

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 basic 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.
- 04.0 Select and arrange furniture, equipment, and accessories.
- 05.0 Identify the appropriate use and function of interior furnishings and materials.
- 06.0 Identify, research, and specify interior design materials and resources.
- 07.0 Research and specify appropriate interior lighting.
- 08.0 Identify interior methods and systems in building construction.
- 09.0 Identify building codes, regulations, and legislation relating to residential and non-residential spaces.
- 10.0 Communicate design concepts through visual and oral presentation skills.
- 11.0 Demonstrate employability skills and identify job and career opportunities.
- 12.0 Identify business organization and development procedures and/or systems for a professional practice.
- 13.0 Analyze historical, cultural, and societal influences on structures, interiors, and furnishings.
- 14.0 Analyze the concept of readapting and/or renovating existing structures.
- 15.0 Incorporate evaluation, space planning, layout, workflow, and design into a project.
- 16.0 Calculate the costs involved in a budget estimate of an interior project.
- 17.0 Learn the process of preparing a complete set of working construction drawings of a residential building, manually and/or electronically.
- 18.0 Identify the importance of acoustics on habitable spaces.
- 19.0 Identify egress requirements.
- 20.0 Design safe and universally accessible spaces.
- 21.0 Prepare the basic agreement between the designer and the client, identifying services and responsibilities.
- 22.0 Demonstrate a basic knowledge of computer skills.
- 23.0 Recognize the concepts of sustainable design.
- 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 basic design to interior spaces--The student should 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	Define and apply the principles of design.
01.05	Explain the way principles of design are used in interior design.
01.06	Demonstrate the aesthetic elements of design.
01.07	Explain the way elements of design are used in interior design.
01.08	Define and demonstrate figure, ground, and spatial relationships.
01.10	Describe and demonstrate the function of the visible spectrum and pigmentation as inherent properties of all design materials and their impact on color perception.
01.11	Describe and demonstrate knowledge of the three dimensions of color.
01.12	Identify common comprehensive color systems used by designers for the accurate description and specification of color.
01.13	Identify and apply knowledge of results and effects of color interaction in design.
01.14	Identify and apply the categories of material and surface texture to appropriate interior needs and function.
01.15	Identify and demonstrate the role of light on our perception of surface texture in design projects.
01.17	Identify, describe, and apply interior architectural and design elements not only to the function and use of the interior space, but also as an expressive factor in form and style.

02.0	Describe the interrelationship between humans and their interior environments--The student should 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 environmental characteristics of housing that affect the well-being of the family.
02.03	Demonstrate an understanding of the Americans with Disabilities Act and how it affects the interior environment.
02.04	Identify and apply responses to the psychological and social needs of people using interiors as well as to their physical needs (i.e. territoriality, personalization, and group interaction).
03.0	Plan for space utilization and development according to identified functions—The student should be able to:
03.01	Identify and apply responses to the psychological and social needs of people using interiors as well as to their physical needs (i.e. territoriality, personalization, and group interaction).
03.02	Identify, describe, and demonstrate functional and aesthetic goals and objectives establishment, which direct the programming process.
03.03	Define and develop a client profile.
03.04	Identify, define, and apply known methods of collecting information and projected user requirements as fundamental to design project preparation.
03.05	Create and interpret a design matrix and other schematic processes.
03.07	Describe and demonstrate comprehension of spatial adjacency, utilization, circulation, light, and function.
03.08	Identify and apply the requirements of good traffic circulation.
03.09	Synthesize concepts of space utilization through sketching, schematic drawings, and models.
03.12	Verify appropriate allocations of space according to programmatic needs.
03.13	Sketch preliminary layouts.
03.14	Identify the differences between public and private space, form, and usage.
04.0	Select and arrange furniture, equipment, and accessories--The student should be able to:
04.01	Analyze criteria for the selection and arrangement of furnishings, including furnishings to be used by persons with disabilities, the elderly, and/or children.
04.02	Develop a furniture arrangement and traffic plan.
04.03	Select bathroom and kitchen fixtures and tile types for an interior design plan.
04.04	Select kitchen and bath cabinets for an interior design plan in an occupied space.
04.05	Select the different fabrics available and recognize characteristics such as durability, texture, comfort, and end use.

04.06	Identify precedents in the use of different materials and furnishings and their historical relevance.
05.0	Identify the appropriate use and function of interior furnishings and materials--The student should be able to:
05.01	Identify and analyze flooring materials and determine the advantages and disadvantages of each.
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 types and functions of windows.
05.06	Identify and describe different types of window coverings.
05.07	Consider maintenance requirements in specifying materials.
06.0	Identify, research, and specify interior design materials and resources--The student should be able to:
06.01	Identify lighting manufacturers.
06.02	Identify manufacturers of architectural treatments.
06.03	Identify manufacturers of accessories.
06.04	Identify recyclable resources for design materials.
06.05	Demonstrate an understanding of quality differences in design materials.
06.06	Identify and describe those aspects of interior materials and installation methods, which have potential to impact the health, safety, and welfare of residential and commercial clientele.
06.07	Identify and describe the role manufacturers' representatives, contractors, and other resource specialists play in assisting the designer and client/s in the appropriate selection, design, specification, and installation of materials and finishes for design projects.
06.08	Identify and describe the role testing standards, agencies, and ratings have on the designer's selection and specifications 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 should be able to:
07.01	Identify lighting requirements.
07.02	Relate lighting styles and fixtures to interior design.
07.03	Identify appropriate lighting fixtures to perform efficiently and effectively in residential and contract interior design projects.
07.04	Identify and describe human response to light contrast.

07.05	Identify and describe the factors of contrast and diffusion as they affect interior space.
07.06	Describe the positive and negative impact of daylight on interiors.
07.07	Describe various means of controlling daylight impact on interiors.
07.08	Identify and describe lighting needs for special needs clients.
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 describe the economic issues of lighting.
07.12	Identify, describe, and apply knowledge of both architectural and portable lighting.
07.13	Apply knowledge of appropriate fixture placement and location in interior design projects.
07.14	Identify, describe, and apply appropriate placement and selection of light switches.
07.15	Identify and describe codes and regulations as they apply to health, safety, and welfare requirements in interior design.
08.0	Identify interior methods and systems in building construction--The student should be able to:
08.01	Identify methods and techniques of construction.
08.02	Read basic mechanical 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 available types of millwork woods and veneers, including finishes.
08.06	Identify and describe the appropriate cuts in lumber and timber for construction or millwork application.
08.07	Identify and draw appropriate installation systems of wall paneling and acoustical ceilings.
08.08	Describe the uses and characteristics of available glazing and film for doors and windows for energy and security considerations in both residential and commercial application.
09.0	Identify building codes, regulations, and legislation relating to residential and non-residential spaces--The student should be able to:
09.01	Identify local, state, and national building codes.
09.02	Identify legislation for barrier-free environment.

09.03	Identify regulations regarding all health and safety codes.
09.04	Cite labeling techniques that identify products that meet flammability standards required by fire code.
09.06	Describe the material ratings and resistance of materials to fire.
09.07	Apply ADA requirements as they relate 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 should be able to:
10.01	Use drafting equipment and computer programs to present interior design concepts.
10.02	Demonstrate the use and care of graphics equipment.
10.03	Demonstrate neatness and accuracy.
10.04	Execute line work by hand and/or by CAD.
10.05	Illustrate size and scale in a drawing.
10.06	Demonstrate overlapping techniques.
10.07	Explain detail drawings.
10.08	Illustrate shade and shadow from natural light source.
10.09	Apply methods and techniques for three-dimensional illustrations.
10.10	Analyze perspective drawing.
10.11	Apply methods and techniques of a one-point perspective drawing.
10.12	Apply methods and techniques of a two-point perspective drawing.
10.13	Create, analyze, and evaluate presentation techniques as vehicles for graphic illustration.
10.14	Demonstrate layout techniques applying principles of design.
10.15	Use lettering techniques and computer skills for visual and oral presentations.
10.16	Use graphic presentation skills in compiling and reviewing a portfolio.
11.0	Demonstrate employability skills and identify job and career opportunities--The student should be able to:



11.01	Conduct a job search.
11.02	Secure information concerning a job.
11.03	Identify documents that may be required when applying for a job.
11.04	Complete a job application.
11.05	Demonstrate competence in job interview techniques.
11.06	Identify or demonstrate appropriate responses to criticism from an employer, supervisor, or other persons.
11.07	Identify acceptable work habits.
11.08	Demonstrate acceptable employee health habits.
11.09	Demonstrate customer relations skills.
11.10	Evaluate sources of employment information.
11.11	Identify four-year schools and special interior design schools for further study.
11.12	Identify job and career opportunities in interior design business and industry.
12.0	Identify business organization and development procedures and/or systems for a professional practice--The student should be able to:
12.01	List interior design professional organizations.
12.02	Analyze business practices and procedures necessary in an interior design business.
12.03	Recognize legal and business terms used in the practice of interior design.
12.04	Describe the legal considerations and forms necessary to the practice of interior design.
12.05	Describe procedures used in current interior design work experience.
12.06	Identify considerations in selecting a location for a business.
12.07	Review a plan for the organizational structure of an interior design studio.
12.08	Identify principles of record keeping.
12.09	Prepare contracts.
12.10	Cite licensing requirements needed to operate a business.

12.11	Identify methods or techniques of supply procurement.
12.12	Describe the principles of pricing for profit.
12.13	Analyze profit margin.
12.14	Demonstrate an understanding of the code of ethics for professional designers as prepared by the professional organizations.
12.15	Demonstrate an understanding of licensing requirements.
13.0	Analyze historical, cultural, and societal influences on structures, interiors, and furnishings--The student should be able to:
13.01	Analyze characteristics of historic design in relation to the history of interiors.
13.23	Apply knowledge and appropriate synthesis of the contemporary form with furnishings, finishes, and materials in design projects.
14.0	Analyze the concept of readapting and/or renovating existing structures--The student should be able to:
14.01	Summarize significant issues and fundamentals of restoration, preservation, and renovation.
14.02	Compare preservation, restoration, and renovation.
14.03	Analyze the issues of housing restoration.
14.04	Identify sources for researching historical period data.
15.0	Incorporate evaluation, space planning, layout, workflow, and design into a project--The student should be able to:
15.01	Develop a plan for a total concept for interior design and furnishings.
15.02	Apply design methods and techniques to a project in residential and nonresidential interior design.
15.03	Understand and apply the programming sequences in a design product.
15.04	Demonstrate an understanding of design development stages by completing a design project.
15.05	Demonstrate an understanding of the purpose and content of a post-occupancy evaluation.
15.06	Develop a schedule for installations.
15.07	Research catalog price lists and prepare order forms.
15.08	Develop and prepare a budget for a project.
15.09	Prepare furniture, fixtures, and equipment (FF&E) specifications for a project.

15.10	Prepare finish schedules/plans.
16.0	Calculate the costs involved in a budget estimate of an interior project--The student should be able to:
16.01	Outline the costs of materials, furnishings, equipment, overhead, and services to be provided.
16.02	Demonstrate the different methods available to estimate the cost of a project.
16.03	Apply information to administrate the process effectively.
17.0	Learn the process of preparing a complete set of working construction drawings of a residential building manually and/or electronically--The student should 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	Implement standard graphics and symbols.
17.04	Design and specify millwork and special features.
18.0	Identify the importance of acoustics on habitable spaces--The student should be able to:
18.01	Apply the basic principles, concepts, and qualities of sound as they affect human perception.
18.02	Evaluate and demonstrate an understanding of sound transmission and levels.
18.03	Apply the fundamentals of sound absorption to evaluate means that might be employed to control the acoustic quality of a space.
18.04	Determine the layout and surface treatment of walls, ceilings, and finishes, in addition to spatial organization, to achieve desired results in sound balance and comfort in an interior.
19.0	Identify egress requirements--The student should be able to:
19.01	Choose appropriate door types for access and egress.
19.02	Identify the differences between residential access and egress requirements.
20.0	Design safe and universally accessible spaces--The student should be able to:
20.01	Incorporate 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 implement in the selection of fixtures, floor surfaces, and bathroom layouts.
20.03	Implement the principles of universal design.
20.04	Analyze the concept of green design.

21.0	Prepare the basic agreement between the designer and the client, identifying services and responsibilities--The student should be able to:
21.01	Put together the basic elements of a contract.
21.02	Outline the scope of basic interior design services plus any additional services to be offered.
21.03	Indicate the owner's responsibilities toward the designer.
21.04	Include all costs related to the execution of the project as well as fees to be charged.
21.05	Indicate designer's responsibilities toward the client.
21.06	List the basic components for a letter of agreement.
22.0	Demonstrate a basic knowledge of computer skills--The student should be able to:
22.01	Demonstrate proficiency in word processing and other applications.
22.02	Demonstrate proficiency in setting up and using an e-mail account.
22.03	Create and manage computer files.
22.04	Research sources on the Internet.
23.0	Recognize the concepts of sustainable design--The student should be able to:
23.01	Define the terminology of sustainable design.
23.02	Identify appropriate materials of sustainable design.
23.03	Identify the costs and requirements of sustainable design.
24.0	Participate in an internship--The student should be able to:
24.01	Establish achievable goals related to 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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 and AV 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 and AV 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 basic design to interior spaces.
- 02.0 Select and arrange furniture, fixtures, equipment, and accessories.
- 03.0 Identify, research, and specify interior design materials and resources.
- 04.0 Communicate design concepts through visual and oral presentation skills.
- 05.0 Analyze the concept of readapting and/or renovating existing structures.
- 06.0 Demonstrate basic knowledge of computer skills.
- 07.0 Identify, research, and design sustainable interiors.
- 08.0 Demonstrate employability skills and identify job and career opportunities.
- 09.0 Prepare the basic agreement between designer and client, identifying services and responsibilities.

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 basic design to interior spaces–The student should be able to:

01.01 Evaluate aspects of color schemes in relation to interior design.

01.02 Describe the color wheel.

01.03 Describe and demonstrate knowledge of the three dimensions of color.

01.04 Explain the psychological effects of color on space and human interaction.

01.05 Define and apply the principles of design.

01.06 Explain the way principles of design are used in interior design.

01.07 Demonstrate the aesthetic elements of design.

01.08 Define and demonstrate figure, ground, and spatial relationships.

01.09 Identify and apply the categories of material and surface texture to interior needs and function.

02.0 Select and arrange furniture, fixtures, equipment, and accessories--The student should be able to:

02.01 Analyze criteria for the selection and arrangement of furnishings for the client.

02.02 Develop a furniture arrangement and traffic plan.

02.03 Select the different fabrics available and recognize characteristics such as durability, texture, comfort and end use.

03.0 Identify, research, and specify interior design materials and resources–The student should be able to:

03.01 Identify manufacturers of architectural treatments.



03.02	Identify manufacturers of accessories.
03.03	Identify recyclable resources for interior design.
03.04	Demonstrate an understanding of quality differences in design materials.
04.0	Communicate design concepts through visual and oral presentation skills--The student should be able to:
04.01	Demonstrate neatness and accuracy.
04.02	Use drafting equipment and computer programs to present interior design concepts.
04.03	Demonstrate overlapping techniques.
05.0	Analyze the concept of readapting and/or renovating existing structures--The student should be able to:
05.01	Summarize significant issues and fundamentals of restoration, preservation, and renovation.
05.02	Compare preservation, restoration, and renovation.
05.03	Analyze the issues of housing restoration.
06.0	Demonstrate basic knowledge of computer skills--The student should be able to:
06.01	Import, manipulate and export computer files.
06.02	Research sources on the internet.
07.0	Identify, research, and design sustainable interiors--The student should be able to:
07.01	Understand the concept and terminology of green design/sustainable design and energy conservation.
07.02	Describe the differences between sustainable and green design.
07.03	Defend the practice of ERIC (Environmentally responsible Interior Design).
07.04	Demonstrate proficiency in material usage.
07.05	Identify governing organizations associated with sustainable design.
08.0	Demonstrate employability skills and identify job and career opportunities--The student should be able to:
08.01	Conduct a job search.
08.02	Secure information concerning a job.

08.03	Identify documents that may be required when applying for a job.
08.04	Complete a job application.
08.05	Identify or demonstrate appropriate responses to criticism from an employer, supervisor, or other persons.
08.06	Demonstrate competence in job interview techniques.
08.07	Demonstrate customer relations skills.
08.08	Evaluate sources of employment information.
08.09	Identify job and career opportunities in interior design business and industry.
09.0	Prepare the basic agreement between designer and client, identifying services and responsibilities--The student should be able to:
09.01	Put together the elements of a contract or letter or agreement following Florida law.
09.02	Outline the scope of basic interior design services.
09.03	Indicate the owner's responsibilities toward the designer.
09.04	Include all costs related to the execution of the project as well as fees to be charged.

## **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.

### **Additional Resources**

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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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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.

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## **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:        **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 communication--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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>



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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 team skills.
- 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 a video camera.
- 07.0 Shoot studio and/or location footage.
- 08.0 Record, mix and edit audio resources.
- 09.0 Organize and edit video resources.
- 10.0 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 team skills--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 proper care of equipment.

02.05 Demonstrate appropriate 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 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, method 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 a video camera--The student will be able to:
06.01	Use current industry standard production video equipment.
06.02	Operate camera in studio and location (field) production environments.
07.0	Shoot studio and/or location footage--The student will be able to:
07.01	Plan a shot to obtain required action/footage.
07.02	Demonstrate appropriate shot sequences, transitions and post production edit effects.
07.03	Control camera movement to obtain required effects.
07.04	Control lens, focal length, aperture and exposure to obtain required effects.
07.05	Set up camera and recording equipment sequence.
07.06	Perform appropriate pre-production checks of equipment function.
07.07	Perform basic routine, preventative and repair maintenance on video equipment.
07.08	Define the various recording formats and media.
08.0	Record, mix and edit audio resources--The student will be able to:
08.01	Identify and select microphones for production needs.
08.02	Determine optimal microphone placement.
08.03	Set up audio recording equipment.
08.04	Establish appropriate recording conditions.
08.05	Perform appropriate pre-production check of production equipment.
08.06	Perform sound edits and enhancements.
08.07	Record location sound.
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	Input video resources into post-production equipment and workflow.
09.04	Perform assemble edits for appropriate effect.
09.05	Perform insert edits for appropriate effect.
09.06	Maintain continuity and production values.
09.07	Mix audio and video resources for final cut.
09.08	Apply color correction to video footage.
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	Determine the special effects need for a production.
10.05	Set up and operate character generator equipment and software.
10.06	Generate appropriate special effects for a production.
10.07	Demonstrate an understanding of graphic image types, file formats, and technical requirements for a production.
10.08	Use image editing software.
10.09	Edit graphics into the program or segment.
10.10	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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

This certificate program is part of the Digital Media/Multimedia Technology AS degree program (1611080102).

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 projects and 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.



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 AS degree program (1611080102). At the completion of this program, the student will be able to:**

01.0 Create projects and 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 and write a script 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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

This certificate program is part of the Digital Media/Multimedia Technology AS degree program (1611080102).

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 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 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 AS degree program (1611080102). At the completion of this program, the student will be able to:**

01.0	Design and generate video and/or animations--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 and write a script 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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 demonstration of appropriate communication skills.

This certificate program is part of the Digital Media/Multimedia Technology AS degree program (1611080102)

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 projects and 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 AS degree program (1611080102). At the completion of this program, the student will be able to:**

01.0 Create projects and 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 needs of the end user.

03.02 Analyze resources available.

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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

**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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

This certificate program is part of the Digital Media/Multimedia Technology AS degree program (1611080102).

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 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.

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.

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 projects and 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 AS degree program (1611080102). 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 projects and presentations utilizing a variety of digital media/multimedia technologies--The student will be able to:

- 02.01 Appraise production resources to achieve desired outcomes.
- 02.02 Utilize production techniques to create the 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 and 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 needs of the end user.
06.02	Analyze resources available.
06.03	Create and write a script 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 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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 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 AS degree program (1611080102).

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 projects and 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 AS degree program (1611080102). 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 projects and 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	Appraise production resources to achieve desired outcomes.
02.03	Utilize production techniques to create the desired 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--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 needs of the end user.
06.02	Analyze resources available.
06.03	Create and write a script 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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

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 team skills.
- 02.0 Demonstrate safe and efficient work practices.
- 03.0 Create appropriate lighting for location and/or set productions.
- 04.0 Operate a video camera.
- 05.0 Shoot studio and/or location footage.
- 06.0 Record, mix and edit audio resources.
- 07.0 Operate control room equipment.
- 08.0 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 team skills--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 proper care of equipment.

02.05 Demonstrate appropriate 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 a video camera--The student will be able to:

04.01 Use current industry standard production video equipment.

04.02 Operate camera in studio and location (field) production environments.

05.0 Shoot studio and/or location footage--The student will be able to:

05.01 Plan a shot to obtain required action/footage.

05.02	Control camera movement to obtain required effects.
05.03	Control lens, focal length, aperture and exposure to obtain required effects.
05.04	Perform appropriate pre-production checks of equipment function.
05.05	Define the various recording formats and media.
06.0	Record, mix and edit audio resources--The student will be able to:
06.01	Set up audio recording equipment.
06.02	Perform appropriate pre-production check of production equipment.
07.0	Operate control room equipment--The student will be able to:
07.01	Define control room functions in a production.
07.02	Use the audio console (mixer) in a production.
07.03	Operate camera switching and traffic control equipment.
08.0	Organize and edit video resources--The student will be able to:
08.01	Log and organize video resources.
08.02	Input 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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 team skills.
- 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 a video camera.
- 07.0 Shoot studio and/or location footage.
- 08.0 Record, mix and edit audio resources
- 09.0 Operate control room equipment.
- 10.0 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 team skills--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 proper care of equipment.

02.05 Demonstrate appropriate 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 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, method 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 a video camera--The student will be able to:
06.01	Use current industry standard production video equipment.
06.02	Align camera for studio production.
06.03	Operate camera in studio and location (field) production environments.
06.04	Operate (CCU) Camera Control Unit.
07.0	Shoot studio and/or location footage--The student will be able to:
07.01	Plan a shot to obtain required action/footage.
07.02	Control camera movement to obtain required effects.
07.03	Control lens, focal length, aperture and exposure to obtain required effects.
07.04	Set up camera and recording equipment sequence.
07.05	Perform appropriate pre-production checks of equipment function.
07.06	Define the various recording formats and media.
08.0	Record, mix and edit audio resources--The student will be able to
08.01	Identify and select microphones for production needs.
08.02	Determine optimal microphone placement.
08.03	Set up audio recording equipment.
08.04	Establish appropriate recording conditions.
08.05	Perform appropriate pre-production check of production equipment.
08.06	Perform sound edits and enhancements.

08.07	Record location sound.
08.08	Record studio live sound.
09.0	Operate control room equipment--The student will be able to:
09.01	Define control room functions in a production.
09.02	Use the audio console (mixer) in a production.
09.03	Use vision control equipment.
09.04	Operate camera switching and traffic control equipment.
09.05	Operate routing switcher for production and tape dubs.
10.0	Organize and edit video resources--The student will be able to:
10.01	Log and organize video resources.
10.02	Operate editing hardware and software.
10.03	Input 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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

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 team skills.
- 02.0 Demonstrate safe and efficient work practices.
- 03.0 Create appropriate lighting for location and/or set productions.
- 04.0 Operate a video camera.
- 05.0 Shoot studio and/or location footage.
- 06.0 Record, mix and edit audio resources.
- 07.0 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 team skills--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

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 of equipment.

02.05 Demonstrate appropriate use of equipment in an efficient manner.

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 a video camera--The student will be able to:

04.01 Use current industry standard production video equipment.

04.02 Operate camera in studio and location (field) production environments.

05.0 Shoot studio and/or location footage--The student will be able to:

05.01	Plan a shot to obtain required action/footage.
05.02	Demonstrate appropriate shot sequences, transitions and post production (edit) effects.
05.03	Control camera movement to obtain required effects.
05.04	Control lens, focal length, aperture and exposure to obtain required effects.
05.05	Perform appropriate pre-production checks of equipment function.
05.06	Define the various recording formats and media.
06.0	Record, mix and edit audio resources--The student will be able to:
06.01	Identify and select microphones for production needs.
06.02	Set up audio recording equipment.
06.03	Perform appropriate pre-production check of production equipment.
07.0	Organize and edit video resources--The student will be able to:
07.01	Log and organize video resources.
07.02	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)**

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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

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 communication skills.
- 02.0 Perform raster and vector based illustration and graphic development.
- 03.0 Formulate concepts/theory.
- 04.0 Apply design theories.
- 05.0 Demonstrate creative use of typography.
- 06.0 Demonstrate production skills.
- 07.0 Interpret printing processes.
- 08.0 Demonstrate knowledge of current industry standards, practices, and techniques.
- 09.0 Interpret photographic procedures.
- 10.0 Apply color theories.
- 11.0 Demonstrate industry level presentation procedures.
- 12.0 Utilize computer hardware, software, networks and peripherals for the production of electronic content.
- 13.0 Create electronic content.
- 14.0 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 communication skills--The student will be able to:

01.01 Demonstrate presentation skills.

01.02 Demonstrate effective oral communication skills.

01.03 Read and interpret written and oral instructions.

02.0 Perform raster and vector based illustration and graphic development--The student will be able to:

02.01 Demonstrate knowledge of methods and materials.

03.0 Formulate concept/theory--The student will be able to:

03.01 Select appropriate style or technique to problem solving.

03.02 Apply principles of design.

03.03 Demonstrate the design process.

04.0 Apply design theories--The student will be able to:

04.01 Create various mockups, dummies, and comprehensive layouts in a variety of formats.

04.02 Evaluate use of design principles utilized in various graphic design applications.

05.0 Demonstrate creative uses of typography--The student will be able to:

05.01 Demonstrate application of typographical specifications.

05.02 Apply proper letters and line spaces for typesetting.

05.03	Develop working knowledge of type spacing.
05.04	Demonstrate principles of typography in design project.
06.0	Demonstrate production skills--The student will be able to:
06.01	Size photographs and illustrations.
06.02	Demonstrate correct preparation of electronic files.
06.03	Demonstrate knowledge of traditional (non-electronic) production techniques.
07.0	Interpret printing processes--The student will be able to:
07.01	Explain basic print process.
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 importance of meeting deadlines.
08.03	Adjust to work conditions.
09.0	Interpret photographic procedures--The student will be able to:
09.01	Perform cropping and scaling.
10.0	Apply color theories--The student will be able to:
10.01	Apply knowledge of color theory.
10.02	Demonstrate knowledge of industry standard color systems.
11.0	Demonstrate industry level presentation procedures--The student will be able to:
11.01	Demonstrate mounting and matting procedure.
11.02	Demonstrate industry presentation procedure 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 understanding of various platforms, operating systems, hardware, software, peripherals, network issues, and compatibility.
13.0	Create electronic content--The student will be able to:



13.01 Create vector or raster based, file formats.

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)**

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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

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 communication skills.
- 02.0 Demonstrate team skills.
- 03.0 Demonstrate safe and efficient work practices.
- 04.0 Perform raster and vector based illustration and graphic development.
- 05.0 Formulate concepts/theory.
- 06.0 Apply design theories.
- 07.0 Demonstrate creative use of typography.
- 08.0 Create advertising layouts.
- 09.0 Demonstrate production skills.
- 10.0 Interpret printing processes.
- 11.0 Demonstrate knowledge of current industry standards, practices, and techniques.
- 12.0 Interpret photographic procedures.
- 13.0 Apply color theories.
- 14.0 Demonstrate industry level presentation procedures.
- 15.0 Utilize computer hardware, software, networks and peripherals for the production of electronic content.
- 16.0 Create electronic content.
- 17.0 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 communication skills--The student will be able to:

01.01 Demonstrate presentation skills.

01.02 Demonstrate effective oral communication skills.

01.03 Read and interpret written and oral instructions.

02.0 Demonstrate team skills--The student will be able to:

02.01 Demonstrate 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 Perform raster and vector based illustration and graphic development--The student will be able to:

04.01 Demonstrate versatile illustration styles and techniques.

04.02 Demonstrate knowledge of methods and materials.

04.03 Create computer illustrations.

05.0 Formulate concept/theory--The student will be able

05.01 Select appropriate style or technique to problem solving.

05.02 Display creative talent and ingenuity.

05.03	Apply principles of design.
05.04	Demonstrate the design process.
06.0	Apply design theories--The student will be able to:
06.01	Create a design in black and white and colors.
06.02	Create various mockups, dummies, and comprehensive layouts in a variety of formats.
06.03	Evaluate use of design principles utilized in various graphic design applications.
07.0	Demonstrate creative uses of typography--The student will be able to:
07.01	Develop appropriate use of type styles and letter forms.
07.02	Demonstrate application of typographical specifications.
07.03	Apply type construction design.
07.04	Apply proper letters and line spaces for typesetting.
07.05	Develop working knowledge of type spacing.
07.06	Demonstrate principles of typography in design project.
07.07	Utilize desktop computer and industry standard software for type production.
08.0	Create advertising layouts--The student will be able to:
08.01	Identify advertising needs and develop appropriate solution.
08.02	Produce comprehensive layouts for advertising in newspaper, advertising, magazines, billboards, and an advertising campaign.
09.0	Demonstrate production skills--The student will be able to:
09.01	Size photographs and illustrations.
09.02	Demonstrate correct preparation of electronic files.
09.03	Demonstrate knowledge of traditional (non-electronic) production techniques.
10.0	Interpret printing processes--The student will be able to:
10.01	Determine methods of printing and specialty printing methods.

10.02	Select appropriate substrates and inks for projects.
10.03	Explain color separation process.
10.04	Identify and specify half-tone and line negatives.
10.05	Interpret signature and imposition procedures.
10.06	Analyze and identify method of proofing.
10.07	Explain basic print process.
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 practice and procedures.
11.04	Explain importance of meeting deadlines.
11.05	Adjust to work conditions.
12.0	Interpret photographic procedures--The student will be able to:
12.01	Describe how to coordinate photographic procedures with photographer.
12.02	Perform cropping and scaling.
12.03	Operate camera.
13.0	Apply color theories--The student will be able to:
13.01	Apply knowledge of color theory.
13.02	Demonstrate knowledge of industry standard color systems.
14.0	Demonstrate industry level presentation--The student will be able to:
14.01	Demonstrate mounting and matting procedure.
14.02	Demonstrate industry presentation procedure and techniques.
15.0	Utilize computer hardware, software, networks, and peripherals for the production of electronic content--The student will be able to:

15.01	Demonstrate understanding of various platforms, operating systems, hardware, software, peripherals, network issues, and compatibility.
16.0	Create electronic content--The student will be able to:
16.01	Create vector or raster based, file formats.
17.0	Demonstrate employability skills--The student will be able to:
17.01	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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

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 communication skills.
- 02.0 Demonstrate team skills.
- 03.0 Demonstrate safe and efficient work practices.
- 04.0 Perform raster and vector based illustration and graphic development.
- 05.0 Formulate concepts/theory.
- 06.0 Apply design theories.
- 07.0 Demonstrate creative use of typography.
- 08.0 Create advertising layouts.
- 09.0 Demonstrate production skills.
- 10.0 Demonstrate knowledge of current industry standards, practices, and techniques.
- 11.0 Interpret photographic procedures.
- 12.0 Apply color theories.
- 13.0 Demonstrate industry level presentation procedures.
- 14.0 Utilize computer hardware, software, networks and peripherals for the production of electronic content.
- 15.0 Create electronic content.
- 16.0 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 communication skills--The student will be able to:

01.01 Demonstrate presentation skills.

01.02 Demonstrate effective oral communication skills.

01.03 Read and interpret written and oral instructions.

02.0 Demonstrate team skills--The student will be able to:

02.01 Demonstrate 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 Perform raster and vector based illustration and graphic development--The student will be able to:

04.01 Demonstrate versatile illustration styles and techniques.

04.02 Demonstrate knowledge of methods and materials.

04.03 Create computer illustrations.

05.0 Formulate concept/theory--The student will be able

05.01 Select appropriate style or technique to problem solving.

05.02 Display creative talent and ingenuity.

05.03	Apply principles of design.
05.04	Demonstrate the design process.
06.0	Apply design theories--The student will be able to:
06.01	Create a design in black and white and colors.
06.02	Create various mockups, dummies, and comprehensive layouts in a variety of formats.
06.03	Evaluate use of design principles utilized in various graphic design applications.
07.0	Demonstrate creative uses of typography--The student will be able to:
07.01	Develop appropriate use of type styles and letter forms.
07.02	Demonstrate application of typographical specifications.
07.03	Apply type construction design.
07.04	Apply proper letters and line spaces for typesetting.
07.05	Demonstrate principles of typography in design project.
07.06	Utilize desktop computer and industry standard software for type production.
08.0	Create advertising layouts--The student will be able to:
08.01	Identify advertising needs and develop appropriate solution.
09.0	Demonstrate production skills--The student will be able to:
09.01	Size photographs and illustrations.
09.02	Demonstrate correct preparation of electronic files.
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 practice and procedures.
10.04	Explain importance of meeting deadlines.

10.05	Adjust to work conditions.
11.0	Interpret photographic procedures--The student will be able to:
11.01	Perform cropping and scaling.
11.02	Operate camera.
12.0	Apply color theories--The student will be able to:
12.01	Apply knowledge of color theory.
12.02	Demonstrate knowledge of industry standard color systems.
13.0	Demonstrate industry level presentation procedures--The student will be able to:
13.01	Demonstrate industry presentation procedure and techniques.
14.0	Utilize computer hardware, software, networks, and peripherals for the production of electronic content--The student will be able to:
14.01	Demonstrate understanding of various platforms, operating systems, hardware, software, peripherals, network issues, and compatibility.
15.0	Create electronic content--The student will be able to:
15.01	Create vector or raster based, file formats.
15.02	Create interactive or web sites.
16.0	Demonstrate employability skills--The student will be able to:
16.01	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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 communication 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 communication--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 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 cabling equipment --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 mode.
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)**

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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 communication--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 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 cabling equipment--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)**

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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 hetrodyning, 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 communication--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 mode.
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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 communication--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 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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

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 communication skills.
- 02.0 Perform raster and vector based illustration and graphic development.
- 03.0 Formulate concepts/theory.
- 04.0 Apply design theories.
- 05.0 Demonstrate creative use of typography.
- 06.0 Demonstrate production skills.
- 07.0 Demonstrate knowledge of current industry standards, practices, and techniques.
- 08.0 Interpret photographic procedures.
- 09.0 Apply marketing/advertising principles.
- 10.0 Apply color theories.
- 11.0 Demonstrate industry level presentation procedures.
- 12.0 Utilize computer hardware, software, networks and peripherals for the production of electronic content.
- 13.0 Create electronic content.
- 14.0 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 communication skills--The student will be able to:

01.01 Demonstrate presentation skills.

01.02 Demonstrate effective oral communication skills.

01.03 Read and interpret written and oral instructions.

02.0 Perform raster and vector based illustration and graphic development--The student will be able to:

02.01 Demonstrate knowledge of methods and materials.

03.0 Formulate concept/theory--The student will be able

03.01 Select appropriate style or technique to problem solving.

03.02 Apply principles of design.

03.03 Demonstrate the design process.

04.0 Apply design theories--The student will be able to:

04.01 Create a design in black and white and colors.

04.02 Create various mockups, dummies, and comprehensive layouts in a variety of formats.

04.03 Evaluate use of design principles utilized in various graphic design applications.

05.0 Demonstrate creative uses of typography--The student will be able to:

05.01 Develop appropriate use of type styles and letter forms.

05.02	Demonstrate application of typographical specifications.
05.03	Apply proper letters and line spaces for typesetting.
05.04	Develop working knowledge of type spacing.
05.05	Demonstrate principles of typography in design project.
06.0	Demonstrate production skills--The student will be able to:
06.01	Size photographs and illustrations.
06.02	Demonstrate correct preparation of electronic files.
07.0	Demonstrate knowledge of current industry standards, practices, and techniques--The student will be able to:
07.01	Use industry terminology.
07.02	Explain importance of meeting deadlines.
07.03	Adjust to work conditions.
08.0	Interpret photographic procedures--The student will be able to:
08.01	Perform cropping and scaling.
09.0	Apply marketing/advertising principles--The student will be able to:
09.01	Identify target market.
10.0	Apply color theories--The student will be able to:
10.01	Apply knowledge of color theory.
10.02	Demonstrate knowledge of industry standard color systems.
11.0	Demonstrate industry level presentation procedures--The student will be able to:
11.01	Demonstrate industry presentation procedure 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 understanding of various platforms, operating systems, hardware, software, peripherals, network issues, and compatibility.
13.0	Create electronic content--The student will be able to:



13.01 Create vector or raster based, file formats.

13.02 Create interactive or web sites.

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)**

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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for initial employment as web production assistant, web production artist, 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 AS degree program (1611080102).

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 projects and 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 AS degree program (1611080102). At the completion of this program, the student will be able to:**

01.0 Create projects and 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 Appraise production resources to achieve desired outcomes.

02.0 Design and generate video and/or animations in 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 needs of the end user.

## **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 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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 team skills.
- 02.0 Demonstrate safe and efficient work practices.
- 03.0 Create appropriate lighting for location and/or set productions.
- 04.0 Shoot studio and/or location footage.
- 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 team skills--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 proper care of equipment.

02.05 Demonstrate appropriate 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 Shoot studio and/or location footage--The student will be able to:

04.01 Plan a shot to obtain required action/footage.

04.02 Demonstrate appropriate shot sequences, transitions and post production (edit) 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 check 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	Input 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, file formats, and technical requirements for a production.

## **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 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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **Accommodations**

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### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 team skills.
- 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 a video camera.
- 07.0 Shoot studio and/or location footage.
- 08.0 Record, mix and edit audio resources.
- 09.0 Operate control room equipment.
- 10.0 Organize and edit video resources.
- 11.0 Design and generate graphic elements.
- 12.0 Plan, coordinate and manage a video or webcast 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 team skills--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 proper care of equipment.

02.05 Demonstrate appropriate 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 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, method of use and application.

05.03 Use lighting equipment according to industry safety standards.

06.0	Operate a video camera--The student will be able to:
06.01	Use current industry standard production video equipment.
06.02	Operate camera in studio and location (field) production environments.
07.0	Shoot studio and/or location footage--The student will be able to:
07.01	Plan a shot to obtain required action/footage.
07.02	Demonstrate appropriate shot sequences, transitions and post production (edit) effects.
07.03	Control camera movement to obtain required effects.
07.04	Control lens, focal length, aperture and exposure to obtain required effects.
07.05	Set up camera and recording equipment sequence.
07.06	Perform appropriate pre-production checks of equipment function.
07.07	Define the various recording formats and media.
07.08	Define appropriate digital compression and signal (file) types.
08.0	Record, mix and edit audio resources--The student will be able to:
08.01	Identify and select microphones for production needs.
08.02	Determine optimal microphone placement.
08.03	Set up audio recording equipment.
08.04	Establish appropriate recording conditions.
08.05	Perform appropriate pre-production check of production equipment.
08.06	Perform sound edits and enhancements.
08.07	Record location sound.
08.08	Record studio live sound.
09.0	Operate control room equipment--The student will be able to:
09.01	Define control room functions in a production.

09.02	Use the audio console (mixer) in a production.
10.0	Organize and edit video resources--The student will be able to:
10.01	Log and organize video resources.
10.02	Operate editing hardware and software.
10.03	Input video resources into post-production equipment and workflow.
11.0	Design and generate graphic elements--The student will be able to:
11.01	Determine the graphic requirements for a production.
11.02	Operate graphic production software.
11.03	Produce broadcast graphic elements for titling, credits and graphic transitions.
11.04	Generate appropriate special effects for a production.
11.05	Demonstrate an understanding of graphic image types, file formats, and technical requirements for a production.
11.06	Use image editing software.
11.07	Edit graphics into the program or segment.
12.0	Plan, coordinate and manage a video production—The student will be able to:
12.01	Define the program/segment format and market.
12.02	Develop a production schedule.
12.03	Direct final production values.
12.04	Archive and manage finished assets and originals.
12.05	Oversee broadcast/distribution to market.
12.06	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)**

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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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

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.

**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 in order 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)**

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### **Accommodations**

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### **Additional Resources**

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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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

To prepare students for employment as 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 their 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, makeup, 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**

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### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for employment as 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.
- 08.0 Analyze and execute tasks for film/video editing.
- 09.0 Analyze and execute 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 (i.e. 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 between 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 situation(s).
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, makeup, 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 synch to picture.
06.06	Evaluate and edit production dialogue track.
06.07	Mix multiple tracks of dialogue, sound effects, and music into finished soundtrack according to industry quality standards.
06.08	Playback/synchronize finished soundtrack to finished picture track.
07.0	Analyze and execute tasks for the area of camera--The student will be able to:
07.01	Demonstrate knowledge of mechanics and parts of a camera (shutter, f/stops, lenses, etc.).
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 the area of film/video editing--The student will be able to:
08.01	Interpret various production documentation related to editing (script notes, camera notes, sound reports, lined script, continuity reports, etc.).
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**

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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Motion Picture Post Production  
**Career Cluster:** Arts A/V Technology and Communication

CCC	
CIP Number	0650060205
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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for employment as a post-production 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: synchronization of dailies, interpreting and implementing the audio requirements for a film production and employability skills.

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 Synchronize dailies.
- 02.0 Function as part of a team on film/video productions.
- 03.0 Interpret and implement the audio requirements for film production.
- 04.0 Demonstrate employability skills.

Florida Department of Education  
Student Performance Standards

Program Title: Motion Picture Post Production  
 CIP Number: 0650060205  
 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 Synchronize dailies--The student will be able to:

- 01.01 Transfer location sound from location recording format to display format.
- 01.02 Synchronize sound element to picture element.
- 01.03 Demonstrate basic sound editing skills (manually or electronically).

02.0 Function as part of a team on film/video productions--The student will be able to:

- 02.01 Differentiate the working relationships that exist between the various participants involved in the film making process.
- 02.02 Perform as a member of a technical team within the framework of an organized theater/film production.
- 02.03 Adapt learned skills and generate new approaches in order to solve unique production problems.
- 02.04 Demonstrate the proper use of standard film making forms.
- 02.05 Define the specific technical processes used by the camera, grip, lighting, sound, art, costume, special effects, make up and editing departments.
- 02.06 Compare the techniques used in film and video production.
- 02.07 Manage resources and personnel in order to meet production deadlines.
- 02.08 Analyze job needs and perform transactions with rental houses and suppliers.
- 02.09 Apply accepted principles of film technology to production situation(s).
- 02.10 Interpret a film script and storyboard for their production requirements.
- 02.11 Develop appropriate industry contacts.

03.0	Interpret and implement the audio requirements for film production--The student will be able to:
03.01	Formulate sound design for required sound effects and dialogue replacement to complete motion picture soundtrack.
03.02	Augment picture soundtrack with pre-recorded score from various sources.
03.03	Edit and synchronize pre-recorded sound effects from pre-recorded source in synch to picture.
03.04	Evaluate and edit production dialogue track.
04.0	Demonstrate employability skills--The student will be able to:
04.01	Conduct a job search.
04.02	Secure information about a job.

## **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Motion Picture Production Management  
**Career Cluster:** Arts A/V Technology and Communication

CCC	
CIP Number	0650060206
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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for employment as a producer’s assistant, production assistant, production manager, 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: analysis and implementation of tasks for gripping, camera, lighting, and film/video editing

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.
- 02.0 Analyze and implement tasks for gripping.
- 03.0 Analyze and execute tasks for camera.
- 04.0 Analyze and execute tasks for film/video editing.
- 05.0 Analyze and execute for film lighting.
- 06.0 Demonstrate employability skills.
- 07.0 Demonstrate an understanding of entrepreneurship.



Florida Department of Education  
Student Performance Standards

Program Title: Motion Picture Production Management  
 CIP Number: 0650060206  
 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	Function as part of a team on film/video productions--The student will be able to:
01.01	Demonstrate the proper use of standard film making forms.
01.02	Define the specific technical processes used by the camera, grip, lighting, sound, art, costume, special effects, make up and editing departments.
01.03	Compare the techniques used in film and video production.
01.04	Manage resources and personnel in order to meet production deadlines.
01.05	Analyze job needs and perform transactions with rental houses and suppliers.
01.06	Apply accepted principles of film technology to production situation(s).
01.07	Interpret a film script and storyboard for their production requirements.
01.08	Develop appropriate industry contacts.
01.09	Formulate and implement a production plan in the areas of sync sound, camera, grip, electrical, sound, art direction, post-production, special effects, wardrobe, makeup, assistant direction, casting, script supervision and production management.
02.0	Analyze and implement tasks for gripping--The student will be able to:
02.01	Translate script needs into creative uses of dollies, cranes and their camera mounts as required for film and video production.
02.02	Originate solutions to unique shooting problems.
02.03	Organize production routines.
02.04	Analyze a script for its technical requirements.

02.05	Work as a member of a film production team.
02.06	Develop appropriate industry contacts.
02.07	Demonstrate safe work habits.
02.08	Analyze production requirements to determine grip equipment needs.
02.09	Demonstrate proper and safe use of equipment.
03.0	Analyze and execute tasks for the area of camera--The student will be able to:
03.01	Analyze the aesthetic needs of a shot and accomplish them by using standard industry camera equipment.
03.02	Interpret shooting activities required for appropriate camera department documentation.
03.03	Develop appropriate industry contacts.
03.04	Analyze production requirements to determine camera equipment needs.
03.05	Demonstrate knowledge of camera blocking and screen direction.
04.0	Analyze and execute tasks for the area of film/video editing--The student will be able to:
04.01	Demonstrate understanding of picture and sound editing techniques using nonlinear video editing systems.
04.02	Demonstrate understanding of organizing, archiving and cataloguing film and tape media.
05.0	Analyze and execute tasks for film lighting--The student will be able to:
05.01	Work as a member of a film production team.
05.02	Develop appropriate industry contacts.
05.03	Analyze production requirements to determine lighting equipment needs.
06.0	Demonstrate employability skills--The student will be able to:
06.01	Conduct a job search.
06.02	Secure information about a job.
06.03	Identify documents that may be required when applying for a job.
06.04	Complete a job application form correctly.

06.05	Demonstrate competence in job interview techniques.
06.06	Identify or demonstrate appropriate responses to criticism from employer, supervisor or other persons.
06.07	Identify acceptable work habits.
06.08	Demonstrate knowledge of how to make job changes appropriately.
06.09	Demonstrate acceptable employee health habits.
06.10	Demonstrate knowledge of the "Florida Right-To-Know Law" as recorded in Federal 29 CFR-1910, 1200.
07.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
07.01	Define entrepreneurship.
07.02	Describe the importance of entrepreneurship to the American economy.
07.03	List the advantages and disadvantages of business ownership.
07.04	Identify the risks involved in ownership of a business.
07.05	Identify the necessary personal characteristics of a successful entrepreneur.
07.06	Identify the business skills needed to operate a small business efficiently and effectively.

## **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Audio Technology  
**Career Cluster:** Arts A/V Technology and Communication

CCC	
CIP Number	0650060209
Program Type	College Credit Certificate (CCC)
Program Length	15 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4011 – Audio and Video Equipment Technicians
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for initial employment as a sound technician or recording technician, or to provide supplemental training for persons previously or currently employed in these occupations. The content includes, but is not limited to, set up and configuration of a computer for audio applications, and the operation of basic reproduction, reinforcement and recording audio equipment.

This certificate program is part of the Music Production Technology AS degree program (1650091300).

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 set-up and configuration of a computer for audio applications.
- 02.0 Understand the operation of basic reproduction, reinforcement and recording audio equipment.
- 03.0 Demonstrate understanding of requirements for set up and operation of a sound reinforcement system.

Florida Department of Education  
Student Performance Standards

**Program Title:** Audio Technology  
**CIP Number:** 0650060209  
**Program Length:** 15 credit hours  
**SOC Code(s):** 27-4011

**This certificate program is part of the Music Production Technology AS degree program (1650091300). At the completion of this program, the student will be able to:**

01.0	Demonstrate set-up and configuration of a computer for audio applications--The student will be able to:
01.01	Install and configure software related to audio programs.
01.02	Demonstrate basic knowledge of computer system requirements.
01.03	Install basic peripheral devices related to audio programs.
02.0	Understand the operation of basic reproduction, reinforcement and recording audio equipment--The student will be able to:
02.01	Assess the audio technology needs of a music production (Pre-Production).
02.02	Evaluate available audio resources.
02.03	Select and configure appropriate hardware and software.
02.04	Formulate strategies for producing multi-track recording.
02.05	Evaluate production needs for microphone applications.
02.06	Demonstrate proficiency with multi-track, multi-channeled mixing consoles.
02.07	Formulate strategies for electronic editing.
02.08	Configure audio recording systems for optimal and appropriate use of signal processing equipment.
02.09	Engineer a recording session and prepare appropriate documentation.
02.10	Mix multi-track recording.
02.11	Configure audio equipment for optimal musical mix.

02.12	Create a mixing plan.
02.13	Evaluate the quality of multi-track recording.
02.14	Interpret audio needs for end user.
02.15	Supervise equipment operator.
02.16	Evaluate quality of the final mix to industry standards.
03.0	Demonstrate understanding of requirements for set up and operation of a sound reinforcement system–The student will be able to:
03.01	Demonstrate basic understanding of audio electronics (head room, biasing, distortion, equalization, frequency response, etc.).
03.02	Demonstrate basic understanding of acoustics.
03.03	Demonstrate knowledge of principles of operation of analog/digital devices (block diagram).
03.04	Demonstrate basic understanding of audio signal flow in an analog or digital chain.
03.05	Formulate strategies for audio reinforcement of music productions.
03.06	Evaluate performance needs.
03.07	Evaluate technical needs as appropriate to given spaces.
03.08	Configure a sound reinforcement system to meet performance needs.
03.09	Analyze various audio qualities to achieve proper sound mix.
03.10	Perform transactions with audio suppliers.
03.11	Design a plot for proper microphone and speaker selection and placement.



## **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 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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Photography  
**Career Cluster:** Arts, A/V Technology and Communication

CCC	
CIP Number	0650060501
Program Type	College Credit Certificate (CCC)
Program Length	22 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4021 – Photographers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for employment as a photographer or to provide supplemental training for persons previously or currently employed in these occupations.

This certificate program is part of the Photographic Technology AS degree program (1650060500).

The content includes, but is not limited to, communication skills, leadership skills, human relations and employability skills, safe and efficient work practices, using digital cameras, image editing software, inkjet photographic papers, computer editing practices, photographic equipment, and technical recording and reporting.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Photography industry; planning, management, finance, technical and product skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

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 Perform laboratory skills.
- 02.0 Control exposures (SLR camera).
- 03.0 Take basic photographs (SLR camera and digital).
- 04.0 Finish photographs.
- 05.0 Apply lighting techniques.
- 06.0 Take studio photographs.
- 07.0 Reproduce photographic media.
- 08.0 Print color photographs.
- 09.0 Produce media presentations.
- 10.0 Demonstrate competencies required to manage a photographic business.
- 11.0 Take photographs for news media.
- 12.0 Apply quality control.
- 13.0 Demonstrate appropriate communication skills.
- 14.0 Demonstrate appropriate math skills.
- 15.0 Demonstrate appropriate understanding of basic science.
- 16.0 Demonstrate employability skills.
- 17.0 Demonstrate an understanding of entrepreneurship.

Florida Department of Education  
Student Performance Standards

Program Title:       Photography  
CIP Number:        0650060501  
Program Length:    22 credit hours  
SOC Code(s):       27-4021

**This certificate program is part of the Photographic Technology AS degree program (1650060500). At the completion of this program, the student will be able to:**

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 as well as color film.

01.03 Print black and white as well as color photographs.

01.04 Process black and white as well as color paper.

01.05 Process high contrast film.

01.06 Perform toning skills.

01.07 Produce pan masking.

01.08 Produce black and white as well as color print using automated processing.

02.0 Control exposures (SLR camera)--The student will be able to:

02.01 Explain appropriate F-stops and shutter speeds.

02.02 Select appropriate film type.

03.0 Take basic photographs (SLR camera and digital camera)--The student will be able to:

03.01 Apply camera care and maintenance principles.

03.02 Compose photographs.

03.03 Take still photographs.

03.04	Take action photographs.
04.0	Finish photographs--The student will be able to:
04.01	Mount photographs.
04.02	Mat/frame photographs.
04.03	Apply print retouching.
04.04	Apply color lacquer spray.
04.05	Apply photo enhancement.
05.0	Apply lighting techniques--The student will be able to:
05.01	Take photographs with low, medium and high light as well as on bright back lighting.
05.02	Take photographs with electronic strobe.
05.03	Take photographs with photo-flood lighting.
05.04	Take photographs with quartz lighting.
05.05	Take photographs with parabolic lighting.
06.0	Take studio photographs--The student will be able to:
06.01	Take commercial photographs.
06.02	Take portraits.
06.03	Take industrial photographs.
07.0	Reproduce photographic media--The student will be able to:
07.01	Copy prints.
07.02	Copy transparencies.
08.06	Identify and define color separation.
08.0	Print color photographs--The student will be able to:
08.01	Process color paper.

08.02	Print color negatives using color analyzer.
09.0	Produce media presentations--The student will be able to:
09.01	Prepare script for presentation.
09.02	Shoot slides for presentation.
09.03	Produce presentation.
09.04	Prepare storyboard for presentation.
10.0	Demonstrate competencies required to manage a photographic business—The student will be able to:
10.01	Apply communication skills.
10.02	Apply human relations skills.
10.03	Set rates for photographic work.
10.04	Maintain shop records and files.
10.05	Develop effective advertising.
10.06	Create and maintain a presentational portfolio.
10.07	Analyze potential market area.
10.08	Analyze and develop a marketing plan.
10.09	Perform cost analysis.
10.10	Apply accounting techniques.
10.11	Prepare basic media release
11.0	Take photographs for news media--The student will be able to:
11.01	Identify photographers' legal rights/responsibilities.
11.02	Identify rules/regulations of copyright.
11.03	Take photographs for news media.
11.04	Write captions for photos.

11.05	Identify special camera accessories.
11.06	Identify specialized optics for photojournalism.
12.0	Apply quality control--The student will be able to:
12.01	Run control strips. (Perform color calibration on monitor)
12.02	Plot control results.
13.0	Demonstrate appropriate communication skills--The student will be able to:
13.01	Write logical and understandable statements, or phrases, to accurately fill out forms/invoices commonly used in business and industry.
13.02	Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area.
13.03	Read and follow written and oral instructions.
13.04	Answer and ask questions coherently and concisely.
13.05	Read critically by recognizing assumptions and implications and by evaluating ideas.
13.06	Demonstrate appropriate telephone/communication skills.
14.0	Demonstrate appropriate math skills--The student will be able to:
14.01	Solve problems for volume, weight, area, circumference and perimeter measurements for rectangles, squares, and cylinders.
14.02	Measure tolerance(s) on horizontal and vertical surfaces using millimeters, centimeters, feet and inches.
14.03	Add, subtract, multiply and divide using fractions, decimals, and whole numbers.
14.04	Determine the correct purchase price, to include sales tax for a materials list containing a minimum of six items.
14.05	Demonstrate an understanding of federal, state and local taxes and their computation.
15.0	Demonstrate appropriate understanding of basic science--The student will be able to:
15.01	Understand molecular action as a result of temperature extremes, chemical reaction, and moisture content.
15.02	Draw conclusions or make inferences from data.
15.03	Identify health related problems which may result from exposure to work related chemicals and hazardous materials, and know the proper precautions required for handling such materials.
15.04	Understand pressure measurement in terms of PSI, inches of mercury, and KPA.



16.0	Demonstrate employability skills--The student will be able to:
16.01	Conduct a job search.
16.02	Secure information about a job.
16.03	Identify documents which may be required when applying for a job interview.
16.04	Complete a job application form correctly.
16.05	Demonstrate competence in job interview techniques.
16.06	Identify or demonstrate appropriate responses to criticism from employer, supervisor or other employees.
16.07	Identify acceptable work habits.
16.08	Demonstrate knowledge of how to make job changes appropriately.
16.09	Demonstrate acceptable employee health habits.
16.10	Demonstrate knowledge of the "Federal Right-To-Know Law" as recorded in 29 CFR-1910, 1200.
17.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
17.01	Define entrepreneurship.
17.02	Describe the importance of entrepreneurship to the American economy.
17.03	List the advantages and disadvantages of business ownership.
17.04	Identify the risks involved in ownership of a business.

## **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 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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Interior Design Technology  
**Career Cluster:** Arts, A/V Technology and Communication

**AS**

CIP Number	1450040801
Program Type	College Credit
Standard Length	75 credit hours
CTSO	Collegiate DECA
SOC Codes (all applicable)	27-1029 – Designers, All Other
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The primary purpose of this program is to prepare students for initial employment in the interior design, architecture or construction industry leading to state licensing and registration as an interior designer. Interior designers are required by the Florida Department of Business and Professional Regulation, Board of Architecture and Interior Design to have a combination of six years of education and work experience and National Council for Interior Design Qualification (NCIDQ) Certification. Other occupations relevant to this program include careers as a kitchen designer, bath designer, color consultant, display manager, buyer, merchandise displayer, sales associate, manufacturer sales representative, drafting technician, space planner, and construction/housing specifications writer. This program may also be used to provide supplemental or required training for persons previously or currently employed in these related occupations.

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 75 credit hours.

## **Standards**

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

- 01.0 Identify and apply elements and principles of basic 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.
- 04.0 Select and arrange furniture, fixtures, equipment, and accessories.
- 05.0 Identify the appropriate use and function of furnishings and materials.
- 06.0 Identify, research, and specify interior design materials and resources.
- 07.0 Research and specify appropriate interior lighting.
- 08.0 Identify interior methods and systems in building construction.
- 09.0 Identify interior building codes, regulations, and legislation relating to residential and non-residential spaces.
- 10.0 Communicate design concepts through visual and oral presentation skills.
- 11.0 Demonstrate employability skills and identify job and career opportunities.
- 12.0 Identify business organization and development procedures and/or systems for a professional practice.
- 13.0 Analyze historical, cultural, and societal influences on structures, interiors, and furnishings.
- 14.0 Analyze the concept of readapting and/or renovating existing structures.
- 15.0 Incorporate evaluation, space planning, layout, workflow, and design into a project.
- 16.0 Calculate the costs involved in a budget estimate of an interior project.
- 17.0 Learn the process of preparing a complete set of working construction drawings of a residential building manually and/or electronically.
- 18.0 Identify the importance of acoustics on habitable spaces.
- 19.0 Create a Life Safety Plan.
- 20.0 Identify egress requirements.
- 21.0 Design safe and universally accessible spaces.
- 22.0 Prepare the basic agreement between the designer and the client, identifying services and responsibilities.
- 23.0 Demonstrate a basic knowledge of computer skills..
- 24.0 Identify, research, and design sustainable interiors.
- 25.0 Recognize the concepts of sustainable design.
- 26.0 Participate in an internship.

Florida Department of Education  
Student Performance Standards

Program Title: Interior Design Technology  
 CIP Number: 1450040801  
 Program Length: 75 credit hours  
 SOC Code(s): 27-1029

**The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. At the completion of this program, the student will be able to:**

01.0	Identify and apply elements and principles of basic design to interior spaces--The student should 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	Define and apply the principles of design.
01.05	Explain the way principles of design are used in interior design
01.06	Demonstrate the aesthetic elements of design.
01.07	Explain the way elements of design are used in interior design
01.08	Define and demonstrate figure, ground, and spacial relationships.
01.09	Demonstrate the primary elements of design form (i.e. point line plane and volume) and their role in interior design and architecture.
01.10	Describe and demonstrate the function of the visible spectrum and pigmentation as inherent properties of design materials and their impact on color perception.
01.11	Describe and demonstrate knowledge of the three dimensions of color.
01.12	Identify common comprehensive color systems used by designers for the description and specification of color.
01.13	Apply knowledge of the results and effects of color interaction in design.
01.14	Identify and apply the categories of material and surface texture to interior needs and function.
01.15	Identify and demonstrate the role of light on our perception of surface texture in design projects.

01.16	Identify, describe, and demonstrate the differences between mechanical, visual, and human scale in design-related problems.
01.17	Identify, describe, and apply interior architectural and design elements not only to the function and use of the interior space, but also as an expressive factor in form and style.
02.0	Describe the interrelationship between humans and their interior environments--The student should 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 environmental characteristics of housing that affect the well-being of the family.
02.03	Identify ways that spaces influence social behavior and emotional well-being.
02.04	Identify ways interior spaces can create intellectual development
02.05	Demonstrate an understanding of the Americans with Disabilities Act and how it affects the interior environment.
02.06	Identify ways interior spaces can exhibit economic status.
02.07	Demonstrate an understanding of the design needs of the special needs population.
02.08	Illustrate the principles of ergonomics and anthropometrics.
02.09	Identify and apply required adjacency and spatial concerns in interior spaces
02.10	Identify and apply responses to the psychological and social needs of people using interiors as well as to their physical needs (i.e. territoriality, personalization, and group interaction).
03.0	Plan for space utilization and development according to identified functions--The student should be able to:
03.01	Identify and apply responses to the psychological and social needs of people using interiors as well as to their physical needs (i.e. territoriality, personalization, and group interaction).
03.02	Identify, describe, and demonstrate functional and aesthetic goals and objectives establishment, which direct the programming process.
03.03	Define and develop a client profile.
03.04	Identify, define, and apply known methods of collecting information used to create the program.
03.05	Create and interpret a design matrix and other schematic processes.
03.06	Illustrate bubble diagrams and block planning.
03.07	Describe and demonstrate comprehension of spatial adjacency, utilization, circulation, light, and function.
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 public and private space, form, and usage.
04.0	Select and arrange furniture, fixtures, equipment, and accessories--The student should be able to:
04.01	Analyze 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	Select the different fabrics available and recognize characteristics such as durability, texture, comfort, and end use.
04.06	Identify precedents in the use of different materials and furnishings and their historical relevance.
05.0	Identify the appropriate use and function of furnishings and materials--The student should be able to:
05.01	Identify and analyze flooring materials and determine the advantages and disadvantages of each.
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 types and functions of windows.
05.06	Identify and describe different types of window coverings.
05.07	Calculate mathematically quantity needed for floor, window treatments, and wall coverings.
05.08	Consider maintenance recycling requirements in specifying materials.
06.0	Identify, research, and specify design materials and resources--The student should be able to:
06.01	Identify lighting manufacturers.
06.02	Identify manufacturers of architectural treatments.
06.03	Identify manufacturers of accessories.
06.04	Identify recyclable resources for interior design.

06.05	Demonstrate an understanding of quality differences in design materials.
06.06	Identify and describe those aspects of interior materials and installation methods, which have potential to impact the health, safety, and welfare of residential and commercial clientele.
06.07	Identify and describe the role manufacturers' representatives, contractors, and other resource specialists play in assisting the designer and client/s in the appropriate selection, design, specification, and installation of materials and finishes for design projects.
06.08	Identify and describe the role testing standards, agencies, and ratings have on the designer's selection and specifications 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 should be able to:
07.01	Identify lighting requirements.
07.02	Relate lighting styles and fixtures to interior design.
07.03	Identify appropriate lighting fixtures to perform efficiently and effectively in residential and contract interior design projects.
07.04	Identify and describe human response to light contrast.
07.05	Identify and describe the factors of contrast and diffusion as they affect interior space.
07.06	Describe the positive and negative impact of daylight on interiors.
07.07	Describe various means of controlling daylight impact on interiors.
07.08	Identify and describe lighting needs for special needs clients.
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 describe the economic issues of lighting.
07.12	Identify, describe, and apply knowledge of both architectural and portable lighting.
07.13	Apply knowledge of appropriate fixture placement and location in interior design projects.
07.14	Identify, describe, and apply appropriate placement and selection of light switches.
07.15	Identify and describe codes and regulations as they apply to health, safety, and welfare requirements in interior design.
08.0	Identify interior methods and systems in building construction--The student should be able to:
08.01	Identify methods and techniques of construction.
08.02	Read basic mechanical 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 available types of millwork woods and veneers, including finishes.
08.06	Identify and describe the appropriate cuts in lumber and timber for construction or millwork application.
08.07	Identify and draw appropriate installation systems of wall paneling and acoustical ceilings.
08.08	Describe the uses and characteristics of available glazing and film for doors and windows for energy and security considerations in both residential and commercial application.
09.0	Identify building codes, regulations, and legislation relating to residential and non-residential spaces--The student should be able to:
09.01	Identify local, state, national building codes
09.02	Identify legislation for barrier-free environment.
09.03	Identify regulations regarding all health and safety codes.
09.04	Cite labeling techniques that identify 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	Apply ADA requirements as they relate 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 should be able to:
10.01	Use drafting equipment and computer programs to present interior design concepts.
10.02	Demonstrate the use and care of graphics equipment.
10.03	Demonstrate neatness and accuracy.
10.04	Execute line work by hand and/or by CAD.
10.05	Illustrate size and scale in a drawing.
10.06	Demonstrate overlapping techniques.
10.07	Explain detail drawings.

10.08	Illustrate shade and shadow from natural light source.
10.09	Apply methods and techniques for three-dimensional illustrations.
10.10	Analyze perspective drawing.
10.11	Apply methods and techniques of a one-point perspective drawing.
10.12	Apply methods and techniques of a two-point perspective drawing.
10.13	Create, analyze, and evaluate presentation techniques as vehicles for graphic illustration.
10.14	Demonstrate layout techniques applying principles of design.
10.15	Use lettering techniques and computer skills for visual and oral presentations.
10.16	Use graphic presentation skills in compiling and reviewing a portfolio.
11.0	Demonstrate employability skills and identify job and career opportunities--The student should be able to:
11.01	Conduct a job search.
11.02	Secure information concerning a job.
11.03	Identify documents that may be required when applying for a job.
11.04	Complete a job application.
11.05	Demonstrate competence in job interview techniques.
11.06	Identify or demonstrate appropriate responses to criticism from an employer, supervisor, or other persons.
11.07	Identify acceptable work habits.
11.08	Demonstrate acceptable employee health habits.
11.09	Demonstrate customer relations skills.
11.10	Evaluate sources of employment information.
11.11	Identify four-year schools and special interior design schools for further study.
11.12	Identify job and career opportunities in interior design business and industry.
12.0	Identify business organization and development procedures and/or systems for a professional practice--The student should be able to:

12.01	List interior design professional organizations.
12.02	Analyze business practices and procedures necessary in an interior design business.
12.03	Recognize legal and business terms used in the practice of interior design.
12.04	Describe the legal considerations and forms necessary to the practice of interior design.
12.05	Describe procedures used in current interior design work experience.
12.06	Identify considerations in selecting a location for a business.
12.07	Review a plan for the organizational structure of an interior design studio.
12.08	Identify principles of record keeping.
12.09	Prepare contracts.
12.10	Cite licensing requirements needed to operate a business.
12.11	Identify methods or techniques of supply procurement.
12.12	Describe the principles of pricing for profit.
12.13	Analyze profit margin.
12.14	Demonstrate an understanding of the code of ethics for professional designers as prepared by the professional organizations.
12.15	Demonstrate an understanding of licensing requirements.
13.0	Analyze historical, cultural, and societal influences on structures, interiors, and furnishings--The student should be able to:
13.01	Analyze characteristics of historic design in relation to the history of interiors.
13.02	Identify and describe the influence of ancient Roman and Greek architecture, furniture styles, and decorative arts on interiors of later civilizations.
13.03	Recognize architectural styles and interiors of the Middle Ages.
13.04	Identify and describe the influence of Italian Renaissance architecture, furniture, and decorative arts on interiors through to current times.
13.05	Describe the influences of Spanish and Islamic cultures on interior design.
13.06	Identify and describe architecture, interiors, furniture, and the decorative arts from the French Renaissance to the nineteenth century.
13.07	Recognize architecture, interiors, and furniture designed in England's historical and contemporary periods.

13.08	Compare Georgian architecture and interior design with the Restoration to the Middle Georgian period.
13.09	Describe the characteristics of Georgian architecture and interiors designed in America during the 18th century.
13.10	Describe the Queen Anne styles of interior design.
13.11	Describe English interior design of the Adam or Neoclassic period.
13.12	Recognize English interior design of the Regency and Victorian period.
13.13	Recognize Early American architecture and interior design up to the nineteenth century.
13.14	Describe the Eastern influences on interior design.
13.15	Describe sequences of historical influence on architecture and interior design.
13.16	Describe the arts and crafts movement in interior design.
13.17	Describe Art Nouveau as a movement in interior design.
13.18	Describe various movements in the evolution of contemporary architecture and interior design.
13.19	Describe the impact of the Bauhaus design philosophy.
13.20	Describe the impact of the International Style on architecture, interior design, and furnishings.
13.21	Analyze and compare contemporary architects, furniture designers, and styles.
13.22	Describe the impact the Post Modern and Pluralistic architectural movements have had on the building environment, interior space, and furniture.
13.23	Apply knowledge and appropriate synthesis of the contemporary form with furnishings, finishes, and materials in design projects.
14.0	Analyze the concept of readapting and/or renovating existing structures--The student should be able to:
14.01	Summarize significant issues and fundamentals of restoration, preservation, and renovation.
14.02	Compare preservation, restoration, and renovation.
14.03	Analyze the issues of housing restoration.
14.04	Identify sources for researching historical period data.
15.0	Incorporate evaluation, space planning, layout, workflow, and design into a project--The student should be able to:
15.01	Develop a plan for a total concept for interior design and furnishings.

15.02	Apply design methods and techniques to a project in residential and nonresidential interior design.
15.03	Understand and apply the programming sequences in a design product.
15.04	Demonstrate an understanding of design development stages by completing a design project.
15.05	Demonstrate an understanding of the purpose and content of a post-occupancy evaluation.
15.06	Develop a schedule for installations.
15.07	Research catalog price lists and prepare order forms.
15.08	Develop and prepare a budget for a project.
15.09	Prepare furniture, fixtures, and equipment specifications for a project.
15.10	Prepare finish schedules/plans.
16.0	Calculate the costs involved in a budget estimate of an interior project--The student should be able to:
16.01	Outline the costs of materials, furnishings, equipment, overhead, and services to be provided.
16.02	Demonstrate the different methods available to estimate the cost of a project.
16.03	Apply information to administrate the process effectively.
17.0	Learn the process of preparing a complete set of working construction drawings of a residential building manually and/or electronically--The student should 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	Implement standard graphics and symbols.
17.04	Design and specify millwork and special features.
18.0	Identify the importance of acoustics on habitable spaces--The student should be able to:
18.01	Apply the basic principles, concepts, and qualities of sound as they affect human perception.
18.02	Evaluate and demonstrate an understanding of sound transmission and levels.
18.03	Apply the fundamentals of sound absorption to evaluate means that might be employed to control the acoustic quality of a space.
18.04	Determine the layout and surface treatment of walls, ceilings, and finishes, in addition to spatial organization, to achieve desired results in sound balance and comfort in an interior.

19.0	Create a Life Safety Plan--The student should be able to:
19.01	Calculate occupant load and required number of exits.
19.02	Determine 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, commercial, and industrial access and egress requirements.
20.0	Identify egress requirements--The student should be able to:
20.01	Choose appropriate door types for access and egress.
20.02	Identify the differences between residential access and egress requirements.
21.0	Design safe and universally accessible spaces--The student should be able to:
21.01	Incorporate the use of ramps and automated systems designed to accommodate persons with disabilities.
21.02	Demonstrate an understanding of the anthropometrics and ergonomics of a disabled person to implement in the selection of fixtures, floor surfaces, and bathroom layouts.
21.03	Implement the principles of uniform design.
21.04	Describe Aging in Place methodology
21.05	Analyze the concept of green design.
22.0	Prepare the basic agreement between designer and client, identifying services and responsibilities--The student should be able to:
22.01	Put together the elements of a contract or letter or agreement following Florida law.
22.02	Outline the scope of basic interior design services-
22.03	Indicate the owner's responsibilities toward the designer.
22.04	Include all costs related to the execution of the project as well as fees to be charged.
23.0	Demonstrate a basic knowledge of computer skills--The student should be able to:
23.01	Demonstrate proficiency in CAD
23.02	Demonstrate proficiency in 2D and 3D computer drawing.

23.03	Import, manipulate and export computer files.
23.04	Research sources on the Internet.
24.0	Identify, research and design sustainable interiors–The student should be able to:
24.01	Understand the concept and terminology of green design/sustainable design and energy conservation.
24.02	Describe the differences between sustainable and green design
24.03	Defend the practice of ERID (Environmentally Responsible Interior Design)
24.04	Demonstrate proficiency in material usage.
24.05	Identify governing organizations associated with sustainable design.
24.06	Evaluate the cost of green/sustainable design vs. other methods both initially and long term.
25.0	Recognize the concepts of sustainable design–The student should be able to:
25.01	Define the terminology of sustainable design.
25.02	Identify appropriate materials of sustainable design.
25.03	Identify the costs and requirements of sustainable design.
26.0	Participate in an internship–The student should be able to:
26.01	Establish achievable goals related to 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. 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.

### **Certificate Programs**

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

Kitchen and Bath Specialization (0450040805) - 39 credit hours  
Home Staging Specialist (0450040807) - 12 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>



Florida Department of Education  
Curriculum Framework

**Program Title:** Digital Television and Media Production (60)  
**Career Cluster:** Arts A/V Technology and Communication

**AS**

CIP Number	1609070213
Program Type	College Credit
Standard Length	64 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4099 – Media and Communication Equipment Workers, All Other
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for employment as television and video production personnel. Job titles include independent video producer, camera operator, floor director, technical producer, videographer, video editor, location/studio sound operator, broadcast graphics designer and webcast producer/director.

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: lighting, photography, design, camera operation, floor and television direction, post-production, editing and webcast production. Also included are skills relating to professionalism, employability, communication and management. Programs may include the following specialization areas: Broadcast Television, Video Production or Internet/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.

**Program Structure**

This program is a planned sequence of instruction consisting of 60 credit hours.

## **Standards**

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

- 01.0 Demonstrate effective communication skills.
- 02.0 Demonstrate team skills.
- 03.0 Demonstrate safe and efficient work practices.
- 04.0 Demonstrate knowledge of appropriate industry laws, regulations, trade terminology and ethical practices.
- 05.0 Develop a project proposal and script.
- 06.0 Generate a production schedule.
- 07.0 Plan a production set.
- 08.0 Acquire appropriate production resources.
- 09.0 Create appropriate lighting for location and/or set productions.
- 10.0 Operate a video camera.
- 11.0 Shoot studio and/or location footage.
- 12.0 Record, mix and edit audio resources.
- 13.0 Demonstrate knowledge and skills of streaming media.
- 14.0 Operate control room equipment.
- 15.0 Organize and edit video resources.
- 16.0 Design and generate graphic elements.
- 17.0 Direct a TV/video production or webcast.
- 18.0 Plan, coordinate and manage a TV or video based production.
- 19.0 Create a marketing and distribution plan.
- 20.0 Demonstrate appropriate math skills.
- 21.0 Demonstrate appropriate writing skills.
- 22.0 Demonstrate an appropriate understanding of basic science.
- 23.0 Demonstrate employability skills.
- 24.0 Demonstrate an understanding of entrepreneurship.

Florida Department of Education  
Student Performance Standards

Program Title: Digital Television and Media Production (60)  
 CIP Numbers: 1609070213  
 Program Length: 60 credit hours  
 SOC Code(s): 27-4099

**The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. At the completion of this program, the student will be able to:**

01.0 Demonstrate effective communication skills--The student will be able to:

01.01 Demonstrate presentation skills.

01.02 Prepare written correspondence.

01.03 Demonstrate effective oral communication skills.

01.04 Read and interpret written and oral directions.

02.0 Demonstrate team skills--The student will be able to:

02.01 Demonstrate management and leadership abilities.

02.02 Demonstrate ability to work as part of a team.

03.0 Demonstrate safe and efficient work practices--The student will be able to:

03.01 Follow industry safety rules, regulations and policies.

03.02 Demonstrate proper handling of hazardous materials.

03.03 Demonstrate awareness of appropriate ergonomics.

03.04 Demonstrate proper care of equipment.

03.05 Demonstrate appropriate use of equipment.

04.0 Demonstrate knowledge of appropriate industry laws, regulations, terminology and ethical practices--The student will be able to:

04.01 Define all Federal Communications Commission regulations pertaining to the broadcasting and various industry distribution methods.

04.02	Define the laws and regulations pertaining to the ownership and control of media assets, license allocation, measurement and records, political broadcasts and lottery laws.
04.03	Utilize trade terminology appropriately.
04.04	Utilize trade abbreviations and acronyms as appropriate.
04.05	Define the laws and practices underlying rights, releases and permits.
04.06	Define the laws and practices underlying slander, libel, free speech and “truth in advertising” issues and Privacy Rights.
04.07	Define the laws and practices underlying indecent programming, obscenity and censorship issues.
04.08	Define the laws and practices underlying contract, labor, copyright and insurance/liability issues.
05.0	Develop a project proposal and script--The student will be able to:
05.01	Identify a project goal.
05.02	Create a project budget.
05.03	Write a production script.
05.04	Develop a story-board from a script.
05.05	Develop and or respond appropriately to RFP's
06.0	Generate a production schedule--The student will be able to:
06.01	Define the segment or program type.
06.02	Identify production resources needed.
06.03	Establish viable production time frame targets.
06.04	Formulate and develop a production budget.
07.0	Plan a production set--The student will be able to:
07.01	Define set requirements for program type.
07.02	Develop and supervise set assembly/contract work.
07.03	Define needed prop, costume and other resources.
07.04	Acquire appropriate locations for segment type.

08.0	Acquire appropriate production resources--The student will be able to:
08.01	Secure project funding sources.
08.02	Acquire rights, releases and permits.
08.03	Cast talent.
08.04	Define production equipment needs.
08.05	Define personnel needs for production crew positions.
08.06	Acquire other audio and video resources and assets for production.
08.07	Define the tasks for contract professionals.
09.0	Create appropriate lighting for location and/or set productions--The student will be able to:
09.01	Determine appropriate lighting needs for production settings.
09.02	Identify locations and studio lighting types, method of use and application.
09.03	Use lighting equipment according to industry safety standards.
09.04	Define light quality in terms of intensity, color, direction and characteristics.
09.05	Light a location set with ambient/available and supplemental lighting.
09.06	Use lighting for effect to control mood and impact in production settings.
09.07	Use studio lighting master control equipment.
10.0	Operate a video camera--The student will be able to:
10.01	Use current industry standard production video equipment.
10.02	Operate camera in studio and location (field) production environments.
11.0	Shoot studio and/or location footage--The student will be able to:
11.01	Plan a shot to obtain required action/footage.
11.02	Demonstrate appropriate shot sequences, transitions and post production (edit) effects.
11.03	Control camera movement to obtain required effects.

11.04	Control lens, focal length, aperture and exposure to obtain required effects.
11.05	Set up camera and recording equipment sequence.
11.06	Perform appropriate pre-production checks of equipment function.
11.07	Perform basic routine, preventative and repair maintenance on video equipment.
11.08	Define the various recording formats and media.
11.09	Define appropriate digital compression and signal (file) types.
12.0	Record, mix and edit audio resources--The student will be able to:
12.01	Identify and select microphones for production needs.
12.02	Determine optimal microphone placement.
12.03	Set up audio recording equipment.
12.04	Establish appropriate recording conditions.
12.05	Perform appropriate pre-production check of production equipment.
12.06	Set up audio mixing console and control equipment.
12.07	Acquire library and archive sound assets.
12.08	Perform sound edits and enhancements.
12.09	Perform sound dubs and overdubs.
12.10	Record location sound.
12.11	Record studio live sound.
12.12	Prepare recorded files for production requirements
12.13	Record voice-over and soundtrack.
12.14	Perform routine, preventative and basic repair maintenance on audio equipment.
13.0	Demonstrate knowledge and skill of streaming media--The student will be able to:
13.01	Identify technology used for streaming media.

13.02	Operate technology used for steaming media.
13.03	Update, post and utilize internet resources for both audio and video.
13.04	Stream various media to include but not limited to webcasting
13.05	Post audio and video on database driven and web hosted sites for downloading and or streaming
14.0	Operate control room equipment--The student will be able to:
14.01	Define control room functions in a production.
14.02	Operate the audio console (mixer) in a production.
14.03	Operate vision control equipment.
14.04	Operate camera switching and traffic control equipment.
14.05	Operate routing switcher for production requirements.
14.06	Follow industry standards for broadcast audio/video signal and levels.
14.07	Maintain production values and continuity.
14.08	Operate (CCU) Camera Control Unit.
15.0	Organize and edit video resources--The student will be able to:
15.01	Log and organize video resources.
15.02	Operate editing hardware and software.
15.03	Digitize video resources into post-production equipment and workflow.
15.04	Edit video for script and or production requirements
15.05	Maintain continuity and production values.
15.06	Mix audio and video resources for production requirements.
15.07	Apply color correction to video footage.
15.08	Transfer finished edit to appropriate media for streaming distribution or archiving.
16.0	Design and generate graphic elements--The student will be able to:

16.01	Determine the graphic requirements for a production.
16.02	Operate graphic production software.
16.03	Produce broadcast graphic elements for titling, credits and graphic transitions.
16.04	Determine the special effects need for a production.
16.05	Set up and operate character generator equipment and software.
16.06	Generate appropriate special effects for a production.
16.07	Demonstrate an understanding of graphic image types, file
16.08	Use image editing software.
16.09	Edit graphics into the program or segment.
16.10	Demonstrate an ability to use type, color, composition and graphic elements for a specific production effect.
17.0	Direct TV/Video production or webcast--The student will be able to:
17.01	List and explain crew functions that come under the director's control.
17.02	Direct on-camera talent.
17.03	Direct crew during production.
17.04	Direct camera operation, lighting and sound recording functions.
17.05	Direct set, proper and craft services.
17.06	Oversee continuity and production values.
18.0	Plan, coordinate and manage a TV or video based production--The student will be able to:
18.01	Define the program/segment format and market.
18.02	Present a project proposal and script for approval.
18.03	Develop a production schedule.
18.04	Create a plan to acquire all needed production resources and talent.
18.05	Manage crew and staff during pre-planning and production.



18.06	Determine post-production requirements.
18.07	Coordinate post-production activities.
18.08	Conduct client approval reviews of project.
18.09	Direct final production values.
18.10	Archive and manage finished assets and originals.
18.11	Oversee broadcast/distribution to market.
18.12	Explain various techniques for program or segments promotion.
18.13	Explain the techniques and procedures of web hosts, portals, television broadcast and cable networks, syndication and public broadcasters.
19.0	Create a marketing and distribution plan--The student will be able to:
19.01	Identify potential markets.
19.02	Identify clients.
19.03	Prepare bids and proposals.
19.04	Determine distribution method and format.
19.05	Define distribution logistics and technical requirements.
19.06	Determine user interface for interactive elements.
19.07	Develop delivery schedule.
19.08	Manage duplication/replication and/or distribution activities.
19.09	Develop revenue and payment projections.
20.0	Demonstrate appropriate math skills--The student will be able to:
20.01	Solve problems for volume, weight, area, circumference and perimeter measurements for rectangles, squares, and cylinders.
20.02	Measure tolerance(s) on horizontal and vertical surfaces using millimeters, centimeters, feet and inches.
20.03	Add, subtract, multiply and divide using fractions, decimals and whole numbers.
20.04	Determine the correct purchase price, to include sales tax for a materials list containing a minimum of six items.

20.05	Demonstrate an understanding of federal, state and local taxes and their computation.
21.0	Demonstration appropriate writing skills--The student will be able to:
21.01	Write audio and video scripts for narrative, documentary, news and related script styles.
21.02	Demonstrate proper use of formats for various script styles.
21.03	Write copy for TV, Radio, and Web based delivery.
21.04	Demonstrate proper technical writing.
21.05	Demonstrate correct use of English language, grammar in writing reports about technology, plans, justifications and related industry job requirements.
22.0	Demonstrate appropriate understanding of basic science--The student will be able to:
22.01	Draw conclusions or make inferences from data.
22.02	Identify health related problems that may result from exposure to work related chemicals and hazardous materials, and know the proper precautions required for handling such materials.
22.03	Demonstrate an understanding of pressure measurement in terms of PSI, inches of mercury, and KPA.
23.0	Demonstrate employability skills--The student will be able to:
23.01	Create and write a resume and cover letter.
23.02	Prepare and develop a portfolio to be presented in appropriate format for medium.
23.03	Conduct a job search.
23.04	Secure information about a job.
23.05	Identify documents that may be required when applying for a job interview.
23.06	Complete a job application form correctly.
23.07	Demonstrate competence in job interview techniques.
23.08	Identify or demonstrate appropriate responses to criticism from employer, supervisor or other employees.
23.09	Identify acceptable work habits.
23.10	Demonstrate knowledge of how to make appropriate job changes.
23.11	Demonstrate acceptable employee health habits.

23.12	Demonstrate knowledge of the “Florida Right-To-Know Law” as recorded in Federal Statutes 29 CFR-1910, 1200.
24.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
24.01	Define entrepreneurship.
24.02	Describe the importance of entrepreneurship to the American economy.
24.03	Identify the risks involved in ownership of a business.
24.04	Identify the necessary personal characteristics of a successful entrepreneur.
24.05	Identify the business skills needed to operate a small business efficiently and effectively.
24.06	Identify the risks involved in ownership of a business.

## **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 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. 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.

### **Certificate Programs**

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

Television Studio Production (0610010513) - 12 credit hours

Digital Video Fundamentals (0610030414) - 12 credit hours

Webcast Media (0650010215) - 12 credit hours

Broadcast Production (0610020216) - 24 credit hours

Video Editing and Post Production (0609040217) - 24 credit hours

Webcast Technology (0650010218) - 24 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Interactive Media Production Technology  
**Career Cluster:** Arts, A/V Technology and Communication

**AS**

CIP Number	1610020101
Program Type	College Credit
Standard Length	65 credit hours
CTSO	Skills USA
SOC Codes (all applicable)	27-1014 – Media Artist and Animators 27-2012 – Producers and Directors 27-3099 – Media and Communication Workers, All Other
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for employment as media, multi-media, and interactive media producers. In the program, students will combine skills in critical thinking, writing, photography, video, audio, social media and web creation/design to produce both traditional, multi-media interactive media productions.

The course includes the following: basic and creative writing, reportage, journalism, digital still photography, still photography post production, videography, video post-production, audio and music recording, audio and music post-production, drawing, design, typography, website creation and design, statistics and analytics.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the media production industry; audience analysis and estimation, media literacy, interpersonal and business communications, employability skills, management, finance, community and multicultural sensitivity and environmental issues.

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 65 credit hours.

## **Standards**

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

- 01.0 Identify the information needs of various audiences across various media.
- 02.0 Demonstrate the ability to gather and evaluate appropriate information and assets to create multi-media projects.
- 03.0 Define the mass media's impact on society, responsibilities and legalities.
- 04.0 Demonstrate proficiency in still photography and still photography post-production.
- 05.0 Demonstrate proficiency in videography, lighting for videography and video post-production.
- 06.0 Demonstrate proficiency in audio recording and audio post-production.
- 07.0 Demonstrate proficiency in drawing, design and layout.
- 08.0 Demonstrate proficiency in web creation and design.
- 09.0 Create finished multi-media communications projects incorporating still photographs, video, audio, web design and publishing, reportage, feature and technical writing.
- 10.0 Demonstrate professional interpersonal and business communications skills.
- 11.0 Demonstrate proficiency in writing and reportage.



Florida Department of Education  
Student Performance Standards

**Program Title:** Interactive Media Production Technology  
**CIP Number:** 0610020101  
**Program Length:** 65 credit hours  
**SOC Code(s):** 27-1014; 27-2012; 27-3099

<b>The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. At the completion of this program, the student will be able to:</b>	
01.0	Identify the information needs of various audiences across various media--The student will be able to:
01.01	Demonstrate the ability to research audience requirements for use in crating specific content.
01.02	Critically analyze the aesthetic dimensions of past and present communications and communication trends.
01.03	Select the appropriate platforms for disseminating media to target audiences.
01.04	Select, combine and utilize the appropriate media for various audiences.
02.0	Demonstrate the ability to gather and evaluate appropriate information and assets to create multi-media projects--The student will be able to:
02.01	Demonstrate the ability to compare and contrast traditional and current production techniques.
02.02	Demonstrate proficiency in the selection of various media for multi/interactive media productions.
02.03	Analyze metrics such as Google analytics for incorporation into the determination of multi/interactive-media productions.
03.0	Define the mass media's impact on society, responsibilities and legalities--The student will be able to:
03.01	Have a fresh perspective on our multicultural world and identify and appraise the mass communication/media literacy processes that shape our cultures.
03.02	Understand historical significance, duties and career opportunities of major media books, newspapers, broadcast, advertising and public relations.
03.03	Know the laws, values and ethics established to guide media practitioners.
03.04	Engage with emerging technologies/philosophies in a changing media landscape.
03.05	Demonstrate ability to apply class concepts/critical thinking to scholarly research.
04.0	Demonstrate proficiency in still photography and still photography post-production--The student will be able to:

04.01	Demonstrate competent and safe practices in the photographic computer labs.
04.02	Demonstrate proficient camera operation.
04.03	Interpret light meter readings.
04.04	Control image depth of field and critical focus.
04.05	Effectively use different focal length lenses.
04.06	Demonstrate competency in navigating image-editing and workflow software.
04.07	Capture Raw and jpeg images, and process these images.
04.08	Proficiently scan film and prints using scanners.
04.09	Produce edited images for presentation.
04.10	Produce digital prints with appropriate contrast, density and tonality.
04.11	Use composition, cropping and point-of-view to create effective image design.
04.12	Produce a grouping of photographs that demonstrates a theme or idea effectively.
05.0	Demonstrate proficiency in videography, lighting for videography and video post-production--The student will be able to:
05.01	Exhibit team skills.
05.02	Model safe and efficient work practices.
05.03	Create appropriate lighting for set productions.
05.04	Operate a video camera.
05.05	Generate studio footage.
05.06	Use production control room equipment.
05.07	Exhibit team skills.
05.08	Model safe and efficient work practices.
05.09	Create appropriate lighting for location and set productions.
05.10	Operate a field video camera.

05.11	Record, mix and edit audio resources.
05.12	Operate control room equipment.
05.13	Organize and utilize video resources.
06.0	Demonstrate proficiency in audio recording and audio post production--The student will be able to:
06.01	Select and utilize microphones based on production parameters.
06.02	Input audio signals from microphones and other audio resources.
06.03	Import audio into various audio editing software.
06.04	Mix audio utilizing various audio post production software.
07.0	Demonstrate proficiency in drawing, design and layout--The student will be able to:
07.01	Employ the basic terminology appropriate to drawing.
07.02	Describe the individual art elements used in drawing.
07.03	Demonstrate basic principles of composition.
07.04	Define three dimensional spaces in two dimensional terms.
07.05	Demonstrate a proficiency of tools and materials.
07.06	Comprehend and demonstrate technical skills via artwork.
07.07	Define the various job categories that make up the design industry.
07.08	Discuss ethical and legal issues as they relate to the design industry.
07.09	Define basic terminology used in the design industry and its related fields.
07.10	Define visual communication and related components.
07.11	Demonstrate proper usage of design tools, equipment and materials.
07.12	Demonstrate methods for conceptualizing and visualizing ideas.
07.13	Demonstrate knowledge of composition and layout including aesthetic arrangement, placement and relationship of elements.
07.14	Demonstrate the design process as used in the graphic design industry.

07.15	Demonstrate knowledge of basic typography.
07.16	Demonstrate knowledge of measurement systems used in the graphic design industry.
08.0	Demonstrate proficiency in web creation and design--The student will be able to:
08.01	Define the various job categories that make up the graphic design industry.
08.02	Discuss ethical and legal issues as they relate to the graphic design industry.
08.03	Define basic terminology used in the graphic design industry and its related fields.
08.04	Define visual communication and related components.
08.05	Demonstrate proper usage of graphic design tools, equipment and materials.
08.06	Demonstrate methods for conceptualizing and visualizing ideas.
08.07	Demonstrate knowledge of composition and layout including aesthetic arrangement, placement and relationship of elements.
08.08	Demonstrate the design process as used in the graphic design industry.
08.09	Demonstrate knowledge of basic typography.
08.10	Demonstrate knowledge of measurement systems used in the graphic design industry.
08.11	Create web home page and sites.
08.12	Identify the terms, concepts, and components used in the internet and web environment.
08.13	Create publications for the internet incorporating graphics, such as gif and jpeg.
08.14	Utilize digital media computer software toward the creation of interactive web publishing.
08.15	Create hyperlinks between pages, documents and other sites.
08.16	Demonstrate methods for conceptualizing and visualizing ideas.
08.17	Design and create tables.
08.18	Create hyperlinked images.
08.19	Create framed documents.
08.20	Create image maps.

09.0	Create finished multi-media communications projects incorporating still photographs, video, audio, web design and publishing, reportage, feature and technical writing--The student will be able to:
09.01	Analyze audience characteristics.
09.02	Select and utilize visuals for multi/interactive media productions.
09.03	Select and utilize audio resources for multi/interactive media productions.
09.04	Combine audio and video sources for multi/interactive media productions.
09.05	Utilize web elements to disseminate multi/interactive media productions.
09.06	Track effectiveness and dissemination of interactive media productions with analytic data.
10.0	Demonstrate professional interpersonal and business communication skills--The student will be able to:
10.01	Prepare and verbally deliver factual material in a direct and logical manner.
10.02	Demonstrate scholarly research skills.
10.03	Demonstrate persuasive techniques.
10.04	Demonstrate the effective use of visual aids, technical equipment and projected images.
10.05	Demonstrate professional interviewing skills and general interpersonal communications.
10.06	Produce a body of work that demonstrates proficiency in language, spelling, mechanics and grammar.
10.07	Increase listening skills and retention of information.
11.0	Demonstrate proficiency in writing and reportage--The student will be able to:
11.01	Understand concepts of news judgment and use fact-gathering, research and revision to write and publish newspaper, magazine or online stories.
11.02	Identify legal and ethical implications, as well as restrictions on the media, and apply them to writing assignments.
11.03	Know and employ style, terms and jargon associated with the field.
11.04	Arrange and conduct interviews and build sources in a professional manner.
11.05	Define and discuss the technology, concepts and challenges of 21st century convergence journalism.

## **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 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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Radio and Television Broadcast Programming  
**Career Cluster:** Arts A/V Technology and Communication

**AS**

CIP Number	1610020202
Program Type	College Credit
Standard Length	64 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4032 – Film and Video Editors
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare the student for employment as a broadcast director.

The content includes but is not limited to: commercial or industrial TV and radio/studio assisting, camera operating, technical directing, producing video tape or film chain operating, audio controlling, gaffing, grip, or script writing. This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Radio and Television industry; planning, management, finance, technical and product skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

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 64 credit hours.

## **Standards**

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

- 01.0 Demonstrate knowledge of the television production technology program instructional system, safety procedures and trade terminology.
- 02.0 Plan a set for television production.
- 03.0 Perform lighting activities for a planned production.
- 04.0 Operate studio color television camera.
- 05.0 Perform video tape recording and editing operations.
- 06.0 Perform television production and programming activities.
- 07.0 Perform character generator and special effects generator functions.
- 08.0 Operate television studio audio control system.
- 09.0 Perform electronic news gathering (ENG) and electronic field production (EFP) equipment functions.
- 10.0 Perform basic film operations.
- 11.0 Perform routine operator preventative maintenance operations.
- 12.0 Demonstrate appropriate communication skills.
- 13.0 Demonstrate appropriate math skills.
- 14.0 Demonstrate appropriate understanding of basic science.
- 15.0 Demonstrate employability skills.
- 16.0 Demonstrate appropriate broadcast speaking manner.
- 17.0 Operate control room equipment.
- 18.0 Demonstrate radio broadcasting skills.
- 19.0 Explain and demonstrate news broadcasting.
- 20.0 Write broadcast news.
- 21.0 Explain and demonstrate ability to properly control radio traffic.
- 22.0 Write commercial copy.
- 23.0 Explain programming concepts.
- 24.0 Describe business aspects of broadcasting.
- 25.0 Explain surveys and demographics.
- 26.0 Explain rules and regulations governing radio broadcasts.
- 27.0 Perform radio broadcasting functions.
- 28.0 Demonstrate an understanding of entrepreneurship.



Florida Department of Education  
Student Performance Standards

**Program Title:** Radio and Television Broadcast Programming  
**CIP Number** 1610020202  
**Program Length:** 64 credit hours  
**SOC Code(s):** 27-4032

**The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. At the completion of this program, the student will be able to:**

01.0 Demonstrate knowledge of the television production technology program instructional system, safety procedures and trade terminology--  
The student will be able to:

01.01 Describe the operating system of the vocational program.

01.02 State and apply general safety rules for operation of equipment and learning activities in the lab.

01.03 Utilize trade terminology in the television production lab.

01.04 Utilize trade abbreviations and acronyms as appropriate.

01.05 Transport equipment safely and securely.

01.06 Store equipment in appropriate locations.

02.0 Plan a set for television production--The student will be able to:

02.01 Prepare television set for a planned production.

02.02 Draw and design a set plan to scale.

02.03 Select and arrange stage props.

02.04 Utilize hand tools to construct scene components.

02.05 Inspect and repair scenery as needed.

03.0 Perform lighting activities for a planned production--The student will be able to:

03.01 Describe types of lighting fixtures.

03.02 Identify parts of lighting fixtures.

03.03	Perform special-effects lighting.
03.04	Set-up appropriate lighting for a production.
03.05	Describe functions of master lighting panel and dimmer board.
03.06	Operate master lighting panel to dimmer board.
03.07	Analyze lighting needs for production.
03.08	Describe dangers of high intensity studio lighting.
03.09	Understand lighting theory.
04.0	Operate studio color television camera--The student will be able to:
04.01	Describe major parts of a studio camera.
04.02	Align camera for a studio production.
04.03	Perform appropriate camera movements.
04.04	Operate camera for commercial recording.
04.05	Operate camera for studio production.
04.06	Perform floor director's functions.
04.07	Understand CCU Camera Control Unit.
05.0	Perform video tape recording and editing operations--The student will be able to:
05.01	Identify and describe different video tape machines.
05.02	Describe operational parts of a video tape machine.
05.03	Operate video tape machine to record and playback.
05.04	Describe operational parts of a video cassette editor.
05.05	Perform assemble edits.
05.06	Perform insert edits.
05.07	Set up video tape machines.

05.08	Set up video cassette editor.
05.09	Recognize different video tape formats.
06.0	Perform television production and programming activities—The student will be able to:
06.01	Operate master switcher.
06.02	Operate routing switcher for production and tape dubs.
06.03	Set up machines and tuner for in-house playback.
06.04	Develop script for a program.
06.05	Draw story board for a planned production.
06.06	Direct participants in production of a program.
06.07	Perform on-camera.
06.08	Act as producer to get program from idea to air.
06.09	Operate through the lens teleprompter.
07.0	Perform character generator and special effects generator
07.01	Describe operational parts of character generator.
07.02	Set up character generator.
07.03	Describe inputs of special effects generator.
07.04	Operate special effects generator during production.
07.05	Operate character generator during production.
07.06	Demonstrate basic computer literacy.
07.07	Demonstrate knowledge of computer generated video graphics.
08.0	Operate television studio audio control system--The student will be able to:
08.01	Identify and select microphones for production.
08.02	Place microphones for maximum effect.

08.03	Describe parts of cartridge machine.
08.04	Set up cartridge machine for production.
08.05	Operate cartridge machine during recording and playback.
08.06	Describe parts of reel-to-reel tape machine.
08.07	Set up reel-to-reel tape and cassette tape machines for production.
08.08	Operate reel-to-reel tape and cassette tape machines for production.
08.09	Describe parts of a turntable.
08.10	Operate turntable for production.
08.11	Describe parts of audio mixing console.
08.12	Operate audio mixing console.
08.13	Operate cassette with search for production.
08.14	Operate compact disc sound source during production.
09.0	Perform Electronic News Gathering (ENG) and Electronic Field Production (EFP) equipment functions--The student will be able to:
09.01	Describe ENG and EFP port-a-PAC components.
09.02	Set up port-a-PAC for field production.
09.03	Operate port-a-PAC during production segments.
09.04	Complete a field production from writing to shooting to VCR electronic editing.
10.0	Perform basic film operations--The student will be able to:
10.01	Operate film editor.
10.02	Edit film for time slot.
10.03	Describe parts of Film Island.
10.04	Set-up Film Island for production.
10.05	Demonstrate skill in both cut and paste editing and transfer to tape electronic editing.

11.0	Perform routine operator preventative maintenance operations—The student will be able to:
11.01	Describe types of video connectors.
11.02	Describe types of audio connectors.
11.03	Assemble audio and video cables.
11.04	Clean tape heads on audio recording equipment.
11.05	Clean tape heads on video recording equipment.
11.06	Replace broken knobs.
11.07	Replace sliders and potentiometers.
11.08	Replace head shell/cartridge and balance tone arm.
11.09	Replace bulb in light fixture.
12.0	Demonstrate appropriate communication skills--The student will be able to:
12.01	Write logical and understandable statements, or phrases, to accurately fill out forms/invoices commonly used in business and industry.
12.02	Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area.
12.03	Read and follow written and oral instructions.
12.04	Answer and ask questions coherently and concisely.
12.05	Read critically by recognizing assumptions and implications and by evaluating ideas.
12.06	Demonstrate appropriate telephone/communication skills.
13.0	Demonstrate appropriate math skills--The student will be able to:
13.01	Solve problems for volume, weight, area, circumference and perimeter measurements for rectangles, squares, and cylinders.
13.02	Measure tolerance(s) on horizontal and vertical surfaces using millimeters, centimeters, feet and inches.
13.03	Add, subtract, multiply and divide using fractions, decimals, and whole numbers.
13.04	Determine the correct purchase price, to include sales tax for a materials list containing a minimum of six items.
13.05	Demonstrate an understanding of federal, state and local taxes and their computation.

14.0	Demonstrate appropriate understanding of basic science--The student will be able to:
14.01	Understand molecular action as a result of temperature extremes, chemical reaction, and moisture content.
14.02	Draw conclusions or make inferences from data.
14.03	Identify health related problems which may result from exposure to work related chemicals and hazardous materials, and know the proper precautions required for handling such materials.
14.04	Understand pressure measurement in terms of PSI, inches of mercury, and KPA.
15.0	Demonstrate employability skills--The student will be able to:
15.01	Conduct a job search.
15.02	Secure information about a job.
15.03	Identify documents which may be required when applying for a job interview.
15.04	Complete a job application form correctly.
15.05	Demonstrate competence in job interview techniques.
15.06	Identify or demonstrate appropriate responses to criticism from employer, supervisor or other employees.
15.07	Identify acceptable work habits.
15.08	Demonstrate knowledge of how to make job changes appropriately.
15.09	Demonstrate acceptable employee health habits.
15.10	Prepare a resume.
15.11	Prepare an audio audition tape (required).
15.12	Prepare a video audition tape (optional).
15.13	Write a letter of introduction.
15.14	Demonstrate knowledge of Radio/TV career patterns.
15.15	Demonstrate knowledge of the "Federal Right-To-Know Law" as recorded in 29 CFR-1910, 1200.
16.0	Demonstrate appropriate broadcast speaking manner--The student will be able to:
16.01	Identify and correct own vocal deficiencies.

16.02	Demonstrate his ability to breathe properly, project and control loudness, resonate his voice and vary tone, pitch and pace.
16.03	Articulate and pronounce words according to accepted standards.
16.04	Understand the basic elements of good speech.
16.05	Express feelings with voice.
16.06	Interpret copy for dramatic content.
17.0	Operate control room equipment--The student will be able to:
17.01	Demonstrate a working familiarity and understanding of the functions of an audio console (mixer).
17.02	State the characteristics of various microphone types and
17.03	Demonstrate knowledge of and ability to operate turntables, tape recorders, cart recorders and playbacks.
17.04	Handle remote sources through the console.
17.05	Demonstrate how to handle an audio portion of a deejay show and news program, putting together all the elements of audio control in radio.
17.06	Demonstrate ability to work as an audio control operator in TV or radio studio production.
17.07	Understand the ad-lib format and show proficiency in that style of broadcast.
18.0	Demonstrate radio broadcasting skills--The student will be able to:
18.01	Outline the qualifications and requirements of a radio announcer.
18.02	Demonstrate development of the skills of announcing, the various techniques of delivery and procedures according to accepted standards.
18.03	Demonstrate the ability to perform to standards before a TV camera, visually and orally.
18.04	Perform the various assignments in a professional manner, for both radio and TV, according to industry standards.
19.0	Explain and demonstrate news broadcasting--The student will be able to:
19.01	Differentiate between news, commentary, and editorials.
19.02	Demonstrate ability to mark, edit, and present news in an acceptable manner.
19.03	Demonstrate ability to use the various equipment of a newsroom.
19.04	Identify the various sources of news and how they are used.

19.05	Demonstrate ability to ad-lib from the scene, interview guests, and type news stories.
19.06	Understand and interpret criticism of broadcast news.
20.0	Write broadcast news--The student will be able to:
20.01	List the elements that constitute news materials and evaluate them.
20.02	Demonstrate ability to write news stories in broadcast style.
20.03	Be able to use the broadcast style page format.
20.04	Understand the technique of using present of past perfect tense in writing broadcast news.
21.0	Explain and demonstrate ability to properly control radio traffic--The student will be able to:
21.01	State the duties of the traffic department.
21.02	List the elements and procedures of log-keeping.
21.03	Demonstrate a working knowledge of the rules and regulations pertaining to traffic control and standards of performance.
21.04	Demonstrate the ability to create a program log.
22.0	Write commercial copy--The student will be able to:
22.01	Explain the job of a copy writer and outline the elements of good copy.
22.02	Demonstrate ability to write commercial continuity in its various forms.
22.03	Demonstrate ability to select and utilize music and sound effects in the production of recorded copy.
22.04	Demonstrate ability to edit, splice, dub, overlap sound or otherwise utilize various production techniques.
23.0	Explain programming concepts--The student will be able to:
23.01	List and explain the various functions under the control of the program director.
23.02	Differentiate between formats used in large and small markets.
23.03	Explain various methods of station promotion, including procedures and rules.
23.04	Explain the techniques and procedures of networks, syndication, news, talk, sports, special events, public service and music programs.
23.05	Identify the various music formats used in contemporary radio.



23.06	Understand FCC rules dealing with indecent programming and obscenity.
24.0	Explain business aspects of broadcasting--The student will be able to:
24.01	Explain the determination of cost and expense involved in station operation, the financial structure, the evaluation of time to the station and its clients.
24.02	List procedures and techniques of radio sales and demonstrate the ability to use maps, rate cards, contracts, etc., in accordance with station practice.
24.03	Explain the requirements and regulations of station ownership.
24.04	Describe the development of media advertising and explain the various forms utilized in the industry today.
25.0	Explain surveys and demographics--The student will be able to:
25.01	Explain the methods of measurement used by broadcasters and evaluate their function in the overall operation of a station.
25.02	Outline the methodology of pulse, ARB, and explain the use of the SRDS.
26.0	Explain rules and regulations governing radio broadcasts--The student will be able:
26.01	Demonstrate an understanding of rules and regulations governing licenses, measurement and records, political broadcasts, and lottery laws.
26.02	Will show an understanding of the features in broadcasting magazine including the update on all broadcasting litigation and lawmaking.
27.0	Perform radio broadcasting functions--The student will be able to:
27.01	Perform to high standards in the role of audio operator, announcer, deejay, newsman, interviewer and commercial production, in varied format situations.
28.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
28.01	Define entrepreneurship.
28.02	Describe the importance of entrepreneurship to the American economy.
28.03	List the advantages and disadvantages of business ownership.
28.04	Identify the risk involved in owning a business.
28.05	Identify the personal characteristics of a successful entrepreneur.
28.06	Identify the business skills needed to operate a small business efficiently and effectively.

## **Additional Information**

### **Laboratory Activities**

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

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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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Digital Media/Multimedia Technology  
**Career Cluster:** Arts A/V Technology and Communication

**AS**

CIP Number	1611080102
Program Type	College Credit
Standard Length	64 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4011 – Audio and Video Equipment Technicians
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for initial employment as the following professions: digital media/multimedia programmer, digital media/multimedia project manager, web designer/web developer/web production artist, audio visual technician/audio technician, lighting technician, graphic animator, graphic designer, videographer/editor, video engineer, digital media/multimedia producer, technical director, instructional designer or interface designer. This program may also be used to provide supplemental training for persons previously or currently employed in these occupations.

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.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Digital Media/Multimedia industry: planning, management, finance, technical and product 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 64 credit hours.

## **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 projects and presentations utilizing a variety of digital media/multimedia technologies.
- 03.0 Design and generate still imagery/graphics.
- 04.0 Design and generate video and/or animations in a multimedia project.
- 05.0 Design and execute audio technology for a digital media/multimedia project.
- 06.0 Use computer applications for digital media/multimedia projects.
- 07.0 Produce digital media/multimedia projects.
- 08.0 Demonstrate appropriate communication skills.
- 09.0 Demonstrate appropriate math skills.
- 10.0 Demonstrate employability skills.
- 11.0 Demonstrate an understanding of entrepreneurship.

Florida Department of Education  
Student Performance Standards

**Program Title:** Digital Media/Multimedia Technology  
**CIP Numbers:** 1611080102  
**Program Length:** 64 credit hours  
**SOC Code(s):** 27-4011

**The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. 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 with digital media/multimedia hardware and software.
01.03	Analyze equipment performance to meet industry standards.
02.0	Create projects and presentations utilizing industry standard 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	Assess digital media technology to determine 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 still imagery/graphics--The student will be able to:
03.01	Capture, manipulate and apply a still imagery/graphics in a digital media/multimedia project.
03.02	Differentiate and optimize still image formats.
03.03	Apply elements of design, principles of composition and qualities of light to still images/graphics in a digital media/multimedia project.
03.04	Understand the properties of light and how to measure its intensity and color.
03.05	Integrate the use of photographic special effects for a digital media/multimedia production.
03.06	Evaluate photographic quality using appropriate application.

04.0	Design and generate video and/or animations in a multimedia project--The student will be able to:
04.01	Capture, manipulate and apply a video and/or animation image in a digital media/multimedia project.
04.02	Differentiate and optimize video and/or animation formats.
04.03	Apply elements of design, principles of composition and qualities of light to video and/or animation in a digital media/multimedia project.
04.04	Integrate the use of video special effects into digital media/multimedia project.
04.05	Evaluate moving image quality using appropriate application standards.
04.06	Shoot and edit video or create animation to production specifications
04.07	Understand the properties of light and how to measure its intensity and color.
05.0	Design and execute audio technology for a digital media/multimedia project--The student will be able to:
05.01	Capture, manipulate and apply audio and sound in a digital media/multimedia project.
05.02	Differentiate and optimize formats for audio and sound.
05.03	Evaluate production needs for microphone applications.
05.04	Demonstrate proficiency with a multi-channel audio mixer.
05.05	Generate strategies for electronic editing.
05.06	Generate strategies for multi-track recording to industry standards.
05.07	Interpret the applications of copyright laws as they apply to prerecorded materials.
06.0	Use computer applications for digital media/multimedia projects--The student will be able to:
06.01	Demonstrate a basic proficiency with digital media/multimedia software packages.
06.02	Design and produce digital media/multimedia content.
06.03	Test, edit and de-bug digital media/multimedia content.
06.04	Present digital media/multimedia content.
07.0	Produce digital media/multimedia projects--The student will be able to:
07.01	Assess needs of the end user.

07.02	Analyze resources available.
07.03	Select and apply appropriate media.
07.04	Create and write a script appropriate to the media selected.
07.05	Create and prepare a storyboard appropriate to the media selected.
07.06	Design navigational structure for interactive environments.
07.07	Organize resources and personnel to implement production.
07.08	Synthesize component elements of available digital media/multimedia technologies into a unified project.
07.09	Appraise the quality and end user application of finished project.
08.0	Demonstrate appropriate communication skills--The student will be able to:
08.01	Write logical and understandable statements, or phrases, to accurately fill out forms/invoices commonly used in business and industry.
08.02	Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area.
08.03	Read and follow written and oral instructions.
08.04	Answer and ask questions coherently and concisely.
08.05	Read critically by recognizing assumptions and implications and by evaluating ideas.
08.06	Demonstrate appropriate communication skills.
09.0	Demonstrate appropriate math skills--The student will be able to:
09.01	Solve problems for volume, weight, area, circumference and perimeter measurements for rectangles, squares, and cylinders.
09.02	Add, subtract, multiply and divide using fractions, decimals, and whole numbers.
09.03	Determine the correct purchase price, to include sales tax for a materials list containing a minimum of six items.
10.0	Demonstrate employability skills--The student will be able to:
10.01	Create and write a résumé and cover letter.
10.02	Prepare and develop a portfolio, to be presented in appropriate format for medium.
10.03	Identify acceptable work habits.



10.04	Demonstrate competence in job interview techniques.
10.05	Formulate strategy for job search, employment and career after graduation.
10.06	Describe "Right-to-Know" Law as recorded in (29 CFR-1910.1200)
11.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
11.01	Define entrepreneurship.
11.02	Describe the importance of entrepreneurship to the American economy.
11.03	List the advantages and disadvantages of business ownership.
11.04	Identify the risks involved in ownership of a business.
11.05	Identify the necessary personal characteristics of a successful entrepreneur.
11.06	Identify the business skills needed to operate a small business efficiently and effectively.
11.07	Prepare a project budget reflecting revenue, cost, overhead and operating expenses.

## **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 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. 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.

### **Certificate Programs**

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

- Digital Media/Multimedia Authoring (0609070209) - 12 credit hours
- Digital Media/Multimedia Instructional Technology (0609070211) - 15 credit hours
- Digital Media/Multimedia Production (0610010507) - 15 credit hours
- Digital Media/Multimedia Video Production (0609070210) - 12 credit hours
- Digital Media/Multimedia Presentation (0609070219) - 17 credit hours
- Digital Media/Multimedia Web Production (0650010208) - 15 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

## **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Graphics Technology  
**Career Cluster:** Arts, A/V Technology and Communications

**AS**

CIP Number	1611080300
Program Type	College Credit
Standard Length	64 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1024 – Graphic Designers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers such as Broadcast Designer, Production Artist, Illustrator, Desktop Publisher, Graphic Designer, Production Manager, Presentation Specialist, or Web Designer in the Arts, A/V Technology and Communications 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 Communications career cluster.

The content includes but is not limited to communication skills, team skills, human relations and employability skills, safe and efficient work practices, illustration, style/technique medium, concept formulation, design, drawing, display/exhibit design, layout, production skills, printing processes, use of industry tools and equipment, use and care of materials, use of current industry standards/practices/techniques, typography, photographic procedures, color theorem, marketing/advertising theorem, TV graphics, electronic content, and portfolio development.

Programs may include specialization areas such as: animation, interactive/multimedia design, graphic arts, graphic design, environmental graphics, motion graphics, or 3-D.

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

**Program Structure**

This program is a planned sequence of instruction consisting of 64 credit hours.

## **Standards**

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

- 01.0 Demonstrate effective communication skills.
- 02.0 Demonstrate team skills.
- 03.0 Demonstrate safe and efficient work practices.
- 04.0 Perform raster and vector based illustration and graphic development.
- 05.0 Formulate concepts/theory.
- 06.0 Apply design theories.
- 07.0 Demonstrate drawing techniques.
- 08.0 Demonstrate creative use of typography.
- 09.0 Create exhibit/display designs.
- 10.0 Create advertising layouts.
- 11.0 Demonstrate production skills.
- 12.0 Interpret printing processes.
- 13.0 Demonstrate knowledge of current industry standards, practices, and techniques.
- 14.0 Interpret photographic procedures.
- 15.0 Apply marketing/advertising principles.
- 16.0 Apply color theories.
- 17.0 Demonstrate industry level presentation procedures
- 18.0 Design television graphics/motion graphics.
- 19.0 Utilize computer hardware, software, networks and peripherals for the production of electronic content.
- 20.0 Create electronic content.
- 21.0 Demonstrate appropriate math skills.
- 22.0 Demonstrate appropriate understanding of basic science.
- 23.0 Demonstrate employability skills.
- 24.0 Demonstrate an understanding of entrepreneurship.
- 25.0 Demonstrate proper writing skills.

Florida Department of Education  
Student Performance Standards

Program Title: Graphics Technology  
 CIP Numbers: 1611080300  
 Program Length: 64 credit hours  
 SOC Code(s): 27-1024

**The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. At the completion of this program, the student will be able to:**

01.0	Demonstrate effective communication skills--The student will be able to:
01.01	Demonstrate presentation skills.
01.02	Prepare written correspondence.
01.03	Demonstrate effective oral communication skills.
01.04	Read and interpret written and oral instructions.
02.0	Demonstrate team skills--The student will be able to:
02.01	Demonstrate project management abilities.
02.02	Demonstrate ability to work as part of a team.
03.0	Demonstrate safe and efficient work practices--The student will be able to:
03.01	Follow industry rules, safety regulations and policies.
03.02	Demonstrate proper use of toxic materials.
03.03	Demonstrate awareness of appropriate ergonomics.
03.04	Demonstrate proper care of equipment.
03.05	Demonstrate typical workplace tasks in a timely manner.
04.0	Perform raster and vector based illustration and graphic development--The student will be able to:
04.01	Demonstrate versatile illustration styles and techniques.
04.02	Demonstrate knowledge of methods and materials.

04.03	Create computer illustrations.
04.04	Identify recognized illustrators and renowned works.
05.0	Formulate concept/theory--The student will be able to:
05.01	Select appropriate style or technique to problem solving.
05.02	Display creative talent and ingenuity.
05.03	Apply principles of design.
05.04	Demonstrate the design process.
06.0	Apply design theories--The student will be able to:
06.01	Create a design in black and white and colors.
06.02	Create various mockups, dummies, and comprehensive layouts in a variety of formats.
06.03	Evaluate use of design principles utilized in various graphic design applications.
07.0	Demonstrate drawing techniques--The student will be able to:
07.01	Draw three dimensional shapes.
07.02	Draw still life.
07.03	Draw figures.
07.04	Demonstrate use of perspective.
07.05	Identify artwork and artists of historical significance.
08.0	Demonstrate creative uses of typography--The student will be able to:
08.01	Develop appropriate use of type styles and letter forms.
08.02	Demonstrate application of typographical specifications.
08.03	Apply type construction design.
08.04	Apply proper letters and line spaces for typesetting.
08.05	Develop working knowledge of type spacing.

08.06	Demonstrate principles of typography in design project.
08.07	Utilize a desktop computer and industry standard software for type production.
09.0	Create exhibit/display designs--The student will be able to:
09.01	Apply 2D or 3D design principles.
09.02	Construct scale models.
09.03	Indicate proper specifications for design.
09.04	Coordinate production of displays and exhibits.
10.0	Create advertising layouts--The student will be able to:
10.01	Identify advertising needs and develop appropriate solution.
10.02	Produce comprehensive layouts for advertising in newspaper, advertising, magazines, billboards, and an advertising campaign.
11.0	Demonstrate production skills--The student will be able to:
11.01	Size photographs and illustrations.
11.02	Demonstrate correct preparation of electronic files.
11.03	Demonstrate knowledge of traditional (non-electronic) production techniques.
12.0	Interpret printing processes--The student will be able to:
12.01	Determine methods of printing and specialty printing methods.
12.02	Select appropriate substrates and inks for projects.
12.03	Explain color separation process.
12.04	Identify and specify half-tone and line negatives.
12.05	Interpret signature and imposition procedures.
12.06	Analyze and identify method of proofing.
12.07	Explain basic print process.
13.0	Demonstrate knowledge of current industry standards, practices, and techniques--The student will be able to:



13.01	Explain copyright procedures.
13.02	Use industry terminology.
13.03	Identify industry practice and procedures.
13.04	Explain importance of meeting deadlines.
13.05	Acquire up-to-date in-field technology.
13.06	Learn how to cope with stress.
13.07	Adjust to work conditions.
14.0	Interpret photographic procedures--The student will be able to:
14.01	Describe how to coordinate photographic procedures with photographer.
14.02	Perform cropping and scaling.
14.03	Demonstrate understanding of photographic terminology.
14.04	Operate camera.
14.05	Create an artistic photographic image.
15.0	Apply marketing/advertising principles--The student will be able to:
15.01	Apply marketing/advertising principles.
15.02	Identify customer needs.
15.03	Identify target market.
15.04	Prepare cost estimate.
15.05	Analyze marketing potential.
15.06	Recognize proper use of specialty services (supplies, specialties).
15.07	Identify client marketing objective.
15.08	Identify client advertising objective.
15.09	Understand an advertising agency's structure and procedures.

16.0	Apply color theories--The student will be able to:
16.01	Apply knowledge of color theory.
16.02	Demonstrate knowledge of industry standard color systems.
17.0	Demonstrate industry level presentation procedures--The student will be able to:
17.01	Demonstrate mounting and matting procedure.
17.02	Demonstrate industry presentation procedure and techniques.
17.03	Prepare industry level portfolio.
18.0	Design television graphics/motion graphics--The student will be able to:
18.01	Produce storyboards.
18.02	Design graphics for broadcast and or video based delivery medium.
19.0	Utilize computer hardware, software, networks, and peripherals for the production of electronic content--The student will be able to:
19.01	Demonstrate understanding of various platforms, operating systems, hardware, software, peripherals, network issues, and compatibility.
20.0	Create electronic content--The student will be able to:
20.01	Create vector or raster based, file formats.
20.02	Create interactive or web sites.
21.0	Demonstrate appropriate math skills--The student will be able to:
21.01	Solve problems for volume, weight, area, circumference and perimeter measurements for rectangles, squares, and cylinders.
21.02	Measure tolerance(s) on horizontal and vertical surfaces using millimeters, centimeters, feet and inches.
21.03	Add, subtract, multiply and divide using fractions, decimals, and whole numbers.
21.04	Determine the correct purchase price, to include sales tax for a materials list containing a minimum of six items.
21.05	Demonstrate an understanding of federal, state and local taxes and their computation.
22.0	Demonstrate appropriate understanding of basic science--The student will be able to:
22.01	Understand molecular action as a result of temperature extremes, chemical reaction, and moisture content.

22.02	Draw conclusions or make inferences from data.
22.03	Identify health related problems that may result from exposure to work related chemicals and hazardous materials, and know the proper precautions required for handling such materials.
22.04	Understand pressure measurement in terms of P.S.I., inches of mercury, and K.P.A.
23.0	Demonstrate employability skills--The student will be able to:
23.01	Create a résumé.
23.02	Conduct a job search.
23.03	Secure information about a job.
23.04	Identify documents that may be required when applying for a job interview.
23.05	Complete a job application form correctly.
23.06	Demonstrate competence in job interview techniques.
23.07	Identify or demonstrate appropriate responses to criticism from employer, supervisor or other employees.
23.08	Identify acceptable work habits.
23.09	Demonstrate knowledge of how to make appropriate job changes.
23.10	Demonstrate acceptable employee health habits.
23.11	Demonstrate knowledge of the "Florida Right-To-Know Law" as recorded in Florida Statutes Chapter 442.
24.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
24.01	Define entrepreneurship.
24.02	Describe the importance of entrepreneurship to the American economy.
24.03	List the advantages and disadvantages of business ownership.
24.04	Identify the risks involved in ownership of a business.
24.05	Identify the necessary personal characteristics of a successful entrepreneur.
24.06	Identify the business skills needed to operate a small business efficiently and effectively.
25.0	Demonstration proper writing skills--The student will be able to:

25.01	Demonstrate knowledge and skill of streaming media.
25.02	Identify technology used for streaming media.
25.03	Operate technology used for streaming media.
25.04	Update post and utilize internet resources for both audio and video.
25.05	Stream various media to include but not limited to webcasting.
25.06	Post audio and video on database driven and web hosted sites for downloading and or streaming.

## **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.

### **Certificate Programs**

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

- Graphic Design Support (0611080302) – 15 credit hours
- Interactive Media Support (0650010203) – 15 credit hours
- Graphic Design Production (0611080303) – 24 credit hours
- Interactive Media Production (0611080304) – 24 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:  
<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Graphic Arts Technology  
**Career Cluster:** Arts A/V Technology and Communication

**AS**

CIP Number	1611080301
Program Type	College Credit
Standard Length	64 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1024 – Graphic Designers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for employment as printing operations managers. This program also provides supplemental training for persons previously or currently employed in this occupation.

The course content includes the following: pre-press, press and post-press operations, administration, copy preparation, stripping black and white, line graphic photo processes, offset presswork, estimating, graphic arts halftone processes and color reproduction technology. The course content should also include training in communication, leadership, human relations and employability skills; and safe, efficient work practices.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Graphic Arts industry; planning, management, finance, technical and product skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

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 64 credit hours.



## **Standards**

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

- 01.0 Perform reproduction process operations.
- 02.0 Perform estimating operations.
- 03.0 Perform graphic design operations.
- 04.0 Perform typographical operations.
- 05.0 Perform copy preparation operations.
- 06.0 Perform line graphic photo operations.
- 07.0 Perform graphic arts halftone operations.
- 08.0 Perform color reproduction operations.
- 09.0 Perform stripping operations.
- 10.0 Perform proofing and plate-making operations.
- 11.0 Perform offset operations.
- 12.0 Perform finishing operations.
- 13.0 Demonstrate appropriate communication skills.
- 14.0 Demonstrate appropriate math skills.
- 15.0 Demonstrate appropriate understanding of basic science.
- 16.0 Demonstrate employability skills.
- 17.0 Demonstrate an understanding of entrepreneurship.

Florida Department of Education  
Student Performance Standards

Program Title: Graphic Arts Technology  
 CIP Numbers: 1611080301  
 Program Length: 64 credit hours  
 SOC Code(s): 27-1024

**The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. At the completion of this program, the student will be able to:**

01.0	Perform reproduction process operations--The student will be able to:
01.01	Identify the equipment and materials used in reproduction process operations, their parts and functions and the safety rules relating to their operation.
01.02	Set up and operate reproduction tools and equipment.
01.03	Perform operator maintenance on reproduction equipment.
01.04	Identify and explain the scope, purpose, size and products of the graphic communications industry by identifying various statistics that relate to its existence.
01.05	Trace the evolution of writing, kinds of communications, materials used and printing by identifying and recalling times, cultures and specific inventions.
01.06	Analyze various reproduction processing methods such as: letterpress, gravure, offset lithography, screen, flexography and electronic.
01.07	Compare and contrast the various reproduction processes to distinguish the strengths and weaknesses of each.
01.08	Explain the value of planning and design to the graphic communication process by identifying principles of design and the steps used in the planning of layouts.
01.09	Analyze the various printing surfaces by contrast and comparison to a variety of elements in each process to distinguish the difference in each surface.
01.10	Evaluate printing processes by judging advantages and disadvantages of each.
01.11	Define terms used in mark-up of copy for composition by being able to recognize marks, instructions and other data.
01.12	Place in sequential order the production steps of a printing job from conception to completion.
01.13	Define terms used in making a paste-up or mechanical.
01.14	Define and explain the elements of typography and their value to the printing and design process.
01.15	Analyze typographic terms.

01.16	Analyze the current systems of composition by comparison and contrast and by being able to categorize and distinguish each.
01.17	Define and explain the terms and methodology used in commercial and process photography as they relate to the printing processes.
01.18	Analyze plates used in the various printing processes.
01.19	Define and explain the principles and generalizations in the use of color in design of printing.
01.20	Define and explain the history of inks, substrates and differences between printing processes.
01.21	Define and explain the history of paper and basic components in paper by recalling items used in place of paper and identifying the steps used in the manufacture of paper.
01.22	List and explain career opportunities in printing.
01.23	Analyze the difference between artist use and production use of printing.
01.24	Set up and operate machine used in reproduction process operation in accordance with manufacturer's specifications.
01.25	Perform operator maintenance on machine used in reproduction process operation in accordance with manufacturer's specifications.
02.0	Performing estimating operations--The student will be able to:
02.01	Identify the equipment and materials used in estimating operations, their parts and functions and the safety rules relating to their operation.
02.02	Define and explain the methods of reproduction illustrated by offset and letter press.
02.03	Define and explain the organization and management of a well organized printing company by identifying its organizational elements.
02.04	Define and explain an estimator's duties including the knowledge of categories of production pertaining to estimating.
02.05	Define and explain the role and responsibility of the estimator in a printing plant.
02.06	Define and explain the sources of information available to the estimator.
02.07	Define and explain the factors that must be considered by the estimator in preparing an estimate such as standard production times, budgeted hour cost rates, outside purchased services and material costs.
02.08	Analyze terms used in estimating.
02.09	Place in sequential order the progressive steps for preparing an estimate.
02.10	Define and explain the principle characteristics of the different papers used in the printing process.
02.11	List the job tasks that usually appear on an estimating form.

02.12	List the job tasks that usually appear on an estimating form in the sequential order in which they are usually performed.
02.13	Apply formula for computing weight of paper stock.
02.14	Define and explain basic sheet sizes by listing the paper categories with the basic sheet size for each.
02.15	Prepare costs estimates utilizing given items, costs and specifications for a one-color, one-up job.
02.16	Prepare costs estimates utilizing given items, costs and specifications for a one-color, multiple.
02.17	Prepare cost estimates utilizing given items, costs and specifications for a one-color, step job.
02.18	Prepare cost estimates utilizing given items, costs and specifications for a one-color, four-page job.
02.19	Prepare cost estimates utilizing given items, costs and specifications for a one-color, eight-page job.
02.20	Prepare cost estimates utilizing given items, costs and specifications for a one color, sixteen-page folded, saddle stitched job.
03.0	Perform graphic design operations--The student will be able to:
03.01	Identify the equipment and materials used in graphic design operations, their parts and functions and the safety rules relating to their operation.
03.02	Set up and operate graphic design operation tools and equipment.
03.03	Perform operator maintenance on graphic design operation equipment.
03.04	Prepare thumbnail layout.
03.05	Prepare rough layout.
03.06	Prepare comprehensive layout including finish working dummy.
03.07	Size and proportion photographs, line drawings and other copy elements.
03.08	Copy fit and mark up (specify type sizes and styles).
04.0	Perform typographical operations--The student will be able to:
04.01	Identify the equipment and materials used in typographical operations, their parts and functions and the safety rules relating to their operation.
04.02	Set up and operate typographical tools and equipment.
04.03	Perform operator maintenance on typographical equipment.
04.04	Define and explain typographic terms for measurement.

04.05	Set up and proofread type by a variety of means.
04.06	Analyze and solve printing measurement problems using a group of specific facts, a system of logic and arithmetic based on printer's measurements.
04.07	Set up and operate a variety of typesetting machines.
04.08	Evaluate printed typed samples for visual spacing to mechanical spacing and certain letter combinations to other letter combinations and produce examples.
04.09	Define terms used in typesetting and typography and explain the difference.
04.10	Define and explain terms that deal with type identification.
04.11	Define and explain the elements of typography and their values in printing and design.
04.12	Solve copy fitting problems by applying typographic principles.
04.13	Evaluate typesetting systems by judging their advantages and their disadvantages.
04.14	Apply the principles of several copy fitting systems for counting manuscripts by predicting keystrokes in each system.
04.15	Perform manual, automatic and semi-automatic justification decisions.
05.0	Perform copy preparation operations--The student will be able to:
05.01	Identify the equipment and materials used in copy preparation operations, their parts and functions and the safety rules relating to their operation.
05.02	Set up and operate copy preparation tools and equipment.
05.03	Perform operator maintenance on copy preparation equipment.
05.04	Define and explain the scope and purpose of copy preparation.
05.05	Define and explain terms used in copy preparation.
05.06	Define and explain career opportunities preparation.
05.07	Apply the principles of mechanical paste-up using printed type proofs.
05.08	Define, explain and demonstrate how to scale by diagonal line method.
05.09	Define, explain and demonstrate the use of the proportion wheel.
05.10	Apply the use of the proportion wheel to various copy situations.
05.11	Define, explain and demonstrate layout for mechanicals.

05.12	Define and explain the different types of light sensitive materials used on copy preparation.
05.13	Define, explain and apply the elements of mechanical masking.
05.14	Explain and demonstrate the use of a process color chart such as a Murphy color wheel when specifying color breaks.
05.15	Demonstrate the use of amberlith by cutting to the specific areas where color is to be masked in basic art drawings.
05.16	Demonstrate application of room light film materials.
05.17	Paste up mechanical elements including keyline for photographs and tint blocks; and ruling.
05.18	Prepare tissue overlay and specify color break, tint percentages, and reverses.
05.19	Check and compare completed mechanical to comprehensive layout for final proofing.
06.0	Perform line graphic photo operations--The student will be able to:
06.01	Identify the equipment and materials used in line graphic photo operations, their parts and functions and the safety rules relating to their operations.
06.02	Set up and operate line graphic photo tools and equipment.
06.03	Perform operator maintenance on line graphic photo equipment.
06.04	Analyze and solve lithographic scaling problems by analyzing facts, calculating proper sizes or percentages and stating solutions in appropriate terms.
06.05	Define and explain the photographic record.
06.06	Define and explain terms relating to film construction.
06.07	Define and explain characteristics of film relating to speed, contrast and color.
06.08	Define and explain terms relating to line photography.
06.09	Define and explain terms relating to electromagnetic energy and spectrum.
06.10	Demonstrate the application and alignment of camera planes and working parts.
06.11	Operate a process camera by making various adjustments and by making a series of negatives to produce appropriate results using a variety of photographic materials.
06.12	Demonstrate the application and limitation of the relationship between time, F-stop, exposure and light intensity by using a reflection density guide and interpreting results.
06.13	Define and explain specific terms in relation to a process camera lens.
06.14	Define and explain lens aberrations and flare.

06.15	Define and explain the law of inverse squares, law of reflection, and law of reflection of light.
06.16	Demonstrate application and limitation of the relationship between bellows extension, exposure and F-stops by using formulas, charts, diaphragm control systems and interpret results.
06.17	Demonstrate the mixing of photographic chemicals for processing of photographic materials by identifying ratios, recognizing terms and different chemical and mixing them when necessary.
06.18	Operate a vacuum frame and use a variety of films, copy and procedures.
06.19	Demonstrate application and procedures to produce film negatives and positives with a variety of films, equipment and conditions.
06.20	Demonstrate the use of a reflection density guide by establishing a standard under a given set of conditions for prediction, control and standardization of results.
06.21	Demonstrate the use of a density guide and the arithmetic behind it by identifying step relationships, explaining exposure changes to steps, by being able to explain changes in density and by confirming them in laboratory practice.
06.22	Define and explain terms relating to photographic filters used in process photography.
06.23	Demonstrate the use of filters in laboratory projects.
06.24	Define and explain the need and value of establishing and maintaining standardized procedures.
07.0	Perform graphic arts halftone operations--The student will be able to:
07.01	Identify the equipment and materials used in graphic arts halftone operations, their parts and functions and the safety rules relating to their operation.
07.02	Set up and operate graphic arts halftone tools and equipment.
07.03	Perform operator maintenance on graphic arts halftone equipment.
07.04	Define halftone terminology.
07.05	Calibrate a reflection densitometer to manufacturer's specifications.
07.06	Compare and contrast the funding of the reflection densitometer with the Kodak Density Guide.
07.07	Solve a variety of exposure problems using an exposure computer.
07.08	Solve a variety of exposure problems using neutral density filters.
07.09	Demonstrate and explain a variety of special films such as litho pan, rapid access and room light.
07.10	Evaluate a typical printed halftone under normal laboratory conditions and determine the best possible exposure combination to help establish laboratory standards halftone photography.
07.11	Develop sets of directions for the major basics of halftone photography, basic exposure, basic density range of the contact screen, basic density of the copy, basic flash and basic material on which to print on.

07.12	Solve a variety of problems by applying the principles of densitometry and exposure.
08.0	Perform color reproduction operations--The student will be able to:
08.01	Identify the equipment and materials used in color reproduction operations, their parts and functions and the safety rules relating to their operation.
08.02	Set up and operate color reproduction tools and equipment.
08.03	Perform operator maintenance on color reproduction equipment.
08.04	Apply the principles of visible light by constructing a spectrograph and placing the major subdivisions of white light in their proper position according to scientific theory.
08.05	Define and explain the interrelationship of light and color.
08.06	Define and explain the principles of color theory as they apply to process printing.
08.07	Define and explain the difference between additive and subtractive color.
08.08	Define and explain the color absorption/reflection theory as it applies to process color filters and printing inks.
08.09	Compare and contrast color separation systems for direct, indirect and electronic scanning.
08.10	Interpret manufacturer's film data sheets of various applicable films.
08.11	Define and explain densitometry and sensitometry.
08.12	Apply the principles of densitometry and sensitometry to establish local laboratory standards.
08.13	Define and explain the requirements for photographic color separation by listing the materials, equipment, facilities and special considerations required in the process.
08.14	Define and explain the requirements for color production by graphing and interpreting the deficiencies of printing inks.
09.0	Perform stripping operations--The student will be able to:
09.01	Identify the equipment and materials used in stripping operations, their parts and functions and the safety rules relating to their operation.
09.02	Set up and operate stripping operations tools and equipment.
09.03	Perform operator maintenance on stripping operations equipment.
09.04	Define and explain terms used in stripping.
09.05	Define and explain stripping as a career opportunity.
09.06	Analyze the various approaches to stripping by comparing and contrasting pre-printed masking sheets with conventional non-printed masking sheets.



09.07	Identify the parts of a contact frame and point light source and explain their use.
09.08	Produce contacts using orthochromatic and duplicating film using transmission density guide and standard time and temperature development.
09.09	Identify equipment and materials used in the stripping function and the safety rules pertaining to each.
09.10	Apply basic principles of stripping using T-square and triangle to align, position and tape film.
09.11	Prepare working dummy and produce a one-color, one-up layout.
09.12	Prepare working dummy and produce a one-color, multiple layout.
09.13	Define and explain methodology relating to step-and-repeat by choosing or recognizing the different procedures relating to particular situations.
09.14	Prepare working dummy and produce a one-color, step layout.
09.15	Prepare working dummy and produce a one-color, four-page layout.
09.16	Prepare working dummy and produce a one-color, eight-page layout.
09.17	Demonstrate the cutting of Rubylith masks by trapping to key line negatives.
09.18	Prepare a working dummy and apply principles of a pin-register system to produce a multiple-burn exposure layout (halftone and screen tints).
09.19	Prepare a working dummy and apply principles of a pin-register system to produce and strip a multi-flat color layout.
09.20	Produce composed film from multi-flat color layout and strip in position.
09.21	Inspect and evaluate flats to original mechanical.
10.0	Perform proofing and plate making operations--The student will be able to:
10.01	Identify the equipment and materials used in proofing and plate making operations, their parts and functions and the safety rules relating to their operation.
10.02	Set up and operate proofing and plate making tools and equipment.
10.03	Perform operator maintenance on proofing and plate making equipment.
10.04	Identify equipment and materials used in proofing and plate making to obtain proper exposures using a transmission density guide.
10.05	Produce proofs on Diazo, silver and color proofing materials.
10.06	Inspect and evaluate proofs to original mechanical.
10.07	Identify, contrast and compare image carriers such as paper, photo direct, foil, aluminum additive and aluminum subtractive for run length and quality to suit customer specifications.

10.08	Process paper, photo direct, foil, aluminum additive and aluminum subtractive image carriers to manufacturer specifications.
10.09	Inspect and evaluate plates to proofs.
10.10	File, handle and retrieve flats and plates.
11.0	Perform offset operations--The student will be able to:
11.01	Identify the equipment and materials used in offset presswork operations, their parts and functions and the safety rules, rules relating to their operation.
11.02	Set up and operate offset presswork tools and equipment.
11.03	Perform operator maintenance on offset presswork equipment.
11.04	Define and explain the basic principle of the lithographic process.
11.05	Compare and contrast a single-sheet feeder, stream-fed, web-fed systems.
11.06	Compare and contrast deliver systems for sheet- and web-fed systems.
11.07	Compare and contrast register systems such as side-guide, pull-guide and head register.
11.08	Compare and contrast ink and moisture system for sheet- and web-fed systems.
11.09	Explain make ready procedures in proper sequence in preparation for actual production.
11.10	Apply basic principles of offset lithography pertaining to dampening systems (ducted and continuous).
11.11	Apply basic principles of offset lithography pertaining to fountain solutions chemical components (acid, alkaline and neutral).
11.12	Apply basic principles of offset lithography pertaining to pH control and its effects on the lithographic process.
11.13	Apply basic principles of offset lithography pertaining to interrelationships of paper.
11.14	Demonstrate the inking system by identifying each part and making proper adjustments.
11.15	Make ready and demonstrate feeder and delivery systems.
11.16	Demonstrate methods for achieving register by making machine adjustments.
11.17	Apply basic principles of offset press operations to produce work and turn, work and tumble and sheetwise printed products.
12.0	Perform finishing operations--The student will be able to:
12.01	Identify the equipment and materials used in finishing/binding operation, their parts and functions and the safety rules relating to their operation.

12.02	Identify basic principles of finishing/binding operations pertaining to pre-press paper cutting, post press paper cutting and post bindery cutting (after folding, stitching, etc.).
12.03	Apply basic principles of finishing/binding operations pertaining to sheet cutting.
12.04	Identify basic principles of finishing/binding operations pertaining to grain, caliper and finish (coated or uncoated or paper).
12.05	Identify basic principles of finishing/binding operations pertaining to signature configurations for sheet and web presses.
12.06	Apply basic principles of finishing/binding operations pertaining to folding.
12.07	Apply basic principles of finishing/binding operations pertaining to scoring and perforating.
12.08	Identify basic principles of finishing/binding operations pertaining to collating and gathering.
12.09	Identify basic principles of finishing/binding operations pertaining to binding alternatives (saddle, side, perfect, comb, spiral, case, etc.).
12.10	Identify basic principles of finishing/binding operations pertaining to adhesive binding (padding and fan-apart).
13.0	Demonstrate appropriate communication skills--The student will be able to:
13.01	Write logical and understandable statements, or phrases, to accurately fill out forms/invoices commonly used in business and industry.
13.02	Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area.
13.03	Read and follow written and oral instructions.
13.04	Answer and ask questions coherently and concisely.
13.05	Read critically by recognizing assumptions and implications and by evaluating ideas.
13.06	Demonstrate appropriate telephone/communication skills.
14.0	Demonstrate appropriate math skills--The student will be able to:
14.01	Solve problems for volume, weight, area, circumference and perimeter measurements for rectangles, squares, and cylinders.
14.02	Measure tolerance(s) on horizontal and vertical surfaces using millimeters, centimeters, feet and inches.
14.03	Add, subtract, multiply and divide using fractions, decimals, and whole numbers.
14.04	Determine the correct purchase price, to include sales tax for a materials list containing a minimum of six items.
14.05	Demonstrate an understanding of federal, state and local taxes and their computation.
15.0	Demonstrate appropriate understanding of basic science--The student will be able to:

15.01	Understand molecular action as a result of temperature extremes, chemical reaction, and moisture content.
15.02	Draw conclusions or make inferences from data.
15.03	Identify health related problems which may result from exposure to work related chemicals and hazardous materials, and know the proper precautions required for handling such materials.
15.04	Understand pressure measurement in terms of PSI, inches of mercury, and KPA.
16.0	Perform employability skills--The student will be able to:
16.01	Conduct a job search.
16.02	Secure information about a job.
16.03	Identify documents that may be required when applying for a job.
16.04	Complete a job application form correctly.
16.05	Demonstrate competence in job interview techniques.
16.06	Identify or demonstrate appropriate responses to criticism from employer, supervisor, or other persons.
16.07	Identify acceptable work habits.
16.08	Demonstrate knowledge of how to make job changes.
16.09	Demonstrate acceptable employee health habits.
16.10	Interview job applicants.
16.11	Develop and monitor safe and efficient work practices.
16.12	Stimulate, motivate and direct the development of others.
16.13	Interact affectively with customers and vendors.
17.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
17.01	Define entrepreneurship.
17.02	Describe the importance of entrepreneurship to the American economy.
17.03	List the advantages and disadvantages of business ownership.
17.04	Identify the risks involved in ownership of a business.

17.05 Identify the necessary personal characteristics of a successful entrepreneur.

17.06 Identify the business skills needed to operate a small business efficiently and effectively.

## **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 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. 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Telecommunication Engineering Technology  
**Career Cluster:** Arts, A/V Technology and Communication

**AS**

CIP Number	1615030302
Program Type	College Credit
Standard Length	64 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	49-2022 – Telecommunications Equipment Installers and Repairers, Except Line Installers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

This program is designed to prepare students for employment as communications engineering technicians, television technicians, analysis technicians, 2-way cellular wireless technicians, network technicians, network operations specialists, product specialists, I.P. (Internet Protocol) engineers, technical salespersons, field engineers, field technicians, transmission engineers, technical support salespersons, installer/repair technicians, network engineers, or in related occupations, 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 program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Telecommunication Engineering industry: planning, management, finance, technical and product skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

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 64 credit hours.



## Standards

After successfully completing the program, **the student will be able to complete all of Outcomes:** 01.0, 02.0, and 03.0, and **additionally may specialize in one of the following combinations of Outcomes:** 05.0 and 06.0 (Networking and Telephony) **or** 04.0 and 07.0 (Transmission and Distribution Systems and Video).

- 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.
- 07.0 Demonstrate proficiency in the analysis of analog and digital video systems.

Florida Department of Education  
Student Performance Standards

**Program Title:** Telecommunication Engineering Technology  
**CIP Number:** 1615030302  
**Program Length:** 64 credit hours  
**SOC Code(s):** 49-2022

**The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. 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 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	Analyze, troubleshoot and adjust RF power amplifier circuits.
02.06	Describe the operation of Double Side Band (DSB) and Single Side Band (SSB) radio systems.
02.07	Identify the stages of SSB and DSB transmitter and receiver circuits.

02.08	Design, analyze and troubleshoot SSB and DSB transmitter and receiver circuits.
02.09	Conduct operating system checks and make minor adjustments to SSB and DSB transmitters and receivers.
02.10	Analyze and test AM, SSB and DSB radio circuits using spectrum analyzers, noise analyzers, impedance meters, sweep generators, distortion meters and power meters.
02.11	Analyze, adjust and troubleshoot Phase Modulation (PM) circuits.
02.12	Analyze, adjust and troubleshoot FM transceiver circuits.
02.13	Test, adjust and align transmitters and receivers using the spectrum analyzer, sweep generator, noise analyzer, frequency meter, modulation meter, Impedance Bridge and power meter.
02.14	Describe the components and concepts of transmission systems: antennas, fiber optics, coax, copper, microwave, satellite, feed lines, and wave guides.
02.15	Calculate transmission line characteristics and understand impedance matching.
02.16	Analyze and describe the concepts of radio wave propagation and radiation fields.
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 design and analysis of digital communication systems--The student will be able to:
03.01	Describe digital modulation techniques and systems.
03.02	Describe industry standards in digital communications.
03.03	Analyze, measure, and troubleshoot digital modulation systems.
03.04	Perform specific test and measurement as related to the digital devices and equipment.
03.05	Analyze and evaluate the operation of programmable digital filters.
03.06	Describe the operation and application of compression amplifiers.
03.07	Analyze and describe the operation of compander circuits.
03.08	Describe and analyze the operation of a sample and hold circuit.
03.09	Describe the conversion of analog signals into a digital format.
03.10	Describe and analyze the operation of Pulse Code Modulation (PCM) circuits.
03.11	Describe, analyze and evaluate the operation of a Coder/Decoder (CODEC) IC circuit.

03.12	Describe, analyze and evaluate the operation of a continuously variable slope delta modulation circuit.
04.0	Demonstrate proficiency in the analysis of transmission and distribution systems--The student will be able to:
04.01	Analyze and demonstrate the application of optical electronic devices in power control circuits and in analog, digital and data communication circuits.
04.02	Analyze and demonstrate the operation of optical devices.
04.03	Splice and terminate cabling systems.
04.04	Test and evaluate modulators and demodulators.
04.05	Analyze and demonstrate multiplex transmission including use of full and half duplex communications.
04.06	Describe gain and loss concepts as applied to transmission and distribution systems.
04.07	Describe the fundamental concepts of satellite communications.
04.08	Operate satellite communication systems.
04.09	Operate multiplexed data telemetry systems.
04.10	Analyze the theoretical concepts that define antenna equivalent circuits and couplers.
04.11	Perform and analyze the calculations required to evaluate the effectiveness of antennas.
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, from a system standpoint, the characteristics of serial communications standards.
05.04	Analyze and troubleshoot communications between computers.
05.05	Compare serial communications with parallel and other standards.
05.06	Describe, analyze, troubleshoot and demonstrate the operation of network access devices.
05.07	Demonstrate use of network management system.
05.08	Identify the capabilities of a telephone circuit on a data communications system.
05.09	Describe LAN topologies as applied to data networks.

05.10	Design, connect and troubleshoot a Local Area Network (LAN).
05.11	Describe WAN topologies as applied to data networks.
05.12	Design, connect and troubleshoot a Wide Area Network (WAN).
05.13	Describe wireless topologies as applied to data networks.
05.14	Design, connect and troubleshoot a wireless network.
05.15	Fabricate and test LAN cabling.
05.16	Describe the operation of a short-range wireless network (i.e. Blue Tooth, IEEE802.11).
05.17	Describe the operation of a long-range wireless network (i.e. PCS, digital messaging, 3G Technology).
05.18	Describe the operation of a cellular communications network.
05.19	Describe and analyze error detection and correction methods used in data communication systems.
05.20	Describe basic data firewalls, encryption and decryption methods.
05.21	Demonstrate understanding of compression and decompression.
05.22	Describe the general characteristics and operations of frame relay, DSL, and ISDN as they apply to data networks.
05.23	Describe the characteristics of frame relay network management.
05.24	Describe the general characteristics and operations of routers and switches as they apply to data networks and systems.
05.25	Describe the general characteristics and design capabilities of the T-carrier system.
05.26	Analyze the network design criteria of T-1 systems.
05.27	Describe the general characteristics and design capabilities of the Synchronous Optical Network (SONET).
05.28	Describe the characteristics and design capabilities of the Asynchronous Transfer Mode (ATM) network.
05.29	Describe the characteristics of high-speed public data networks.
05.30	Apply the theory of wide area network design to 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 mode.
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.
07.0	Demonstrate proficiency in the analysis of analog and digital video systems--The student will be able to:
07.01	Describe the fundamental principles and concepts of television/video systems.
07.02	Describe the operation of the key components of a television/video system.
07.03	Describe the principles of NTSC and HDTV video signals.
07.04	Analyze and describe the operation of the various sections of a DTV transmitter.
07.05	Analyze and describe the characteristics of the television signal (analog, digital, RF).
07.06	Describe and analyze the operation of the various sections of an NTSC and DTV receiver.
07.07	Analyze and describe the operation of encoders and decoders.
07.08	Assemble and test cables and connectors related to video/audio systems.
07.09	Demonstrate proficiency in the use of video and audio 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.

### **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. 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.

### **Certificate Programs**

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

- Cable Installation (0647010304) – 12 credit hours
- Television System Support (0609040205) – 24 credit hours
- Network Communications (LAN) (0611100206) – 18 credit hours
- Network Communications (WAN) (0611100207) – 18 credit hours
- Wireless Communications (0615030508) – 18 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:  
<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>



Florida Department of Education  
Curriculum Framework

**Program Title:** Theater and Entertainment Technology  
**Career Cluster:** Arts, A/V Technology and Communication

**AS**

CIP Number	1650050202
Program Type	College Credit
Standard Length	64 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4011 – Audio and Video Equipment Technicians
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for work as audio and video equipment 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.

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

**Program Structure**

This program is a planned sequence of instruction consisting of 64 credit hours.

## **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 Implement a "sound design" for live entertainment product.
- 05.0 Hang circuit and focus stage lights to the specifications required in a lighting design.
- 06.0 Perform the duties of a light board operator and follow spot operator.
- 07.0 Maintain stage, lighting, sound, and shop equipment.
- 08.0 Install and operate AV/Multimedia presentation equipment.
- 09.0 Demonstrate safe work practices.
- 10.0 Function as part of a technical team in planning, implementing, and running the technical aspects of theatrical/entertainment productions.
- 11.0 Demonstrate appropriate communication skills.
- 12.0 Demonstrate appropriate math skills.
- 13.0 Demonstrate appropriate understanding of basic science.
- 14.0 Demonstrate employability skills.
- 15.0 Demonstrate an understanding of entrepreneurship.

Florida Department of Education  
Student Performance Standards

Program Title: Theater and Entertainment Technology  
 CIP Number: 1650050202  
 Program Length: 64 credit hours  
 SOC Code(s): 27-4011

**The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. 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	Draft working drawings when given a ground plan and designer's elevations.
01.03	Choose the appropriate materials and hardware for scenic construction.
01.04	Construct common two-dimensional scenery.
01.05	Construct common three-dimensional scenery.
01.06	Demonstrate application techniques used in painting scenery.
01.07	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.
02.05	Install and operate special effects such as fog, pyrotechnics, and automated devices.
03.0	Install and operate theatrical 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	Implement a "sound design" for live entertainment productions--The student will be able to:
04.01	Identify sound equipment used in productions.
04.02	Record and edit sound effects for live entertainment productions.
04.03	Operate components of sound systems as required for both reinforcement and effects applications.
04.04	Construct, install, and operate mechanical, electrical, and electronic sound effects for productions.
04.05	Execute sound cues during rehearsal and performance.
05.0	Hang, circuit and focus stage lights to the specifications required in a lighting design--The student will be able to:
05.01	Read a standard lighting plot.
05.02	Read a standard instrument schedule.
05.03	Identify stage lighting equipment.
05.04	Hang and circuit lights for a stage production.
05.05	Focus lights for a stage production.
05.06	Hang and set control parameters for intelligent lighting fixtures.
06.0	Perform the duties of a light board operator and follow spot operator--The student will be able to:
06.01	Make and read a lighting cue sheet.
06.02	Program and execute cues on a computerized lighting console in both rehearsal and performance.
06.03	Execute cues for intelligent lighting.
06.04	Execute cues using a follow spot in rehearsal and performance.
07.0	Maintain stage lighting, sound, and shop equipment--The student will be able to:
07.01	Calibrate and operate test equipment through all modes of operation as necessary for the maintenance of systems.
07.02	Locate malfunctions using applicable diagnostic methods.

07.03	Read and understand technical manuals.
07.04	Record and maintain documentation on equipment including manufacturer's warranties and parts inventories.
08.0	Install and operate AV/multimedia presentation equipment--The student will be able to:
08.01	Set up and operate basic video production equipment including camcorders, studio cameras, video monitors, video decks, switchers and video DAs.
08.02	Set up and operate a basic 35 mm slide presentation in both single and multi-projector configurations.
08.03	Set up and operate a variety of video projection systems.
08.04	Install and operate data projection equipment.
08.05	Determine layout for an AV show including screen and equipment location.
08.06	Select and install appropriate cable and interfaces for AV set up.
08.07	Perform basic troubleshooting on AV systems.
09.0	Demonstrate safe work practices--The student will be able to:
09.01	Identify safety rules for stage and shop equipment.
09.02	Identify health and environmental hazards of materials used in stage production.
09.03	Select and use the appropriate protective clothing and equipment when working in a shop or stage environment.
09.04	Use shop and stage equipment in accordance with both manufacturer and industry safety standards.
09.05	Identify and correct unsafe work practices.
10.0	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:
10.01	Perform as a member of a technical team within the framework of an organized production.
10.02	Schedule job assignments in order to meet production deadlines.
10.03	Apply accepted principles of theater technology to production situations.
10.04	Adapt learned skills and generate new approaches in order to solve unique production problems.
11.0	Demonstrate appropriate communication skills--The student will be able to:
11.01	Write logical and understandable statements, or phrases, to accurately fill out forms/invoices commonly used in business and industry.

11.02	Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area.
11.03	Read and follow written and oral instructions.
11.04	Answer and ask questions coherently and concisely.
11.05	Read critically by recognizing assumptions and implications and by evaluating ideas.
11.06	Demonstrate appropriate telephone/communication skills.
12.0	Demonstrate appropriate math skills--The student will be able to:
12.01	Solve problems for volume, weight, area, circumference and perimeter measurements for rectangles, squares, and cylinders.
12.02	Measure tolerance(s) on horizontal and vertical surfaces using millimeters, centimeters, feet and inches.
12.03	Add, subtract, multiply and divide using fractions, decimals, and whole numbers.
12.04	Determine the correct purchase price, to include sales tax for a materials list containing a minimum of six items.
12.05	Demonstrate an understanding of federal, state and local taxes and their computation.
13.0	Demonstrate appropriate understanding of basic science--The student will be able to:
13.01	Understand molecular action as a result of temperature extremes, chemical reaction, and moisture content.
13.02	Draw conclusions or make inferences from data.
13.03	Identify health related problems that may result from exposure to work related chemicals and hazardous materials, and know the proper precautions required for handling such materials.
13.04	Understand pressure measurement in terms of PSI, inches of mercury, and KPA.
14.0	Demonstrate employability skills--The student will be able to:
14.01	Conduct a job search.
14.02	Secure information about a job.
14.03	Identify documents that may be required when applying for a job interview.
14.04	Complete a job application form correctly.
14.05	Demonstrate competence in job interview techniques.
14.06	Identify or demonstrate appropriate responses to criticism from employer, supervisor or other employees.

14.07	Identify acceptable work habits.
14.08	Demonstrate knowledge of how to make job changes appropriately.
14.09	Demonstrate acceptable employee health habits.
15.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
15.01	Define entrepreneurship.
15.02	Describe the importance of entrepreneurship to the American economy.
15.03	List the advantages and disadvantages of business ownership. Identify the risks involved in ownership of a business.
15.04	Identify the necessary personal characteristics of a successful entrepreneur.
15.05	Identify the business skills needed to operate a small business efficiently and effectively.

## **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.

### **Certificate Programs**

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

Stage Technology (0650050201) – 17 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>



Florida Department of Education  
Curriculum Framework

**Program Title:** Film Production Technology  
**Career Cluster:** Arts A/V Technology and Communication

**AS**

CIP Number	1650060213
Program Type	College Credit
Standard Length	64 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4032 – Film and Video Editors
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the 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 initial employment as film production technicians, camera operators, sound mixers, editors, editing assistants, set designers, key grips, gaffers, best boys, crane operators, lamp operators, generator operators, re-recording mixers, composers, music editors, Foley artists, production designers, art directors, set decorators, set leads, swings, on-set dressers, prop masters, on-set painters, props buyers, special effects coordinators, special effects assistants, art department coordinators, storyboard artists, visual effects supervisors, animators, technical directors, compositors, director of photography/cinematographers, first assistant/focus pullers, clapper/loaders, video/playback assistants, production manager/coordinators, camera PA/interns, steadicam operators, electronic assistant editors, production/ post-production supervisors, sound designers, sound editors, boom operators, and cable persons, or to provide supplemental training for persons previously or currently employed in these occupations. The content includes, but is not 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: production analysis, interpretation, purchasing/renting, scheduling and the application of production skills to solving unique shooting problems.

Also included are skills relating to professionalism, employability, communication and management. This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Film Production industry: planning, management, finance, technical and product 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 64 credit hours.

## **Standards**

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

- 01.0 Design and supervise the construction and installation of theatrical scenery to the specifications required in a scene for a film or video production.
- 02.0 Formulate strategies for audio recording and playback for film/video productions.
- 03.0 Synchronize dailies.
- 04.0 Supervise the hanging, focusing and circuiting of stage lights to the specifications required in lighting designs.
- 05.0 Function as part of a team on film/video productions.
- 06.0 Analyze and implement tasks for gripping.
- 07.0 Interpret and implement the audio requirements for film production.
- 08.0 Analyze and execute tasks for camera.
- 09.0 Analyze and execute tasks for film/video editing.
- 10.0 Analyze and execute for film lighting.
- 11.0 Demonstrate employability skills.
- 12.0 Demonstrate an understanding of entrepreneurship.

Florida Department of Education  
Student Performance Standards

Program Title: Film Production Technology  
 CIP Number: 16050060213  
 Program Length: 64 credit hours  
 SOC Code(s): 27-4032

**The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. At the completion of this program, the student will be able to:**

01.0	Design and supervise the construction and installation of theatrical scenery to the specifications required in a scene for a film or video production--The student will be able to:
01.01	Design and draft scenic plans to scale.
01.02	Interpret scenic plans for the appropriate use of materials and hardware for scenic
01.03	Formulate design strategies for the construction of common flat scenery.
01.04	Formulate design strategies for the construction of three-dimensional scenery.
01.05	Translate scene design needs into application techniques used in painting scenery.
01.06	Create special effects scenery.
01.07	Schedule and organize transportation of scenery to remote locations.
01.08	Supervise scene shop activities.
02.0	Formulate strategies for audio recording and playback for film/video productions--The student will be able to:
02.01	Demonstrate use of microphones, recorders, speakers, mixers, boom poles, and other recording and playback equipment.
02.02	Demonstrate basic knowledge of acoustics.
02.03	Evaluate recording needs.
02.04	Evaluate technical resources as appropriate to given spaces.
02.05	Configure and operate sound recording and playback systems to meet performance needs.
02.06	Analyze various audio qualities to achieve proper sound mix on an audio mixer.

02.07	Perform transactions with audio suppliers.
02.08	Design a plot for proper microphone and speaker placement.
03.0	Synchronize dailies--The student will be able to:
03.01	Transfer location sound from location recording format to display format.
03.02	Synchronize sound element to picture element.
03.03	Demonstrate basic sound editing skills (manually or electronically).
04.0	Supervise the hanging, focusing and circuiting of stage lights to the specifications required in lighting designs--The student will be able to:
04.01	Demonstrate fundamental electrical skills (i.e. switches, circuits, Ohm's law).
04.02	Demonstrate understanding of quality, physics, and color temperature of light.
04.03	Demonstrate understanding of lighting styles and techniques.
04.04	Demonstrate safe work habits.
04.05	Design a standard lighting plot.
04.06	Analyze and document lighting, electrical, and crew requirements for production.
04.07	Supervise hanging, circuiting and focusing lights for a production.
04.08	Manage lighting area operations.
04.09	Appraise maintenance needs for lighting equipment.
04.10	Design special-effects lighting.
04.11	Design and implement a power distribution system for film lighting equipment.
05.0	Function as part of a team on film/video productions--The student will be able to:
05.01	Differentiate the working relationships that exist between the various participants involved in the film making process.
05.02	Perform as a member of a technical team within the framework of an organized theater/film production.
05.03	Adapt learned skills and generate new approaches in order to solve unique production problems.
05.04	Demonstrate the proper use of standard film making forms.

05.05	Define the specific technical processes used by the camera, grip, lighting, sound, art, costume, special effects, make up and editing departments.
05.06	Compare the techniques used in film and video production.
05.07	Manage resources and personnel in order to meet production deadlines.
05.08	Analyze job needs and perform transactions with rental houses and suppliers.
05.09	Apply accepted principles of film technology to production situation(s).
05.10	Interpret a film script and storyboard for their production requirements.
05.11	Develop appropriate industry contacts.
05.12	Formulate and implement a production plan in the areas of sync sound, camera, grip, electrical, sound, art direction, post-production, special effects, wardrobe, makeup, assistant direction, casting, script supervision and production management.
06.0	Analyze and implement tasks for gripping--The student will be able to:
06.01	Formulate strategies to properly utilize grip equipment during film/video production.
06.02	Translate script needs into creative uses of dollies, cranes and other camera mounts as required for film and video production.
06.03	Originate solutions to unique shooting problems.
06.04	Organize production routines.
06.05	Analyze a script for its technical requirements.
06.06	Work as a member of a film production team.
06.07	Develop appropriate industry contacts.
06.08	Demonstrate safe work habits.
06.09	Analyze production requirements to determine grip equipment needs.
06.10	Create required effects for lighting set-ups.
06.11	Demonstrate proper and safe use of equipment.
06.12	Appraise maintenance needs for gripping equipment (dollies, cranes, etc.).
07.0	Interpret and implement the audio requirements for film production--The student will be able to:
07.01	Formulate sound design for required sound effects and dialogue replacement to complete motion picture soundtrack.

07.02	Augment picture soundtrack with pre-recorded score from various sources.
07.03	Record dialogue replacement lines.
07.04	Record live sound effects.
07.05	Edit and synchronize pre-recorded sound effects from pre-recorded source in synch to picture.
07.06	Evaluate and edit production dialogue track.
07.07	Mix multiple tracks of dialogue, sound effects, and music into finished soundtrack according to industry quality standards.
07.08	Playback/synchronize finished soundtrack to finished picture track.
08.0	Analyze and execute tasks for the area of camera--The student will be able to:
08.01	Demonstrate knowledge of mechanics and parts of a camera (shutter, f/stops, lenses, etc.).
08.02	Demonstrate understanding of film stocks and lab processing.
08.03	Analyze the aesthetic needs of a shot and accomplish them by using standard industry camera equipment.
08.04	Interpret shooting activities required for appropriate camera department documentation.
08.05	Organize the proper care and handling of camera and camera support equipment.
08.06	Analyze the script for camera lens and shot requirements.
08.07	Organize production routines for film camera operation.
08.08	Demonstrate understanding of different responsibilities within the camera department.
08.09	Develop appropriate industry contacts.
08.10	Analyze production requirements to determine camera equipment needs.
08.11	Demonstrate knowledge of camera blocking and screen direction.
09.0	Analyze and execute tasks for the area of film/video editing--The student will be able to:
09.01	Interpret various production documentation related to editing script notes, camera notes, sound reports, lined script, continuity reports, etc.).
09.02	Demonstrate understanding of picture and sound editing techniques using traditional film editing equipment.
09.03	Demonstrate understanding of picture and sound editing techniques using nonlinear video editing systems.

09.04	Convert electronic editing list into material ready for a negative cutter.
09.05	Prepare electronic materials for further laboratory optical or visual effects.
09.06	Demonstrate understanding of organizing, archiving and cataloguing film and tape media.
10.0	Analyze and execute tasks for film lighting--The student will be able to:
10.01	Formulate strategies to utilize standard film lighting equipment to production specifications.
10.02	Plan and implement a power distribution system for film lighting equipment.
10.03	Organize production routines necessary for the lighting department.
10.04	Work as a member of a film production team.
10.05	Create a safe working environment.
10.06	Develop appropriate industry contacts.
10.07	Analyze production requirements to determine lighting equipment needs.
10.08	Create required lighting effects for film shooting.
11.0	Demonstrate employability skills--The student will be able to:
11.01	Conduct a job search.
11.02	Secure information about a job.
11.03	Identify documents that may be required when applying for a job.
11.04	Complete a job application form correctly.
11.05	Demonstrate competence in job interview techniques.
11.06	Identify or demonstrate appropriate responses to criticism from employer, supervisor or other persons.
11.07	Identify acceptable work habits.
11.08	Demonstrate knowledge of how to make job changes appropriately.
11.09	Demonstrate acceptable employee health habits.
11.10	Demonstrate knowledge of the "Federal Right-To-Know Law" as recorded in Federal Statutes 29 CFR-1910, 1200.



12.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
12.01	Define entrepreneurship.
12.02	Describe the importance of entrepreneurship to the American economy.
12.03	List the advantages and disadvantages of business ownership.
12.04	Identify the risks involved in ownership of a business.
12.05	Identify the necessary personal characteristics of a successful entrepreneur.
12.06	Identify the business skills needed to operate a small business efficiently and effectively.

## **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.

### **Certificate Programs**

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

- Film Production Fundamentals (0650060203) - 24 credit hours
- Motion Picture Production (0650060204) - 16 credit hours
- Motion Picture Post-Production (0650060205) - 16 credit hours
- Motion Picture Production Management (0650060206) - 16 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:  
<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Photographic Technology  
**Career Cluster:** Arts, A/V Technology and Communication

**AS**

CIP Number	1650060500
Program Type	College Credit
Standard Length	64 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4021 – Photographers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for employment as a photographer or to provide supplemental training for persons previously or currently employed in these occupations. The content includes, but is not limited to, communication skills, leadership skills, human relations and employability skills, safe and efficient work practices, using film, cameras, chemicals, photographic papers, laboratory practices, photographic equipment, and technical recording and reporting.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Photography industry; planning, management, finance, technical and product skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

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 64 credit hours.

## **Standards**

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

- 01.0 Perform laboratory skills.
- 02.0 Control exposures (SLR camera).
- 03.0 Take basic photographs (SLR camera and digital)
- 04.0 Operate various format cameras.
- 05.0 Finish photographs.
- 06.0 Apply lighting techniques.
- 07.0 Take studio photographs.
- 08.0 Reproduce photographic media.
- 09.0 Process color film.
- 10.0 Print color photographs.
- 11.0 Produce media presentations.
- 12.0 Demonstrate competencies required to manage a photographic business.
- 13.0 Take photographs for news media.
- 14.0 Apply quality control.
- 15.0 Demonstrate appropriate communication skills.
- 16.0 Demonstrate appropriate math skills.
- 17.0 Demonstrate appropriate understanding of basic science.
- 18.0 Demonstrate employability skills.
- 19.0 Demonstrate an understanding of entrepreneurship.

Florida Department of Education  
Student Performance Standards

Program Title:       Photographic Technology  
CIP Number:         1650060500  
Program Length:     64 credit hours  
SOC Code(s):        27-4021

**The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. At the completion of this program, the student will be able to:**

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 as well as color film.
01.03	Print black and white as well as color photographs.
01.04	Process black and white as well as color paper.
01.05	Process high contrast film.
01.06	Perform toning skills.
01.07	Produce pan masking.
01.08	Produce black and white as well as color print using automated processing.
02.0	Control exposures (SLR camera)--The student will be able to:
02.01	Explain appropriate F-stops and shutter speeds.
02.02	Explain appropriate film type.
03.0	Take basic photographs (SLR camera and digital camera)--The student will be able to:
03.01	Apply camera care and maintenance principles.
03.02	Compose photographs.
03.03	Take still photographs.

03.04	Take action photographs.
04.0	Operate various format cameras--The student will be able to:
04.01	Use a 2¼ format camera.
04.02	Use a view camera.
04.03	Use a front screen projection system.
04.04	Use 8 X 10 format.
05.0	Finish photographs--The student will be able to:
05.01	Mount photographs.
05.02	Mat/frame photographs.
05.03	Apply print retouching.
05.04	Apply color lacquer spray.
05.05	Apply photo enhancement.
06.0	Apply lighting techniques--The student will be able to:
06.01	Take photographs with low, medium, and high light as well as on bright back lighting.
06.02	Take photographs with electronic strobe.
06.03	Take photographs with photo-flood lighting.
06.04	Take photographs with quartz lighting.
06.05	Take photographs with parabolic lighting.
07.0	Take studio photographs--The student will be able to:
07.01	Take commercial photographs.
07.02	Take portraits.
07.03	Take industrial photographs.
08.0	Reproduce photographic media--The student will be able to:

08.01	Copy prints.
08.02	Copy transparencies.
08.03	Make inter-negatives.
08.04	Make a translite.
08.05	Make a halftone print.
08.06	Identify and define color separation.
09.0	Process color film--The student will be able to:
09.01	Hand process color negatives and transparencies.
09.02	Process color negatives and transparencies with automation.
09.03	Mix color film chemistry and maintain replenishment.
10.0	Print color photographs--The student will be able to:
10.01	Process color paper.
10.02	Print color negatives.
10.03	Print color negatives using color analyzer.
10.04	Mix color paper chemistry and maintain replenishment.
10.05	Print color transparencies.
11.0	Produce media presentations--The student will be able to:
11.01	Prepare script for presentation.
11.02	Shoot slides for presentation.
11.03	Produce presentation.
11.04	Prepare script for presentation.
11.05	Shoot video tapes.
11.06	Produce video presentation.



11.07	Prepare storyboard for slide presentation.
11.08	Record sound for slide presentation.
11.09	Record sound for video presentation.
12.0	Demonstrate competencies required to manage a photographic business--The student will be able to:
12.01	Apply communication skills.
12.02	Apply human relations skills.
12.03	Set rates for photographic work.
12.04	Maintain shop records and files.
12.05	Develop effective advertising.
12.06	Maintain presentational portfolio.
12.07	Analyze potential market area.
12.08	Analyze and develop a marketing plan.
12.09	Perform cost analysis.
12.10	Apply accounting techniques.
12.11	Prepare basic media release
13.0	Take photographs for news media--The student will be able to:
13.01	Identify photographer's legal rights/responsibilities.
13.02	Identify rules/regulations of copyright.
13.03	Take photographs for news media.
13.04	Write captions for photos.
13.05	Identify special camera accessories.
13.06	Identify specialized optics for photojournalism.
14.0	Apply quality control--The student will be able to:

14.01	Run control strips.
14.02	Plot control results.
14.03	Graft processors performance.
14.04	Maintain pH control of chemistry.
14.05	Operate densitometer.
15.0	Demonstrate appropriate communication skills--The student will be able to:
15.01	Write logical and understandable statements, or phrases, to accurately fill out forms/invoices commonly used in business and industry.
15.02	Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area.
15.03	Read and follow written and oral instructions.
15.04	Answer and ask questions coherently and concisely.
15.05	Read critically by recognizing assumptions and implications and by evaluating ideas.
15.06	Demonstrate appropriate telephone/communication skills.
16.0	Demonstrate appropriate math skills--The student will be able to:
16.01	Solve problems for volume, weight, area, circumference and perimeter measurements for rectangles, squares, and cylinders.
16.02	Measure tolerance(s) 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.
17.0	Demonstrate appropriate understanding of basic science--The student will be able to:
17.01	Understand molecular action as a result of temperature extremes, chemical reaction, and moisture content.
17.02	Draw conclusions or make inferences from data.
17.03	Identify health related problems which may result from exposure to work related chemicals and hazardous materials, and know the proper precautions required for handling such materials.
17.04	Understand pressure measurement in terms of PSI, inches of mercury, and KPA.

18.0	Demonstrate employability skills--The student will be able to:
18.01	Conduct a job search.
18.02	Secure information about a job.
18.03	Identify documents which may be required when applying for a job interview.
18.04	Complete a job application form correctly.
18.05	Demonstrate competence in job interview techniques.
18.06	Identify or demonstrate appropriate responses to criticism from employer, supervisor or other employees.
18.07	Identify acceptable work habits.
18.08	Demonstrate knowledge of how to make job changes appropriately.
18.09	Demonstrate acceptable employee health habits.
18.10	Demonstrate knowledge of the "Federal Right-To-Know Law" as recorded in 29 CFR-1910, 1200.
19.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
19.01	Define entrepreneurship.
19.02	Describe the importance of entrepreneurship to the American economy.
19.03	List the advantages and disadvantages of business ownership.
19.04	Identify the risks involved in ownership of a business.
19.05	Identify the necessary personal characteristics of a successful entrepreneur.
19.06	Identify the business skills needed to operate a small business efficiently and effectively.

## **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.

### **Certificate Programs**

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

Photography (0650060501) - 22 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Music Production Technology  
**Career Cluster:** Arts, A/V Technology and Communication

**AS**

CIP Number	1650091300
Program Type	College Credit
Standard Length	64 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-2041 – Music Directors and Composers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for employment in music production occupations or to provide supplemental professional training for persons previously or currently employed in this field. The content includes, but is not limited to, instruction that prepares individuals for positions such as music directors, singers, composers, sound engineers, producers, programmers, salespeople (retail), manufacturer’s representatives, consultants, music editors, sound designers, sound systems designers, audio assistants, audio technicians, a/v technicians, studio managers/supervisors, archivists and related workers. This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Music Production Technology industry: planning, management, finance, technical and product skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

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 64 credit hours.

## **Standards**

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

- 01.0 Demonstrate knowledge of basic musical skills.
- 02.0 Demonstrate competence in basic keyboard skills.
- 03.0 Demonstrate knowledge of music history.
- 04.0 Demonstrate application of control protocols and their relationship to equipment used in the music industry.
- 05.0 Demonstrate set-up and configuration of a computer for audio applications.
- 06.0 Understand the operation of basic reproduction, reinforcement and recording audio equipment.
- 07.0 Demonstrate understanding of requirements for set up and operation of a sound reinforcement system.
- 08.0 Perform transactions with music industry suppliers.
- 09.0 Demonstrate management skills.
- 10.0 Demonstrate knowledge of the legal issues of copyright and contracts.
- 11.0 Demonstrate employability skills.
- 12.0 Demonstrate an understanding of entrepreneurship.

Florida Department of Education  
Student Performance Standards

Program Title: Music Production Technology  
 CIP Number: 1650091300  
 Program Length: 64 credit hours  
 SOC Code(s): 27-2041

**The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. At the completion of this program, the student will be able to:**

01.0	Demonstrate knowledge of basic musical skills—The student will be able to:
01.01	Demonstrate knowledge of musical structure.
01.02	Analyze the style, structure, and technical content of selected written and performed music.
01.03	Apply listening skills for hearing live and recorded music.
01.04	Identify performance characteristics of musical instruments.
02.0	Demonstrate competence in basic keyboard skills--The student will be able to:
02.01	Demonstrate basic knowledge of scales and chord progressions.
02.02	Follow basic musical notation.
02.03	Demonstrate basic knowledge of a keyboard.
03.0	Demonstrate knowledge of music history--The student will be able to:
03.01	Contrast stylistic periods of composition and performance through analysis of music scores.
03.02	Contrast stylistic periods of composition and performance through analysis of live and recorded performances.
03.03	Identify primary contributions of principal composers from the Renaissance through present.
03.04	Identify primary forms of music for all performing media.
03.05	Identify the components of musical form (motives, phrases, etc.) visually and aurally.
03.06	Associate particular forms of music with particular stylistic periods.
03.07	List the names of instruments that were prevalent in particular historical periods of music.

03.08	Demonstrate knowledge of multicultural (world) music.
04.0	Demonstrate application of control protocols and their relationship to equipment used in the music industry--The student will be able to:
04.01	Demonstrate an understanding of MIDI.
04.02	Demonstrate proficiency in using MIDI instruments to record sounds using a digital sampler.
04.03	Utilize a computer and multiple MIDI instruments.
04.04	Record a single sound track; add multiple sound tracks, and change MIDI voices using the software.
04.05	Demonstrate an understanding of MIDI and other control protocol in the recording studio.
04.06	Configure MIDI and other show control devices in the studio or live environment.
04.07	Troubleshoot MIDI and control communication problems.
05.0	Demonstrate set-up and configuration of a computer for audio applications--The student will be able to:
05.01	Install and configure software related to audio programs.
05.02	Demonstrate basic knowledge of computer system requirements.
05.03	Install basic peripheral devices related to audio programs.
06.0	Understand the operation of basic reproduction, reinforcement and recording audio equipment--The student will be able to:
06.01	Assess the audio technology needs of a music production (Pre-Production).
06.02	Appraise musical needs of client (personnel, hardware, software, etc.).
06.03	Evaluate available audio resources.
06.04	Select and configure appropriate hardware and software.
06.05	Develop a production plan to meet client needs.
06.06	Manage personnel and technical resources for the execution of the project.
06.07	Evaluate the final project for quality and appropriateness.
06.08	Formulate strategies for producing multi-track recording.
06.09	Evaluate production needs for microphone applications.



06.10	Demonstrate proficiency with multi-track, multi-channeled mixing consoles.
06.11	Formulate strategies for electronic editing.
06.12	Formulate strategies for multi-track recording to industry standards.
06.13	Configure audio recording systems for optimal and appropriate use of signal processing equipment.
06.14	Develop strategies for using MIDI.
06.15	Engineer a recording session and prepare appropriate documentation.
06.16	Mix multi-track recording.
06.17	Configure audio equipment for optimal musical mix.
06.18	Create a mixing plan.
06.19	Evaluate the quality of multi-track recording.
06.20	Interpret audio needs for end user.
06.21	Supervise equipment operator.
06.22	Evaluate quality of the final mix to industry standards.
07.0	Demonstrate understanding of requirements for set up and operation of a sound reinforcement system--The student will be able to:
07.01	Demonstrate basic understanding of audio electronics (head room, biasing, distortion, equalization, frequency response, etc.).
07.02	Demonstrate basic understanding of acoustics.
07.03	Demonstrate knowledge of principles of operation of analog/digital devices (block diagram).
07.04	Demonstrate basic understanding of audio signal flow in an analog or digital chain.
07.05	Formulate strategies for audio reinforcement of music productions.
07.06	Evaluate performance needs.
07.07	Evaluate technical needs as appropriate to given spaces.
07.08	Configure a sound reinforcement system to meet performance needs.
07.09	Analyze various audio qualities to achieve proper sound mix.

07.10	Perform transactions with audio suppliers.
07.11	Design a plot for proper microphone and speaker selection and placement.
08.0	Perform transactions with music industry suppliers--The student will be able to:
08.01	Research sources for needed equipment, supplies and educational materials.
08.02	Differentiate the levels of quality in the hierarchy of manufacturers, distributors and suppliers.
08.03	Evaluate purchasing agreements including bids, warranties, and maintenance contracts.
08.04	Evaluate the technical specifications of audio related products.
08.05	Execute the purchase of audio equipment, supplies and educational materials.
09.0	Perform specified management skills--The student will be able to:
09.01	Organize scheduling for live music performances.
09.02	Organize scheduling for recording sessions.
09.03	Develop and manage budgets for musical events (performance sessions and equipment).
09.04	Manage live musical performances.
09.05	Manage music recording sessions.
09.06	Demonstrate understanding of music production audio personnel hierarchy.
10.0	Demonstrate knowledge of legal issues of copyright and contracts--The student will be able to:
10.01	Define and implement contractual agreements with unions, agents, managers and other representatives of the commercial music production industry.
10.02	Evaluate and apply copyright and licensing laws.
10.03	Identify potential music marketing areas and manage product distribution.
10.04	Recognize the right of artists and employ successful negotiation of contractual agreements.
11.0	Demonstrate employability skills--The student will be able to:
11.01	Create and write a résumé and cover letter.
11.02	Prepare and compile a work portfolio/demo or recording.

11.03	Identify acceptable work habits.
11.04	Demonstrate competence in job interview techniques.
11.05	Formulate strategy for post-graduation.
11.06	Generate a career plan.
11.07	Demonstrate knowledge of the "Federal Right-To-Know Law" as recorded in (29 CFR-1910, 1200).
12.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
12.01	Define entrepreneurship.
12.02	Describe the importance of entrepreneurship to the American economy.
12.03	List the advantages and disadvantages of business ownership.
12.04	Identify the risks involved in ownership of a business.
12.05	Identify the necessary personal characteristics of a successful entrepreneur.
12.06	Identify the business skills needed to operate a small business efficiently and effectively.

## **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.

### **Certificate Programs**

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

Audio Technology (0650060209) – 15 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>

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, 30, 31
Standard Length	Multiple credits
Teacher Certification	ANY VOCATIONAL FIELD OR COVERAGE ANY FIELD WHEN CERT REFLECTS BACHELOR OR HIGHER Any District Certification appropriate to the students' chosen career field
CTSO	SkillsUSA
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 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.

## **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

<b>CTE Standards and Benchmarks</b>	
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 students 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.

### **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 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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, 30, 31
Standard Length	Multiple credits
Teacher Certification	MKTG 1 ANY VOC FIELD OR COV/TC COOP ED E G ANY FIELD BA OR HIGHER/TC WK EXP E COOR WK EXP @7
CTSO	SkillsUSA
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

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

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

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

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

Arts, A/V 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.

## **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

<b>Standards and Benchmarks</b>	
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 at <http://www.fldoe.org/core/fileparse.php/3/urlt/steps-manual.pdf>.

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.

### **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 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, 30, 31
Standard Length	7 credits
Teacher Certification	TV PRO TEC @7 7G TEC ED 1 @ 2
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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for initial employment in the Digital Cinema Production field as equipment operation 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.

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A	8201010	Digital Cinema Production 1	1 credit	27-2012	2	VO
	8201020	Digital Cinema Production 2	1 credit			VO
B	8201030	Digital Cinema Production 3	1 credit	27-4011	2	VO
C	8201040	Digital Cinema Production 4	1 credit	27-4031	2	VO
	8201050	Digital Cinema Production 5	1 credit			VO
D	8201060	Digital Cinema Production 6	1 credit	27-4032	2	VO
E	8201070	Digital Cinema Production 7	1 credit	27-2012	2	VO

*(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics, VO= Career and Technical Education)*

**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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Cinema Production
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Cinema Production
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Cinema Production
- 04.0 Understand the history of cinema.
- 05.0 Understand the production process.
- 06.0 Understand intellectual property rights, copyright laws and plagiarism as it applies to creative assets.
- 07.0 Demonstrate proficiency in computer skills.
- 08.0 Demonstrate knowledge of photo editing software.
- 09.0 Demonstrate a knowledge of production writing as it relates to narrative filmmaking.
- 10.0 Demonstrate knowledge of production management.
- 11.0 Demonstrate knowledge of art direction.
- 12.0 Demonstrate knowledge of character development.
- 13.0 Demonstrate knowledge of storyboarding.
- 14.0 Demonstrate knowledge of funding presentations and pitches.
- 15.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Cinema Production
- 16.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Cinema Production
- 17.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Cinema Production
- 18.0 Demonstrate understanding of lighting principles.
- 19.0 Demonstrate understanding of production set protocol.
- 20.0 Demonstrate understanding of lighting fixtures.
- 21.0 Demonstrate understanding of electricity.
- 22.0 Demonstrate understanding of special effects lighting techniques and equipment.
- 23.0 Demonstrate understanding of grip principles.
- 24.0 Demonstrate understanding of basic grip equipment.
- 25.0 Demonstrate understanding of dollies.
- 26.0 Demonstrate understanding of cranes, jibs and arms.
- 27.0 Demonstrate knowledge of cinematography.
- 28.0 Demonstrate knowledge of cameras.
- 29.0 Demonstrate basic audio production.
- 30.0 Interpret and implement audio requirements for film production.
- 31.0 Formulate strategies for audio recording and playback.
- 32.0 Demonstrate knowledge of the post-production process.

- 33.0 Demonstrate knowledge of video editing software.
- 34.0 Demonstrate knowledge of audio editing software.
- 35.0 Demonstrate knowledge of DVD authoring software.
- 36.0 Demonstrate knowledge of color correction software.
- 37.0 Demonstrate knowledge of compositing software.
- 38.0 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.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Cinema Production.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Cinema Production.		
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's	

Florida Standards		Correlation to CTE Program Standard #
	capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Cinema Production.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure. MAFS.K12.MP.7.1	



Florida Standards	Correlation to CTE Program Standard #
03.08 Look for and express regularity in repeated reasoning. MAFS.K12.MP.8.1	

**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 Understand the history of cinema--The student will be able to:		
04.01 Understand the history of cinema (silent, sound, color).		
05.0 Understand the production process--The student will be able to:		
05.01 Identify the job titles associated with the filmmaking process.		
05.02 Identify various tools and equipment used to produce narrative productions.		
05.03 Understand speed and efficiency concepts.		
05.04 Understand a production pipeline.		
05.05 Identify the departments of a production studio.		
05.06 Understand the interrelationships between departments.		
05.07 Understand basic communication concepts (verbal, memos, paperwork).		
05.08 Identify the stages of production.		
05.09 Understand studio terms and jargon.		
05.10 Create and organize production paperwork into production bibles or prepare for presentations.		
05.11 Demonstrate the proper use of standard filmmaking forms.		
06.0 Understand intellectual property rights, copyright laws and plagiarism as it applies to creative assets--The student will be able to:		
06.01 Understand the limits and expectations of copyright protection.		
06.02 Understand the use of "Fair use and Fair Dealing".		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
06.03 Understand the transfer and licensing of creative works.		
06.04 Understand the use of “exclusive rights” to intellectual creations.		
06.05 Demonstrate the use of digital watermarking.		
07.0 Demonstrate proficiency in computer skills--The student will be able to:		
07.01 Identify all computer parts.		
07.02 Demonstrate understanding of computer performance specifications.		
07.03 Compare and contrast difference between business machines and workstations.		
07.04 Demonstrate best practices of computer safety and ergonomics.		
07.05 Demonstrate understanding of operating systems.		
07.06 Perform software installation and setup.		
07.07 Perform peripheral device installation and setup.		
07.08 Perform computer upgrades (memory/hard disk/cards).		
07.09 Perform storage management operations (project/file).		
07.10 Demonstrate knowledge of computer maintenance.		
07.11 Demonstrate ability to troubleshoot computer hardware and software issues.		
08.0 Demonstrate knowledge of photo editing software--The student will be able to:		
08.01 Demonstrate understanding file formats and storage options.		
08.02 Identify parts of the software interface (menus/palettes).		
08.03 Demonstrate ability to use each of the basic tool sets.		
08.04 Demonstrate ability to import, export and save images.		
08.05 Demonstrate understanding of layers and channels.		
08.06 Demonstrate understanding of filters, effects and plug-ins.		
08.07 Demonstrate understanding of file presets.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.08 Demonstrate ability to select portions of an image for manipulation.		
08.09 Demonstrate ability to transform selections and images (crop, scale).		
08.10 Demonstrate ability to color correct images (brightness, hue, contrast).		
08.11 Demonstrate ability to use brushes for image creation and correction.		
08.12 Understand non-destructive and destructive operations.		
08.13 Demonstrate the basic use of video in Photoshop		
08.14 Design and print a business card.		
09.0 Demonstrate knowledge of production writing as it relates to narrative filmmaking--The student will be able to:		
09.01 Understand the job of a scriptwriter.		
09.02 Identify target audiences, markets, and demographics.		
09.03 Identify the elements of a script.		
09.04 Develop the intended message of a script.		
09.05 Demonstrate ability to write a treatment.		
09.06 Demonstrate ability to write a professionally formatted (submission) script.		
09.07 Identify the genre of a story.		
09.08 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.

Florida Standards		Correlation to CTE Program Standard #
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Cinema Production.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Cinema Production		
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's	

Florida Standards		Correlation to CTE Program Standard #
	capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Cinema Production.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure. MAFS.K12.MP.7.1	

Florida Standards	Correlation to CTE Program Standard #
03.08 Look for and express regularity in repeated reasoning.  MAFS.K12.MP.8.1	

**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
10.0 Demonstrate knowledge of production management--The student will be able to:		
10.01 Demonstrate ability to breakdown a script into production elements (cast, props).		
10.02 Understand the job of a production manager.		
10.03 Create a production board.		
10.04 From a script - create a budget (quote) from local vendors.		
10.05 Ability to write a casting call.		
10.06 Participate in the casting process.		
10.07 Scout a location and perform a site survey.		
10.08 Acquire a permit for shooting on location.		
11.0 Demonstrate knowledge of art direction--The student will be able to:		
11.01 Develop the overall visual appearance of an animation.		
11.02 Demonstrate the ability to create moods with style.		
11.03 Determine the geographic location and time period of the story.		
11.04 Understand the importance of art direction as it pertains to the message.		
11.05 Understand the use of color in art direction.		
11.06 Document the technical aspects of art direction for use in production.		
11.07 Perform the various assignments in a professional manner according to industry standards.		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
12.0	Demonstrate knowledge of character development--The student will be able to:		
12.01	Demonstrate and understanding of character profiles.		
12.02	Demonstrate the ability to develop character resumes/profiles.		
13.0	Demonstrate knowledge of storyboarding--The student will be able to:		
13.01	Demonstrate understanding of visual storytelling and how storyboards are used during production.		
13.02	Identify common aspect ratios and how to calculate ratios.		
13.03	Demonstrate understanding of camera framing and camera movement.		
13.04	Develop a visual style using the art direction.		
13.05	Break down a script into the various camera shots and character action.		
13.06	Demonstrate understanding of perspective and depth of field.		
13.07	Demonstrate knowledge of lighting and color use.		
13.08	Demonstrate ability to sketch a storyboard including characters.		
13.09	Demonstrate ability to use storyboarding software or illustration software.		
13.10	Demonstrate the ability to create side (storyboard thumbnail pages).		
14.0	Demonstrate knowledge of funding presentations and pitches--The student will be able to:		
14.01	Understand the ecosystem associated with product distribution.		
14.02	Identify the job titles and roles of the distributors.		
14.03	Identify potential markets, target audiences, and products.		
14.04	Develop the materials needed to effectively convey the message.		
14.05	Effectively communicate a message or pitch.		
14.06	Attend an educational seminar outside of class.		
14.07	Attend a film festival.		
14.08	Acquire a domain name.		



CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
14.09 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.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
15.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Cinema Production.	
15.01	Key Ideas and Details	
15.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.  LAFS.1112.RST.1.1	
15.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.1112.RST.1.2	
15.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.1112.RST.1.3	
15.02	Craft and Structure	
15.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.  LAFS.1112.RST.2.4	
15.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.  LAFS.1112.RST.2.5	
15.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.  LAFS.1112.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
15.03 Integration of Knowledge and Ideas		
15.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
15.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
15.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
15.04 Range of Reading and Level of Text Complexity		
15.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
15.04.2		
16.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Cinema Production.		
16.01 Text Types and Purposes		
16.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
16.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
16.02 Production and Distribution of Writing		
16.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
16.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
16.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback,	

Florida Standards		Correlation to CTE Program Standard #
	including new arguments or information. LAFS.1112.WHST.2.6	
16.03	Research to Build and Present Knowledge	
16.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
16.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
16.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
16.04	Range of Writing	
16.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
17.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Cinema Production.	
17.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
17.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
17.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
17.04	Model with mathematics. MAFS.K12.MP.4.1	
17.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
17.06	Attend to precision. MAFS.K12.MP.6.1	
17.07	Look for and make use of structure. MAFS.K12.MP.7.1	

Florida Standards	Correlation to CTE Program Standard #
17.08 Look for and express regularity in repeated reasoning.  MAFS.K12.MP.8.1	

**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 understanding of lighting principles--The student will be able to:		
18.01 Identify the descriptions of the lighting crew.		
18.02 Identify relevant lighting cues from production notes.		
18.03 Create a lighting plan based on production notes.		
18.04 Demonstrate understanding of Foot-Candles.		
18.05 Demonstrate understanding of F-Stops, ISO/ASA and gain.		
18.06 Demonstrate understanding of Depth of Field.		
18.07 Demonstrate understanding of Contrast Ratio.		
18.08 Demonstrate color theory and correction.		
18.09 Demonstrate use of a light meter.		
18.10 Understand the photographic lighting principal.		
18.11 Analyze production requirements to determine lighting equipment needs.		
19.0 Demonstrate understanding of production set protocol--The student will be able to		
19.01 Demonstrate ability to stage an area for lights.		
19.02 Demonstrate ability to set lights.		
19.03 Demonstrate ability to use common hand and radio signals.		
19.04 Demonstrate ability to wrap a cable.		
19.05 Demonstrate proper cabling methods (layout/securing).		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
19.06	Demonstrate proper cable labeling methods.		
19.07	Demonstrate safety.		
19.08	Differentiate the working relationships that exist between various participants involved in the filmmaking process.		
19.09	Perform as a member of a technical team within the framework of an organized production.		
19.10	Create a safe working environment.		
20.0	Demonstrate understanding of lighting fixtures--The student will be able to:		
20.01	Demonstrate understanding of tungsten lights.		
20.02	Demonstrate use of Fresnel, area, and open-faced lights.		
20.03	Demonstrate understanding of PAR lights.		
20.04	Demonstrate understanding of HMI lights.		
20.05	Demonstrate understanding of fluorescent lights.		
20.06	Demonstrate understanding of LED lights.		
20.07	Demonstrate an understanding of ambient and practical lighting.		
21.0	Demonstrate understanding of electricity--The student will be able to:		
21.01	Demonstrate understanding of electrical units of measure.		
21.02	Calculate amperage of lights.		
21.03	Demonstrate understanding of Ohm's Law.		
21.04	Demonstrate use of circuit protection.		
21.05	Understand types of distribution circuits (Direct Current, Alternating Current).		
21.06	Demonstrate understanding of single and three phase systems.		
21.07	Demonstrate use of proper grounding techniques.		
21.08	Demonstrate use of voltmeter.		
21.09	Demonstrate use of portable and full-size generators.		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
22.0	Demonstrate understanding of special effects lighting techniques and equipment--The student will be able to:		
22.01	Understand lightning effects.		
22.02	Understand the challenges of lighting a green/blue screen.		
22.03	Demonstrate the proper use of fog machines.		
22.04	Demonstrate both high key and low-key lighting techniques.		
22.05	Demonstrate how to incorporate lighting into exterior day setups.		
22.06	Supervise hanging, circuiting, and focusing lights for production.		
22.07	Demonstrate use of gels and diffusions.		
22.08	Demonstrate use of neutral density filters.		
22.09	Demonstrate use of daylight conversion filters.		
23.0	Demonstrate understanding of grip principles--The student will be able to:		
23.01	Identify the descriptions of the grip crew.		
23.02	Translate script needs into creative uses of dollies, cranes and other camera mounts as required for production.		
23.03	Identify relevant grip cues from production notes.		
23.04	Analyze production requirements to determine grip equipment needs.		
23.05	Demonstrate proper and safe use of equipment.		
23.06	Appraise maintenance needs for equipment.		
24.0	Demonstrate understanding of basic grip equipment--The student will be able to:		
24.01	Demonstrate proper use of stands and stand extensions.		
24.02	Demonstrate use of small and large butterflies.		
24.03	Demonstrate proper use of sandbags.		
24.04	Demonstrate use of apple boxes and risers.		
24.05	Demonstrate ability to identify and use clamps and clips.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
24.06 Demonstrate ability to use specialty knots (bowline, clove hitch, square).		
24.07 Demonstrate ability to identify and use flags, dots, and fingers.		
24.08 Demonstrate ability to identify and use silks, nets.		
24.09 Demonstrate ability to identify and use reflectors and bounce boards.		
25.0 Demonstrate understanding of dollies--The student will be able to:		
25.01 Demonstrate understanding of dolly uses and limitations.		
25.02 Demonstrate understanding of dolly safety.		
25.03 Identify commonly used dolly types and manufacturers.		
25.04 Demonstrate ability to assemble dollies.		
25.05 Demonstrate effective use of track dollies during production.		
26.0 Demonstrate understanding of cranes, jibs and arms--The student will be able to:		
26.01 Demonstrate understanding of crane, jib and arm uses and limitations.		
26.02 Demonstrate understanding of crane, jib and arm safety.		
26.03 Demonstrate ability to assemble cranes, jibs, and arms.		
26.04 Identify commonly used crane, jib and arm types and manufacturers.		
26.05 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.

Florida Standards	Correlation to CTE Program Standard #
15.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Cinema Production.	
15.01 Key Ideas and Details	
15.01.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
15.01.2 Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
15.01.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
15.02 Craft and Structure	
15.02.1 Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
15.02.2 Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
15.02.3 Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. LAFS.1112.RST.2.6	
15.03 Integration of Knowledge and Ideas	

Florida Standards		Correlation to CTE Program Standard #
15.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
15.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
15.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
15.04 Range of Reading and Level of Text Complexity		
15.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
15.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
16.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Cinema Production.	
16.01 Text Types and Purposes		
16.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
16.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
16.02 Production and Distribution of Writing		
16.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
16.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
16.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.1112.WHST.2.6	
16.03	Research to Build and Present Knowledge	
16.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
16.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
16.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
16.04	Range of Writing	
16.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
17.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Cinema Production.	
17.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
17.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
17.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
17.04	Model with mathematics. MAFS.K12.MP.4.1	
17.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
17.06	Attend to precision. MAFS.K12.MP.6.1	
17.07	Look for and make use of structure. MAFS.K12.MP.7.1	
17.08	Look for and express regularity in repeated reasoning.	

Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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
27.0 Demonstrate knowledge of cinematography--The student will be able to:		
27.01 Identify the psychological effects of different types of angles (composition).		
27.02 Analyze a script for camera lens and shot requirements.		
27.03 Demonstrate understanding of different responsibilities within the camera department.		
27.04 Demonstrate knowledge of camera blocking and screen direction.		
27.05 Design a lighting plot.		
27.06 Understand the principals of photography.		
27.07 Compare the techniques used in film and video production.		
27.08 Manage resources and personnel in order to meet production deadlines.		
28.0 Demonstrate knowledge of cameras--The student will be able to:		
28.01 Demonstrate knowledge of mechanics and parts of the camera (shutter, f/stops, lenses, etc.)		
28.02 Analyze the aesthetic needs of a shot and accomplish them by using standard industry equipment		
28.03 Analyze production requirements to determine camera equipment needs		
28.04 Understand the difference between zoom and prime lenses and what lens speeds' are.		
28.05 Program and use a light meter taking (spot, reflected, and incident) readings.		
28.06 Demonstrate the proper use of filters and polarizers.		
28.07 Control lens, focal length, aperture and exposure to obtain required effects.		
28.08 Control camera movement to obtain required effects.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
28.09 Perform basic routine, preventative and repair maintenance on video equipment.		
28.10 Define various recording formats and media.		
28.11 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
29.0	Demonstrate basic audio production--The student will be able to:		
29.01	Demonstrate how to set up a recording environment.		
29.02	Demonstrate understanding of digital audio recording hardware.		
29.03	Demonstrate understanding of the proper use of microphones.		
29.04	Demonstrate knowledge of audio codecs and media.		
29.05	Understand the history of Foley and sound effects production.		
29.06	Demonstrate the ability to record location sounds.		
30.0	Interpret and implement audio requirements for film production--The student will be able to:		
30.01	Formulate sound design for required sound effects and dialogue replacement to complete motion picture soundtrack.		
30.02	Record dialogue replacement lines.		
30.03	Record live sound effects.		
31.0	Formulate strategies for audio recording and playback--The student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
31.01 Demonstrate the use of microphones, recorders, speakers, mixers, boom poles, other recording and playback equipment.		
31.02 Demonstrate basic knowledge of acoustics.		
31.03 Evaluate recording needs.		
31.04 Evaluate technical resources as appropriate to given spaces.		
31.05 Configure and operate sound recording and playback systems to meet performance needs.		
31.06 Analyze various audio qualities to achieve proper sound mix on an audio mixer.		
31.07 Design a plot for proper microphone placement.		
31.08 Demonstrate understanding of the proper use of microphones.		
31.09 Demonstrate knowledge of audio codecs and media.		
31.10 Understand the history of Foley and sound effects production.		
31.11 Demonstrate the ability to record location sounds.		

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
32.0 Demonstrate knowledge of the post-production process--The student will be able to:		
32.01 Identify the psychological effects of different types of edits.		
32.02 Demonstrate understanding of picture and sound editing techniques (including; continuity, screen direction, and transitions).		
32.03 Sync dailies – Synchronize sound elements to picture elements.		
32.04 Formulate sound design for required sound effects and dialogue replacement to complete a motion picture soundtrack.		
32.05 Create sound effects using live Foley techniques.		
32.06 Edit and synchronize pre-recorded sound effects in sync with picture.		
33.0 Demonstrate knowledge of video editing software--The student will be able to:		
33.01 Demonstrate understanding file formats and storage options.		
33.02 Identify parts of the software interface (menus/palettes).		
33.03 Demonstrate ability to use each of the basic tool sets.		
33.04 Demonstrate ability to import, export, and save video projects.		



CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
33.05 Demonstrate understanding of layers and compositing.		
33.06 Demonstrate understanding of filters, effects and plug-ins.		
33.07 Demonstrate understanding of file presets.		
33.08 Demonstrate understanding of rendering process.		
33.09 Demonstrate ability to transform video (crop, scale).		
33.10 Demonstrate ability to color correct images (brightness, hue, contrast).		
33.11 Demonstrate ability to use brushes for image creation and correction.		
33.12 Understand non-destructive and destructive operations.		
33.13 Understand principles of stereo editing.		
34.0 Demonstrate knowledge of audio editing software--The student will be able to:		
34.01 Demonstrate understanding file formats and storage options.		
34.02 Identify parts of the software interface (menus/palettes).		
34.03 Demonstrate ability to use each of the basic tool sets.		
34.04 Demonstrate ability to import, export and save audio.		
34.05 Demonstrate understanding of multiple tracks.		
34.06 Demonstrate understanding of filters, effects and plug-ins.		
34.07 Demonstrate understanding of file presets.		
34.08 Demonstrate understanding of audio rendering process.		
34.09 Demonstrate ability to edit, cut, and delete.		
34.10 Understand non-destructive and destructive operations.		
34.11 Transfer location sound from location recording format to display format.		
34.12 Synchronize sound element to picture element.		
34.13 Demonstrate basic sound editing skills.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
34.14 Mix multiple tracks of dialogue, sound effects, and music into a finished soundtrack according to industry quality standards.		
35.0 Demonstrate knowledge of DVD authoring software--The student will be able to:		
35.01 Identify parts of the software interface (menus/palettes).		
35.02 Demonstrate ability to use each of the basic tool sets.		
35.03 Understand mapping to design menu layouts & navigation.		
35.04 Demonstrate ability to import media (stills, video, and audio).		
35.05 Demonstrate ability to create chapters.		
35.06 Understand the process of encoding and compression.		
35.07 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
36.0 Demonstrate knowledge of color correction software--The student will be able to:		
36.01 Identify parts of the software interface (menus/palettes).		
36.02 Demonstrate ability to use each of the basic tool sets.		
36.03 Demonstrate ability to import, export and save video.		
36.04 Understand color balance, color theory, and channels.		
36.05 Demonstrate ability to create masks and mattes.		
36.06 Understand the use and operation of scopes and waveforms.		
36.07 Demonstrate how to calibrate a monitor.		
36.08 Understand the process of color grading.		
36.09 Demonstrate tracking as it relates to color correction.		
36.10 Demonstrate the process to render and output color corrected content.		
37.0 Demonstrate knowledge of compositing software--The student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
37.01 Identify parts of the software interface (menus/palettes).		
37.02 Demonstrate ability to use each of the basic tool sets.		
37.03 Demonstrate ability to import, export and save video.		
37.04 Understand basic animation using effects presets.		
37.05 Demonstrate ability to animate text and layers.		
37.06 Understand the use of rotoscoping tools.		
37.07 Demonstrate how to animate masks.		
37.08 Understand the process of color correction.		
37.09 Demonstrate both single point and multipoint motion tracking.		
37.10 Demonstrate the process to render and output content.		
38.0 Demonstrate knowledge of stereography--The student will be able to:		
38.01 Understand the challenges and limitations of stereography (3D photography).		
38.02 Demonstrate an understanding of a 3D workflow.		
38.03 Demonstrate understanding of parallax and convergence.		
38.04 Demonstrate and understanding of inter-axial/inter pupillary distance.		
38.05 Demonstrate an understanding of 3D eyewear (polarized, active shutter, and anaglyph).		
38.06 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.

### **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.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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, 30, 31
Standard Length	7 credits
Teacher Certification	BUS ED 1 @2 VOE @7 SECRETAR 7 G TEC ELEC @7 COMPU SCI 6 COMM ART @7 7G TV PRO TEC @7 7G TEC ED 1 @2 PRINTING @7 7G DIGI MEDIA 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1014 – Multimedia Artists and Animators
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 Web page design, 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.

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A	8201210	Digital Media/Multimedia Foundations 1	1 credit	27-1014	2	PA
B	8201220	Digital Media/Multimedia Foundations 2	1 credit	27-1014	2	PA
	8201230	Digital Media/Multimedia Foundations 3	1 credit			PA
C	8201240	Digital Media/Multimedia Foundations 4	1 credit	27-1014	2	PA
	8201250	Digital Media/Multimedia Foundations 5	1 credit			PA
D	8201260	Digital Media/Multimedia Foundations 6	1 credit	27-1014	2	PA
	8201270	Digital Media/Multimedia Foundations 7	1 credit			PA

*(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics, VO= Career and Technical Education)*

**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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Media/Multimedia Design.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Media/Multimedia Design.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Media/Multimedia Design.
- 04.0 Demonstrate knowledge of presentation production issues.
- 05.0 Demonstrate basic computer knowledge.
- 06.0 Demonstrate proficiency in using illustration software.
- 07.0 Demonstrate knowledge of digital still photography.
- 08.0 Demonstrate knowledge of photo editing software.
- 09.0 Demonstrate proficiency in advanced design.
- 10.0 Demonstrate understanding of color modes.
- 11.0 Demonstrate proficiency in using fonts for advance design.
- 12.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Media/Multimedia Design.
- 13.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Media/Multimedia Design.
- 14.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Media/Multimedia Design.
- 15.0 Demonstrate knowledge of design layout software.
- 16.0 Demonstrate proficiency in Web page design applicable to the WWW.
- 17.0 Demonstrate understanding of HTML and CSS.
- 18.0 Demonstrate proficiency in authoring software for Web page design.
- 19.0 Demonstrate proficiency in animated Web page design applicable to the WWW.
- 20.0 Demonstrate understanding of ActionScripts.
- 21.0 Demonstrate proficiency in animation design software for Web page design, interactive presentation and banners for WWW.
- 22.0 Demonstrate proficiency in using presentation software and equipment to produce a complex presentation.
- 23.0 Demonstrate proficiency using video editing software and equipment.
- 24.0 Develop proficiency in using authoring software.
- 25.0 Demonstrate proficiency using all media to create an advertising campaign.
- 26.0 Participate in work-based learning experiences.
- 27.0 Apply job readiness, career planning and job seeking skills to obtain 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, illusion software, digital still photography, and photo editing software.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Media/Multimedia Design.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.910.RST.2.6	
01.03	Integration of Knowledge and Ideas	
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04	Range of Reading and Level of Text Complexity	
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Media/Multimedia Design.	
02.01	Text Types and Purposes	
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02	Production and Distribution of Writing	
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's	

Florida Standards		Correlation to CTE Program Standard #
	capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Media/Multimedia Design.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure. MAFS.K12.MP.7.1	

Florida Standards	Correlation to CTE Program Standard #
03.08 Look for and express regularity in repeated reasoning.  MAFS.K12.MP.8.1	

**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
04.0 Demonstrate knowledge of presentation production issues--The student will be able to:		
04.01 Identify characteristics of design of digital media (print, web, animation video, audio).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
04.02 Identify presentation materials (slides, handouts) and presentation marketing mediums (social media, print media, newspaper, billboards, posters, magazines, Television, movies, computer presentations, interactive CD ROM, kiosks, Web pages).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
04.03 Identify design characteristics (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	
04.04 Demonstrate knowledge of copyright laws including copyright statue, disclaimers, and filing procedures.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
04.05 Research and identify job titles and skills needed for career positions in multimedia design.	LAFS.910.RI.4.10 LAFS.1112.RI.4.10	
04.06 Demonstrate understanding of multimedia file formats (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).		
04.07 Demonstrate knowledge of presentation vocabulary and terms.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
05.0 Demonstrate basic computer knowledge--The student will be able to:		
05.01 Identify basic computer components (CPU, monitor, keyboard).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
05.02 Demonstrate understanding of computer specifications.		
05.03 Demonstrate best practices of computer safety and ergonomics.		
05.04 Demonstrate use of computer operating systems.		
05.05 Perform software installation, setup and updates.		
05.06 Perform peripheral device installation and setup (printer, scanner).		
05.07 Demonstrate use of internal and external drives/storage and data backup.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
05.08 Identify possible software and hardware malfunctions.		
05.09 Identify characteristics of software for (print, photography, web, animation, video and audio).		
06.0 Demonstrate proficiency in using illustration software--The student will be able to:		
06.01 Evaluate industry standard illustration software packages.		
06.02 Identify characteristics of vector and bitmap images.		SC.912.P.12.1
06.03 Demonstrate understanding of the software workspace (menus/palettes).		
06.04 Demonstrate software navigation (views, tabs, zoom).		
06.05 Demonstrate use of drawing tools to create, combine and edit basic shapes.	MAFS.912.G-CO.1.1,2,3,4,5	
06.06 Demonstrate ability to transform content(scale, rotation, position)	MAFS.912.G-CO.1.1,2,3,4,5	
06.07 Demonstrate use of pen and pencil tools to draw/edit straight and curved paths.	MAFS.912.G-CO.1.5	
06.08 Demonstrate use of color and painting tools (patterns, gradients, color palettes).		SC.912.P.10.18
06.09 Demonstrate ability to work with type (formatting, font palette, paths).		
06.10 Demonstrate use of layers (creating, locking, viewing, pasting, merging).		
06.11 Demonstrate use of blending (gradients, objects).		SC.912.P.10.18
06.12 Demonstrate use of brushes.		
06.13 Explore file exporting options and round trips workflows with page layout software.		
06.14 Demonstrate knowledge of bleed for vector and bitmap design software.		SC.912.P.12.1
06.15 Demonstrate knowledge of bleed for vector and image editor authoring software.		SC.912.P.12.1
07.0 Demonstrate knowledge of digital still photography--The student will be able to:		
07.01 Demonstrate knowledge of digital camera types and uses.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
07.02 Demonstrate knowledge of digital photography composition.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
07.03 Demonstrate knowledge of digital camera support (tripod, grips, holds).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
07.04 Identify parts of a digital camera (lens, sensor, battery).	LAFS.910.L.3.6 LAFS.1112.L.3.6	



CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
07.05 Understand digital camera menus and navigation.		
07.06 Demonstrate knowledge of auto modes and settings (F-stops, speed, ISO).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
07.07 Demonstrate knowledge of manual modes and settings (F-stops, speed, ISO).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
07.08 Demonstrate understanding of white balance and lighting.		
07.09 Demonstrate proper care, use, and storage of digital cameras.		
07.10 Create a photography portfolio that includes: portraits and landscapes for studio and field settings.		
08.0 Demonstrate knowledge of photo editing software--The student will be able to:		
08.01 Demonstrate understanding file formats and storage options.		
08.02 Identify parts of the software interface. (menus/palettes)	LAFS.910.L.3.6 LAFS.1112.L.3.6	
08.03 Demonstrate ability to use each of the basic tool sets.		
08.04 Demonstrate ability to import, export and save images.		
08.05 Demonstrate understanding of layers and channels.		
08.06 Demonstrate understanding of filters, effects and plug-ins.		
08.07 Demonstrate understanding of file presets.		
08.08 Demonstrate ability to select portions of an image for manipulation.		
08.09 Demonstrate ability to transforms selections and images. (crop, scale)	MAFS.912.G-CO.1.1,2,3	
08.10 Demonstrate ability to color correct images (brightness, hue, contrast).		SC.912.P.10.18
08.11 Demonstrate ability to use brushes for image creation and correction.		
08.12 Understand non-destructive and destructive operations.		
08.13 Demonstrate the ability to import, paint and export 3D objects.		

**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, color modes, and fonts.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Media/Multimedia Design.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.  LAFS.910.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Media/Multimedia Design.	
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly	

Florida Standards		Correlation to CTE Program Standard #
	and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Media/Multimedia Design.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure. MAFS.K12.MP.7.1	
03.08	Look for and express regularity in repeated reasoning.	

Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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 proficiency in advanced design–The student will be able to:		
09.01 Demonstrate knowledge of advanced design.		
09.02 Identify design strategies to reach the audience		
09.03 Use storyboarding to plan a design.		
09.04 Create formal or informal design layouts using (guidelines, colors, fonts, graphics, logos, etc.)		SC.912.P.10.18
09.05 Demonstrate use of authoring software (vector, image editor, layout) integration.	MAFS.912.N-VM.1.1,2 MAFS.912.N-VM.2.4,5	SC.912.P.12.1
09.06 Identify compatibility formats (extensions) for authoring software integration.		
10.0 Demonstrate understanding color modes–The student will be able to:		
10.01 Demonstrate knowledge of the color process for printing purposes.		SC.912.P.10.18
10.02 Demonstrate knowledge of color conversion from display to print.		SC.912.P.10.18
10.03 Demonstrate knowledge of spot colors		SC.912.P.10.18
10.04 Demonstrate knowledge of Web safe color		SC.912.P.10.18
10.05 Explain color modes differences	LAFS.910.SL.2.4 LAFS.1112.SL.2.4	SC.912.P.10.18
10.06 Understand accessing color modes from authoring software.		SC.912.P.10.18
11.0 Demonstrate proficiency in using fonts for advanced design–The student will be able to:		
11.01 Identify serif and sans-serif fonts.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
11.02 Demonstrate knowledge of conversion of fonts to outlines.		
11.03 Understand the proprietary copyrights of fonts.		
11.04 Demonstrate knowledge of standard font formats (TrueType, Postscript, OpenType, etc.)		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
11.05 Design and develop a print portfolio that includes: business cards, posters, billboards, magazines, brochures, etc.		

**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.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
12.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Media/Multimedia Design.	
12.01	Key Ideas and Details	
12.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.  LAFS.1112.RST.1.1	
12.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.1112.RST.1.2	
12.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.1112.RST.1.3	
12.02	Craft and Structure	
12.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.  LAFS.1112.RST.2.4	
12.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.  LAFS.1112.RST.2.5	
12.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.  LAFS.1112.RST.2.6	
12.03	Integration of Knowledge and Ideas	

Florida Standards		Correlation to CTE Program Standard #
12.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
12.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
12.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
12.04 Range of Reading and Level of Text Complexity		
12.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
12.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
13.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Media/Multimedia Design.	
13.01 Text Types and Purposes		
13.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
13.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
13.02 Production and Distribution of Writing		
13.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
13.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
13.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	



Florida Standards		Correlation to CTE Program Standard #
	LAFS.1112.WHST.2.6	
13.03	Research to Build and Present Knowledge	
13.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
13.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
13.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
13.04	Range of Writing	
13.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
14.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Media/Multimedia Design.	
14.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
14.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
14.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
14.04	Model with mathematics. MAFS.K12.MP.4.1	
14.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
14.06	Attend to precision. MAFS.K12.MP.6.1	
14.07	Look for and make use of structure. MAFS.K12.MP.7.1	
14.08	Look for and express regularity in repeated reasoning.	

Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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 knowledge of design layout software--The student will be able to:		
15.01 Demonstrate understanding file formats and storage options.		
15.02 Identify parts of the software interface. (menus/panels)	LAFS.910.L.3.6 LAFS.1112.L.3.6	
15.03 Demonstrate ability to customize and navigate the workspace.		
15.04 Demonstrate understanding or pre-flighting.		
15.05 Work with styles, graphics and objects in a design.		
15.06 Setup a document and manage pages within document (add/delete/edit: master pages, sections).		
15.07 Demonstrate use of layers, text frames and graphic frames.		
15.08 Demonstrate ability to align, transform and group objects.		
15.09 Understand typography and text editing.		
15.10 Demonstrate understanding of color (applying, gradients, tint, spot, management).		SC.912.P.10.18
15.11 Import and modify graphics (links, vector/bitmap images, quality, alpha channels).		SC.912.P.12.1
15.12 Understand output and exporting functions (proofs, separations, prepress).		

**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 web page design, HTML and CSS, and software authoring for webpage design.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
12.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Media/Multimedia Design.	
12.01	Key Ideas and Details	
12.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.  LAFS.1112.RST.1.1	
12.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.1112.RST.1.2	
12.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.1112.RST.1.3	
12.02	Craft and Structure	
12.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.  LAFS.1112.RST.2.4	
12.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.  LAFS.1112.RST.2.5	
12.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.  LAFS.1112.RST.2.6	
12.03	Integration of Knowledge and Ideas	

Florida Standards		Correlation to CTE Program Standard #
12.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
12.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
12.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
12.04 Range of Reading and Level of Text Complexity		
12.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
12.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
13.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Media/Multimedia Design.	
13.01 Text Types and Purposes		
13.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
13.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
13.02 Production and Distribution of Writing		
13.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
13.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
13.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.1112.WHST.2.6	
13.03	Research to Build and Present Knowledge	
13.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
13.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
13.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
13.04	Range of Writing	
13.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
14.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Media/Multimedia Design.	
14.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
14.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
14.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
14.04	Model with mathematics. MAFS.K12.MP.4.1	
14.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
14.06	Attend to precision. MAFS.K12.MP.6.1	
14.07	Look for and make use of structure. MAFS.K12.MP.7.1	
14.08	Look for and express regularity in repeated reasoning.	

Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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
16.0 Demonstrate proficiency in Web page design applicable to the WWW–The student will be able to:		
16.01 Determine the objectives and the audience for Web pages.	LAFS.910.W.2.4 LAFS.1112.W.2.4	
16.02 Identify design strategies to reach and keep an audience	LAFS.910.W.2.4 LAFS.1112.W.2.4	SC.912.N.1.1
16.03 Use storyboarding to plan a Web site.		
16.04 Create styles and other design elements (e.g. backgrounds, colors, fonts, buttons, etc.)		
17.0 Demonstrate understanding of HTML and CSS–The student will be able to:		
17.01 Interpret HTML coding on an existing Web page.		
17.02 Interpret HTML commands to write a Web page.		
17.03 Understanding of CSS style sheets on an existing Web page.		
18.0 Demonstrate proficiency in authoring software for Web page design–The student will be able to:		
18.01 Demonstrate understanding of photograph compression factors such as transmission speed, color reduction, and browser support.		
18.02 Save and export a photograph to the Web in the format best for image quality and file size.		
18.03 Demonstrate knowledge of image formats related to photos and graphics on the Internet (e.g., Web formats: JPEG, GIF, PNG, etc.)	MAFS.912.G-SRT.1.2 MAFS.912.G-SRT.3.6	
18.04 Demonstrate understanding of pixels for Web design.		
18.05 Create Web pages for publication.		
18.06 Apply style sheets for consistent Web site design.		
18.07 Format text for Web pages (e.g., font families, sizes).	MAFS.912.G-C.2.5 MAFS.912.G-SRT.1.1,2,3	
18.08 Create and edit images, photographs for Web pages using digital imaging software.	MAFS.912.G-CO-1.2	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
18.09 Insert created buttons into a Web page and test for accuracy.		
18.10 Create navigational links.		
18.11 Insert audio files into a Web page.		
18.12 Create, edit and integrate video files into a Web page.		
18.13 Create, edit and integrate animation files into a Web page.		
18.14 Create Meta commands and key words for search engines.		
18.15 Optimize page size for effective downloading to browsers.	MAFS.912.G-SRT.1.1,2	
18.16 Create and incorporate a form in a Web page.		
18.17 Edit and test links for accuracy and validity.		
18.18 Create several Web pages for 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, ActionScripts, and interactive design software.

**Abbreviations:**

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

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
19.0	Demonstrate proficiency in animated Web page design applicable to the WWW–The student will be able to:		
19.01	Determine the objectives and the audience for interactive animated Web pages.		
19.02	Identify design strategies to reach and keep an audience.		SC.912.N.1.1
19.03	Use storyboarding to plan an interactive animated web site.		
19.04	Demonstrate understanding of correct use of authoring design software to create Web pages layouts that will be animated for the WWW.		
19.05	Demonstrate understanding of pixel for animated Web pages, interactive presentations, banners, etc.		
19.06	Save and export (photograph, graphics, etc.) to the Web in the format best for image quality and file size.		
20.0	Demonstrate understanding of ActionScripts–The student will be able to:		
20.01	Interpret ActionScripts on an existing Flash Web pages.		
20.02	Understand the use of ActionScripts for Flash Web pages.		
21.0	Demonstrate proficiency in interactive design software for Web page design, interactive presentation and banners for WWW–The student will be able to:		
21.01	Demonstrate knowledge of image formats related to photos and graphics on the Internet (e.g. Web formats (JPEG, GIF, PNG), etc.		
21.02	Optimize page size for effective downloading to browser.		



CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
21.03 Using ActionScript create an interactive Web page, interactive presentation, Web banner for publication.		
21.04 Demonstrate knowledge of timeline, scenes, etc.		
21.05 Insert audio files into interactive Web pages, interactive presentations and Web banners files.		
21.06 Integrate video files into an interactive Web pages, interactive presentations, Web banners.		

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 presentation software and video editing software.

**Abbreviations:**

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

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
22.0	Demonstrate proficiency in using presentation software and equipment to produce a complex presentation–The student will be able to:		
22.01	Using authoring editing software, create a multimedia presentation that incorporates graphics, shot and edited video, animation, music, narration and adheres to good design principles.	LAFS.910.SL.2.5,6 LAFS.1112.SL.2.5,6	
22.02	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, videographer, interface designers/programmers, etc.)		
23.0	Demonstrate proficiency using video editing software and equipment–The student will be able to:		
23.01	Demonstrate knowledge of non-linear editing software (NLEs).		
23.02	Identify components of non-linear video editing equipment.		
23.03	Set-up non-linear video editing equipment.		
23.04	Compare offline to “real time” video editing.		
23.05	Use storyboarding to plan a short nonlinear video project that includes existing video footage with a title, transitions, background sound, voice-over, animation, and rolling credits.		SC.912.10.21
23.06	Create and edit a movie using video editing software that includes video footage with a title, transitions, background sound, voice-over, and rolling credits and output to video.		SC.912.P.10.21

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
23.07 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	
23.08 Discuss the use of batch processing and project trimming.	LAFS.910.SL.1.1 LAFS.1112.SL.1.1	
23.09 Plan, create, edit and present a short nonlinear QuickTime 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:**

This course covers competencies in using authoring software, creating an advertising campaign, 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

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
24.0	Develop proficiency in using authoring software–The student will be able to:		
24.01	Plan interactive projects for use in a kiosk, CD, DVD, E-merchandizing, computer-based presentation or training or corporate presentation		SC.912.N.1.1
24.02	Use authoring software to create an interactive project for use in a kiosk, CD, DVD, merchandizing application, computer-based training or corporate presentation.		SC.912.N.1.1
24.03	Have the created interactive project evaluated and tested by users and make modifications to improve the project.		SC.912.N.1.1
24.04	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
25.0	Demonstrate proficiency using all media to create an advertising campaign–The student will be able to:		
25.01	Using authoring software plan and create an advertising campaign that includes: collateral materials, digital photography, Web page, animation, video, audio.		
26.0	Participate in work-based learning experiences–The student will be able to:		
26.01	Participate in work-based learning experiences in a digital media/multimedia environment.		
27.0	Apply job readiness, career planning and job seeking skills to obtain personal and professional goals–The student will be able to:		
27.01	Create a digital resume and print it.		
27.02	Create a digital portfolio and publish it on the WWW.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
27.03 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.

### **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.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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, 30, 31
Standard Length	7 credits
Teacher Certification	PHOTOG @7 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4021 – Photographers 27-4032 – Film and Video editors
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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.

The following table illustrates the secondary program structure:

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

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics, VO= Career and Technical Education)

### **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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Photography Technology.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Photography Technology.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Photography Technology.
- 04.0 Demonstrate understanding of the history of photography.
- 05.0 Evaluate the production process.
- 06.0 Demonstrate understanding of intellectual property rights, copyright laws and plagiarism as it applies to creative assets.
- 07.0 Operate parts of a camera system.
- 08.0 Demonstrate use of camera support equipment.
- 09.0 Take basic photographs.
- 10.0 Use photographic workflow applications.
- 11.0 Develop a production plan.
- 12.0 Demonstrate knowledge of art/creative direction.
- 13.0 Demonstrate proficiency in computer skills.
- 14.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Photography Technology.
- 15.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Photography Technology.
- 16.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Photography Technology.
- 17.0 Use photo editing software.
- 18.0 Use photographic lights.
- 19.0 Use photography sets, backgrounds and stages.
- 20.0 Process and print photographs.
- 21.0 Demonstrate knowledge of photo/video journalism.
- 22.0 Demonstrate knowledge of digital single-lens reflex (DSLR) video production.
- 23.0 Demonstrate knowledge of video software.
- 24.0 Practice the business of commercial digital photography.
- 25.0 Operate various format cameras.
- 26.0 Demonstrate knowledge of High Dynamic Range (HDR) photography.
- 27.0 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.

Florida Standards		Correlation to CTE Program Standard #
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Photography Technology.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Photography Technology.		
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's	

Florida Standards		Correlation to CTE Program Standard #
	capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Photography Technology.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure. MAFS.K12.MP.7.1	

Florida Standards	Correlation to CTE Program Standard #
03.08 Look for and express regularity in repeated reasoning.  MAFS.K12.MP.8.1	

**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 understanding of the history of photography--The student will be able to:		
04.01 Demonstrate knowledge photography as an invention.		
04.02 Demonstrate knowledge of early uses of photography.		
04.03 Describe the mechanics of early photographic systems.		
04.04 Identify photography as art.		
04.05 Show the concept of the “decisive moment”.		
04.06 Demonstrate knowledge of pictorial photography		
04.07 Demonstrate knowledge of straight photography.		
04.08 Demonstrate knowledge of documentary photography.		
04.09 Define aspects of photojournalism.		
05.0 Evaluate the production process--The student will be able to:		
05.01 Identify the job titles associated with digital photography.		
05.02 Identify various tools and equipment used in digital photography.		
05.03 Use speed and efficiency concepts (workflow).		
05.04 Identify the different types of the photographic medium such as photojournalism, fine art, event, family portrait, fashion, sports, magazine and product.		
05.05 Identify the interrelationships between artists.		
05.06 Use basic communication concepts such as verbal, memos, paperwork and purchase orders.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
05.07 Identify the stages of production.		
05.08 Examine photographic terms and jargon.		
05.09 Create and organize contact sheets or prepare for presentations online and in person.		
06.0 Demonstrate understanding of intellectual property rights, copyright laws and plagiarism as it applies to creative assets--The student will be able to:		
06.01 Examine the limits and expectations of copyright protection.		
06.02 Analyze the rights of "fair use" and "fair dealing".		
06.03 Demonstrate understanding of the transfer and licensing of creative works.		
06.04 Articulate the use of "exclusive rights" to intellectual creations.		
06.05 Demonstrate the use of digital watermarking and embedding file information.		
07.0 Operate parts of a camera system--The student will be able to:		
07.01 Identify basic camera anatomy such as lens, battery, flash, shutter and display.		
07.02 Remove and attach standard lenses.		
07.03 Charge and connect batteries.		
07.04 Identify, insert and format recording media.		
07.05 Use basic camera functions such as power, date/ time and menu navigation.		
07.06 Set image format and size.		
07.07 Use camera auto, program and scene modes.		
07.08 Use camera viewfinder and LCD displays for image review.		
07.09 Use basic lens control such as auto, manual focus and zoom.		
07.10 Use image International Standards Organization (ISO) and metering functions.		
07.11 Use white balance operations.		
07.12 Use shutter and aperture priority modes.		
07.13 Set proper f-stop and shutter speeds.		



CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
07.14 Use camera drive modes such as delayed, multiple and remote.		
07.15 Operate a camera mounted flash and use fill and red-eye reduction.		
08.0 Demonstrate use of camera support equipment--The student will be able to:		
08.01 Perform basic handholds of camera in portrait and landscape.		
08.02 Identify basic components of a tripod (head, sticks and spreader).		
08.03 Assemble fluid head and friction head tripod components.		
08.04 Setup and level tripod for use in portrait and landscape.		
08.05 Attach camera to support equipment.		
08.06 Identify auxiliary support devices.		
09.0 Take basic photographs--The student will be able to:		
09.01 Apply camera care and maintenance principles.		
09.02 Define the subject of a photograph.		
09.03 Identify available light sources.		
09.04 Demonstrate understanding of photo composition (rule of thirds).		
09.05 Select an appropriate lens for subject (wide, tight, macro).		
09.06 Take still life photographs using available light.		
09.07 Take portrait photographs using available light.		
09.08 Take action photographs using available light.		
09.09 Create a series (picture study) of photographs around a defined subject.		
10.0 Use photographic workflow applications--The student will be able to:		
10.01 Establish system requirements for workflow application software.		
10.02 Install and configure workflow application software.		
10.03 Identify parts of the software interface including menus and palettes.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
10.04 Import photographs from various media sources such as CF, SD and DVD formats.		
10.05 Define and create keyword tags for imported images.		
10.06 Organize, rate, label and rename image collections.		
10.07 Create and modify image metadata.		
10.08 Perform image post processing including white balance, color, tone and crop.		
10.09 Export images to disk or photo editing software.		
10.10 Create and upload 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.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Photography Technology.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.  LAFS.910.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Photography Technology.	
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly	

Florida Standards		Correlation to CTE Program Standard #
	and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Photography Technology.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure. MAFS.K12.MP.7.1	
03.08	Look for and express regularity in repeated reasoning.	

Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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 a production plan--The student will be able to:		
11.01 Work with the client to define the scope of work.		
11.02 Work with the client to identify the message.		
11.03 Determine distribution requirements and client deliverables.		
11.04 Identify the stages of production.		
11.05 Create basic communication concepts verbally and through memos and paperwork.		
11.06 Develop a production schedule.		
11.07 Define roles and coordinate needed production crew.		
11.08 Evaluate the scope and use of model releases.		
11.09 Evaluate the scope and use of property releases.		
11.10 Evaluate the scope and use of liability releases.		
11.11 Identify need and use for production insurance.		
11.12 Determine and secure equipment.		
11.13 Examine industry terms and jargon.		
12.0 Demonstrate knowledge of art/ creative direction--The student will be able to:		
12.01 Develop the overall visual appearance of a photograph/ video.		
12.02 Demonstrate the ability to create moods with style.		
12.03 Describe the importance of art direction as it pertains to the message to be conveyed.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
12.04 Identify the use of color in art direction.		
12.05 Document the technical aspects of the art direction for use in production.		
12.06 Perform the various assignments in a professional manner according to industry standards.		
13.0 Demonstrate proficiency in computer skills--The student will be able to:		
13.01 Identify all computer parts.		
13.02 Demonstrate understanding of computer performance specifications.		
13.03 Compare and contrast difference between business machines and workstations.		
13.04 Demonstrate best practices of computer safety and ergonomics.		
13.05 Demonstrate understanding of operating systems.		
13.06 Perform software installation and setup.		
13.07 Perform peripheral device installation and setup.		
13.08 Perform computer upgrades (memory, hard disks and cards).		
13.09 Perform storage management operations (project/ file).		
13.10 Demonstrate knowledge of computer maintenance.		
13.11 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.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
14.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Photography Technology.	
14.01	Key Ideas and Details	
14.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.  LAFS.1112.RST.1.1	
14.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.1112.RST.1.2	
14.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.1112.RST.1.3	
14.02	Craft and Structure	
14.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.  LAFS.1112.RST.2.4	
14.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.  LAFS.1112.RST.2.5	
14.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.  LAFS.1112.RST.2.6	
14.03	Integration of Knowledge and Ideas	



Florida Standards		Correlation to CTE Program Standard #
14.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
14.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
14.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
14.04 Range of Reading and Level of Text Complexity		
14.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
14.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
15.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Photography Technology.	
15.01 Text Types and Purposes		
15.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
15.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
15.02 Production and Distribution of Writing		
15.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
15.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
15.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.1112.WHST.2.6	
15.03	Research to Build and Present Knowledge	
15.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
15.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
15.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
15.04	Range of Writing	
15.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
16.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Photography Technology.	
16.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
16.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
16.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
16.04	Model with mathematics. MAFS.K12.MP.4.1	
16.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
16.06	Attend to precision. MAFS.K12.MP.6.1	
16.07	Look for and make use of structure. MAFS.K12.MP.7.1	
16.08	Look for and express regularity in repeated reasoning.	

**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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
17.0 Use photo editing software--The student will be able to:		
17.01 Identify the computer requirements for photographic software.		
17.02 Demonstrate understanding file formats and storage options.		
17.03 Compare and contrast available photographic software.		
17.04 Identify parts of the software interface (menus and palettes).		
17.05 Use each of the basic tool sets.		
17.06 Import, export and save images.		
17.07 Develop software and file backup plan.		
17.08 Demonstrate understanding of layers and channels.		
17.09 Demonstrate understanding of filters, effects and plug-ins.		
17.10 Demonstrate understanding of file presets.		
17.11 Select portions of an image for manipulation.		
17.12 Transform selections and images (crop, scale).		
17.13 Color correct images (brightness, hue and contrast).		
17.14 Use brushes for image creation and correction.		
17.15 Identify non-destructive and destructive operations.		
17.16 Import, edit and export raw files.		
17.17 Demonstrate the basic use of video.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
17.18 Implement the undo/redo history and cache system.		
17.19 Use keyboard shortcuts to improve efficiency.		
17.20 Locate and effectively use the help menu system.		
18.0 Use photographic lights--The student will be able to:		
18.01 Demonstrate understanding of light (direction, intensity, color, contrast, hardness).		
18.02 Demonstrate understanding of natural, artificial, available and ambient light sources.		
18.03 Demonstrate understanding and use of sunlight (time of day, color temperature, color correcting, blocking and shade).		
18.04 Use continuous lighting setups and equipment.		
18.05 Use flash and strobe light setups and systems.		
18.06 Use onboard flash systems.		
18.07 Demonstrate understanding of three-point lighting.		
18.08 Use a light meter.		
18.09 Use light modifiers such as scrim, reflectors and flags.		
18.10 Use lights on location.		
19.0 Use photography sets, backgrounds and stages--The student will be able to:		
19.01 Coordinate with creative director on set plan.		
19.02 Define the intended look and materials to be used.		
19.03 Erect background stands and hang background material.		
19.04 Build hard and soft cyclorama product stages.		
19.05 Adjust available seating for studio portraits.		
19.06 Safely secure all grip equipment including reflector stands, c-stand, light stands and sand bags.		
20.0 Process and print photographs--The student will be able to:		
20.01 Prepare photos for print using photo editing software.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
20.02 Adjust the crop, bleed and trim of a photo.		
20.03 Adjust the color mode and resolution of a photo.		
20.04 Calibrate computer monitor and software for printing system.		
20.05 Compare and contrast available papers, printers and inks.		
20.06 Compare and contrast available printing services based on quality, speed, price, reliability, location.		
20.07 Demonstrate understanding of International Color Consortium (ICC) profiles.		
20.08 Demonstrate understanding of archival inks and papers.		
20.09 Work with color and black and white images.		
20.10 Analyze color prints for correct color and contrast.		
20.11 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.

Florida Standards		Correlation to CTE Program Standard #
14.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Photography Technology.	
14.01	Key Ideas and Details	
14.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
14.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
14.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
14.02	Craft and Structure	
14.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
14.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
14.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. LAFS.1112.RST.2.6	
14.03	Integration of Knowledge and Ideas	

Florida Standards		Correlation to CTE Program Standard #
14.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
14.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
14.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
14.04 Range of Reading and Level of Text Complexity		
14.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
14.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
15.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Photography Technology.	
15.01 Text Types and Purposes		
15.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
15.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
15.02 Production and Distribution of Writing		
15.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
15.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
15.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	

Florida Standards		Correlation to CTE Program Standard #
		LAFS.1112.WHST.2.6
15.03	Research to Build and Present Knowledge	
15.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	LAFS.1112.WHST.3.7
15.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.	LAFS.1112.WHST.3.8
15.03.3	Draw evidence from informational texts to support analysis, reflection, and research.	LAFS.1112.WHST.3.9
15.04	Range of Writing	
15.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	LAFS.1112.WHST.4.10
16.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Photography Technology.	
16.01	Make sense of problems and persevere in solving them.	MAFS.K12.MP.1.1
16.02	Reason abstractly and quantitatively.	MAFS.K12.MP.2.1
16.03	Construct viable arguments and critique the reasoning of others.	MAFS.K12.MP.3.1
16.04	Model with mathematics.	MAFS.K12.MP.4.1
16.05	Use appropriate tools strategically.	MAFS.K12.MP.5.1
16.06	Attend to precision.	MAFS.K12.MP.6.1
16.07	Look for and make use of structure.	MAFS.K12.MP.7.1
16.08	Look for and express regularity in repeated reasoning.	



Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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 photo/video journalism--The student will be able to:		
21.01 Demonstrate understanding of the history of photo/video journalism.		
21.02 Identify the jobs and roles related to photo/video journalism.		
21.03 Analyze the legal and ethical issues related to photo/video journalism.		
21.04 Describe the elements that make up a photo story.		
21.05 Sequence a photo story and write captions.		
21.06 Imbed metadata as needed.		
21.07 Shoot correct length of video to tell story and provide coverage.		
21.08 Prepare media for and identify distribution sources.		
22.0 Demonstrate knowledge of digital single-lens reflex (DSLR) video production--The student will be able to:		
22.01 Compare photography and video on DSLR.		
22.02 Compose shots for movement.		
22.03 Choose the appropriate video format (standard/codec and frame rate).		
22.04 Compare and contrast DSLR video with traditional video cameras.		
22.05 Choose appropriate recording media based on card speed and size.		
22.06 Select appropriate video friendly lenses and focusing aids.		
22.07 Select appropriate lighting gear.		
22.08 Set appropriate exposure, white balance and shutter speed.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
22.09 Connect and setup audio interface.		
22.10 Identify video compression picture quality loss.		
22.11 Demonstrate the use of full and cropped sensors such as rolling shutter.		
22.12 Establish the use of action/safe and title safe areas.		
22.13 Set appropriate focus.		
22.14 Use microphones and audio devices.		
22.15 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
23.0 Demonstrate knowledge of video software--The student will be able to:		
23.01 Demonstrate understanding file formats and storage options.		
23.02 Identify parts of the software interface.		
23.03 Use each of the basic tool sets.		
23.04 Import file and video to be composited.		
23.05 Use layers and compositing.		
23.06 Use filters, effects and plug-ins.		
23.07 Use motion paths.		
23.08 Use lighting effects.		
23.09 Use rendering functions.		
23.10 Mask video.		
23.11 Color correct video using brightness, hue and contrast adjustments.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
23.12 Use vector and color keying tools.		
23.13 Demonstrate understanding of time correction.		
23.14 Export final video to be used with video editing software.		
24.0 Practice the business of commercial digital photography--The student will be able to:		
24.01 Identify business aspects of commercial digital photography.		
24.02 Apply appropriate communication and human relation skills.		
24.03 Understand the photography industry's various market sectors including events, family portrait, public relations, product/studio, fashion, catalog, magazine and food.		
24.04 Develop a business plan for a commercial photography business.		
24.05 Identify and understand the importance of industry associations related to commercial photography.		
24.06 Describe the role of special interest groups.		
24.07 Research market rates for photographic work.		
24.08 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
25.0	Operate various format cameras--The student will be able to:		
25.01	Use alternative format cameras.		
25.02	Use a medium format camera.		
25.03	Use a point and shoot camera (fixed lens).		
25.04	Use a mobile phone camera.		
25.05	Use a digital single-lens reflex (DSLR) camera.		
25.06	Use a mirror-less camera.		
26.0	Demonstrate knowledge of High Dynamic Range (HDR) Photography--The student will be able to:		
26.01	Explain HDR photography.		
26.02	Demonstrate HDR workflow and operation.		
26.03	Select appropriate HDR subject.		
26.04	Select appropriate camera support equipment (tripod, monopod, grips).		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
26.05 Configure camera for HDR photography.		
26.06 Acquire HDR image.		
26.07 Process and create HDR image with photo editing software.		
26.08 Reduce ghosting effect using photo editing software.		

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
27.0 Develop a professional portfolio of work--The student will be able to:		
27.01 Identify elements of a professional portfolio and resume.		
27.02 Examine and determine student work to include in a portfolio and resume.		
27.03 Gather cohesive photographs and information to include into portfolio and resume.		
27.04 Explore the use of internet websites for portfolio distribution.		
27.05 Determine the format for portfolio and resume.		
27.06 Research local galleries for portfolio exhibition.		
27.07 Produce resume 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.

### **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.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Careers in Fashion and Interior Design  
**Program Type:** Orientation/Exploratory  
**Career Cluster:** Arts, A/V Technology and Communication

**Secondary – Middle School**

Program Number	8209100
CIP Number	0404050107
Grade Level	6-8
Standard Length	Semester
Teacher Certification	FAM CON SC 1
CTSO	FCCLA
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 course will assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in interior design and fashion design. The content includes but is not limited to the development of leadership skills, communication skills, and employability skills; resource management; exploration of design careers; working with textiles and elements of design; basic sewing skills; clothing choices; technology in the design industry; and completion of projects related to fashion and interior design.

**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 leadership skills.
- 02.0 Demonstrate employability skills as they relate to the design industry.
- 03.0 Demonstrate effective communication skills.
- 04.0 Analyze careers in the design industry.
- 05.0 Select and use tools and equipment.
- 06.0 Identify characteristics and care of textiles.
- 07.0 Explain the elements and principles of design.
- 08.0 Explain how environmental factors impact design.
- 09.0 Demonstrate basic sewing skills.
- 10.0 Analyze clothing choices.
- 11.0 Develop a project related to fashion.
- 12.0 Analyze interior design choices.
- 13.0 Develop a project related to interior design.
- 14.0 Utilize technology as it relates to the design industry.
- 15.0 Demonstrate the skills involved in effective resource management.

Florida Department of Education  
Student Performance Standards

**Course Title:** Careers in Fashion and Interior Design  
**Course Number:** 8209100  
**Course Length:** Semester

**Course Description:**

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in interior design and fashion design. The content includes but is not limited to the development of leadership skills, communication skills, and employability skills; resource management; exploration of design careers; working with textiles and elements of design; basic sewing skills; clothing choices; technology in the design industry; and completion of projects related to fashion and interior design.

<b>CTE Standards and Benchmarks</b>	
01.0	Demonstrate leadership skills–The student will be able to:
01.01	Identify roles and responsibilities of members of professional and community service organizations, including career and technical student organizations.
01.02	Work cooperatively as a group member to achieve organizational goals.
01.03	Demonstrate leadership roles and organizational responsibilities.
01.04	Identify and utilize the planning process.
01.05	Develop a personal growth project.
02.0	Demonstrate employability skills as they relate to the design industry–The student will be able to:
02.01	Identify personal talents and abilities that can contribute to positive self-esteem and success in the work place.
02.02	Practice teamwork skills.
02.03	Practice employability skills.
02.04	Practice positive work ethics and identify negative work ethics.
02.05	Exhibit work expectations of an employer in the design industry.
02.06	Apply math, reading, science, and critical thinking skills as they relate to the design industry.
03.0	Demonstrate effective communication skills–The student will be able to:

## CTE Standards and Benchmarks

03.01 Describe why communication is the basis for all relationships.

03.02 Distinguish between non-assertive, assertive, and aggressive communication.

03.03 Demonstrate communication skills that promote positive relationships in the work place.

03.04 Practice active listening skills.

03.05 Utilize conflict resolution skills.

04.0 Analyze careers in the design industry–The student will be able to:

04.01 Describe careers in the design industry.

04.02 Classify careers from entry level to professional level.

04.03 Explore entrepreneurship opportunities in the design industry.

04.04 Research and present information on a design career to include roles and responsibilities, employment opportunities and requirements for education and training.

05.0 Select and use tools and equipment–The student will be able to:

05.01 Identify and select the appropriate tool for the assignment.

05.02 Demonstrate the proper and safe use of tools and equipment.

05.03 Practice care and maintenance of tools and equipment.

06.0 Identify characteristics and care of textiles–The student will be able to:

06.01 Identify a variety of fabrics through tactile activities.

06.02 Compare and contrast natural and synthetic fabrics.

06.03 Recognize types of fabric construction.

06.04 Identify fabrics appropriate for various purposes.

07.0 Explain the elements and principles of design–The student will be able to:

07.01 Define and illustrate the elements of design.

07.02 Describe a color wheel and its use in design.

07.03 Recognize basic color schemes.

## CTE Standards and Benchmarks

07.04 Research the psychology of color.

07.05 Define and illustrate the principles of design.

08.0 Explain how environmental factors impact design–The student will be able to:

08.01 Define green design, sustainable design, and life cycle cost.

08.02 Research eco-friendly design products.

08.03 Examine the positive and negative impact that a design product has on the environment.

09.0 Demonstrate basic sewing skills–The student will be able to:

09.01 Identify and give the purpose of sewing machine parts.

09.02 Demonstrate math skills as they relate to sewing.

09.03 Demonstrate the threading of the sewing machine.

09.04 Demonstrate straight stitching.

09.05 Identify and demonstrate various stitch length and width selections.

09.06 Interpret written instructions and construct a basic sewing project.

10.0 Analyze clothing choices–The student will be able to:

10.01 Explain the impact of trends and social climates on fashion styles.

10.02 Identify appropriate clothing styles for various events.

10.03 Identify factors that impact clothing costs.

10.04 Demonstrate the procedure for recording accurate body measurements.

10.05 Analyze proper fit.

11.0 Develop a project related to fashion–The student will be able to:

11.01 Select materials and supplies for a fashion project.

11.02 Calculate the costs of a given fashion project.

11.03 Interpret written directions for constructing a fashion project.

## CTE Standards and Benchmarks

11.04 Apply math skills and construct a fashion project.

12.0 Analyze interior design choices—The student will be able to:

12.01 Explain the impact of political and social climates on decorating styles.

12.02 Identify characteristics of furnishing styles.

12.03 Identify factors that impact furnishing choices.

13.0 Develop a project related to interior design—The student will be able to:

13.01 Apply the principals and elements of design in selecting an interior design project.

13.02 Calculate the costs of an interior design project.

13.03 Interpret written directions for assembling/constructing an interior design project.

13.04 Apply math skills and construct an interior design project.

14.0 Utilize technology as it relates to the design industry—The student will be able to:

14.01 Identify technology utilized in the design industry.

14.02 Analyze technology trends impacting the design industry.

14.03 Utilize technology.

15.0 Demonstrate the skills involved in effective resource management—The student will be able to:

15.01 Identify steps of the decision-making process.

15.02 Distinguish between a need and a want.

15.03 Explain how values and goals affect decisions.

15.04 Develop a budget and savings plan.

15.05 Analyze the relationship between resources and attainment of lifestyle goals.

## **Additional Information**

### **Laboratory Activities**

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

### **Special Notes**

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

### **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. 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 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>



Florida Department of Education  
Curriculum Framework

**Program Title:** Careers in Fashion and Interior Design and Career Planning  
**Program Type:** Orientation/Exploratory and Career Planning  
**Career Cluster:** Arts, A/V Technology and Communication

**Secondary – Middle School**

Program Number	8209200
CIP Number	0404050108
Grade Level	6-8
Standard Length	Semester
Teacher Certification	FAM CON SC 1
CTSO	FCCLA
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

This course will assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in interior design and fashion design. The content includes but is not limited to the development of leadership skills, communication skills, and employability skills; resource management; exploration of design careers; working with textiles and elements of design; basic sewing skills; clothing choices; technology in the design industry; and completion of projects related to fashion and interior design.

This course is the same as Careers in Fashion and Interior Design, except that it has included the career and education planning competencies.

**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 leadership skills.
- 02.0 Demonstrate employability skills as they relate to the design industry.
- 03.0 Demonstrate effective communication skills.
- 04.0 Analyze careers in the design industry.
- 05.0 Select and use tools and equipment.
- 06.0 Identify characteristics and care of textiles.
- 07.0 Explain the elements and principles of design.
- 08.0 Explain how environmental factors impact design.
- 09.0 Demonstrate basic sewing skills.
- 10.0 Analyze clothing choices.
- 11.0 Develop a project related to fashion.
- 12.0 Analyze interior design choices.
- 13.0 Develop a project related to interior design.
- 14.0 Utilize technology as it relates to the design industry.
- 15.0 Demonstrate the skills involved in effective resource management.

## **Listed below are the standards that must be met to satisfy the requirements of Section 1003.4156, Florida Statutes.**

- 16.0 Describe the influences that societal, economic, and technological changes have on employment trends and future training.
- 17.0 Develop skills to locate, evaluate, and interpret career information.
- 18.0 Identify and demonstrate processes for making short and long term goals.
- 19.0 Demonstrate employability skills such as working in a group, problem-solving and organizational skills, and the importance of entrepreneurship.
- 20.0 Understand the relationship between educational achievement and career choices/postsecondary options.
- 21.0 Identify a career cluster and related pathways through an interest assessment that match career and education goals.
- 22.0 Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/career goals.
- 23.0 Demonstrate knowledge of technology and its application in career fields/clusters.

Florida Department of Education  
Student Performance Standards

**Course Title:** Careers in Fashion and Interior Design and Career Planning  
**Course Number:** 8209200  
**Course Length:** Semester

**Course Description:**

This course will assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in interior design and fashion design. The content includes but is not limited to the development of leadership skills, communication skills, and employability skills; resource management; exploration of design careers; working with textiles and elements of design; basic sewing skills; clothing choices; technology in the design industry; and completion of projects related to fashion and interior design.

<b>CTE Standards and Benchmarks</b>	
01.0	Demonstrate leadership skills–The student will be able to:
01.01	Identify roles and responsibilities of members of professional and community service organizations, including career and technical student organizations.
01.02	Work cooperatively as a group member to achieve organizational goals.
01.03	Demonstrate leadership roles and organizational responsibilities.
01.04	Identify and utilize the planning process.
01.05	Develop a personal growth project.
02.0	Demonstrate employability skills as they relate to the design industry–The student will be able to:
02.02	Identify personal talents and abilities that can contribute to positive self-esteem and success in the work place.
02.03	Practice teamwork skills.
02.04	Practice employability skills.
02.05	Practice positive work ethics and identify negative work ethics.
02.06	Exhibit work expectations of an employer in the design industry.
02.07	Apply math, reading, science, and critical thinking skills as they relate to the design industry.
03.0	Demonstrate effective communication skills–The student will be able to:

## CTE Standards and Benchmarks

03.02 Describe why communication is the basis for all relationships.

03.03 Distinguish between non-assertive, assertive, and aggressive communication.

03.04 Demonstrate communication skills that promote positive relationships in the work place.

03.05 Practice active listening skills.

03.06 Utilize conflict resolution skills.

04.0 Analyze careers in the design industry–The student will be able to:

04.01 Describe careers in the design industry.

04.02 Classify careers from entry level to professional level.

04.03 Explore entrepreneurship opportunities in the design industry

04.04 Research and present information on a design career to include roles and responsibilities, employment opportunities and requirements for education and training.

05.0 Select and use tools and equipment–The student will be able to:

05.01 Identify and select the appropriate tool for the assignment.

05.02 Demonstrate the proper and safe use of tools and equipment.

05.03 Practice care and maintenance of tools and equipment.

06.0 Identify characteristics and care of textiles–The student will be able to:

06.01 Identify a variety of fabrics through tactile activities.

06.02 Compare and contrast natural and synthetic fabrics.

06.03 Recognize types of fabric construction.

06.04 Identify fabrics appropriate for various purposes.

07.0 Explain the elements and principles of design–The student will be able to:

07.01 Define and illustrate the elements of design.

07.02 Create a color wheel.

07.03 Recognize basic color schemes.

## CTE Standards and Benchmarks

07.04 Research the psychology of color.

07.05 Define and illustrate the principles of design.

08.0 Explain how environmental factors impact design–The student will be able to:

08.01 Define green design.

08.02 Research eco-friendly design products.

08.03 Examine the positive and negative impact that a design product has on the environment.

08.04 Redesign an item into another useful product.

09.0 Demonstrate basic sewing skills–The student will be able to:

09.01 Identify and give the purpose of sewing machine parts.

09.02 Demonstrate math skills as they relate to sewing.

09.03 Demonstrate the threading of the sewing machine.

09.04 Demonstrate straight stitching.

09.05 Identify and demonstrate various stitch length and width selections.

09.06 Interpret written instructions and construct a basic sewing project.

10.0 Analyze clothing choices–The student will be able to:

10.01 Explain the impact of trends and social climates on fashion styles.

10.02 Identify appropriate clothing styles for various events.

10.03 Identify factors that impact clothing costs.

10.04 Demonstrate the procedure for recording accurate body measurements.

10.05 Analyze proper fit.

11.0 Develop a project related to fashion–The student will be able to:

11.01 Select materials and supplies for a fashion project.

11.02 Calculate the costs of a given fashion project.

## CTE Standards and Benchmarks

11.03 Interpret written directions for constructing a fashion project.

11.04 Apply math skills and construct a fashion project.

12.0 Analyze interior design choices–The student will be able to:

12.01 Explain the impact of political and social climates on decorating styles.

12.02 Identify characteristics of furnishing styles.

12.03 Identify factors that impact furnishing choices.

13.0 Develop a project related to interior design–The student will be able to:

13.01 Apply the principals and elements of design in selecting an interior design project.

13.02 Interpret written directions for assembling/constructing an interior design project.

13.03 Apply math skills and construct an interior design project.

14.0 Utilize technology as it relates to the design industry–The student will be able to:

14.01 Identify technology utilized in the design industry.

14.02 Analyze technology trends impacting the design industry.

14.03 Utilize technology.

15.0 Demonstrate the skills involved in effective resource management–The student will be able to:

15.01 Identify steps of the decision-making process.

15.02 Distinguish between a need and a want.

15.03 Explain how values and goals affect decisions.

15.04 Develop a budget and savings plan.

15.05 Analyze the relationship between resources and attainment of lifestyle goals.

**Listed below are the standards that must be met to satisfy the requirements of Section 1003.4156, Florida Statutes.**

The student will be able to:

## CTE Standards and Benchmarks

16.0	Describe the influences that societal, economic, and technological changes have on employment trends and future training.
17.0	Develop skills to locate, evaluate, and interpret career information.
18.0	Identify and demonstrate processes for making short and long term goals.
19.0	Demonstrate employability skills such as working in a group, problem-solving and organizational skills, and the importance of entrepreneurship.
20.0	Understand the relationship between educational achievement and career choices/postsecondary options.
21.0	Identify a career cluster and related pathways that match career and education goals.
22.0	Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/career goals.
23.0	Demonstrate knowledge of technology and its application in career fields/clusters.

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

### **Career Planning**

The requirements of section 1003.4156 (1) (e), Florida Statutes, have been integrated into this course. The statute requires that students take a career and education planning course that must result in a completed personalized academic and career plan for the student; must emphasize the importance of entrepreneurship skills; must emphasize technology or the application of technology in career fields; and, beginning in the 2014-2015 academic year, must provide information from the Department of Economic Opportunity's economic security report as described in section 445.07, Florida Statutes. For additional information on the Middle School Career and Education Planning course requirements, go to <http://www.fldoe.org/workforce/ced/>.

### **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. 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 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.



## **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Course Title:** Introduction to Arts, A/V Technology and Communication  
**Course Type:** Orientation/Exploratory  
**Career Cluster:** Arts, A/V Technology and Communication

**Secondary – Middle School**

Program Number	8209350
CIP Number	148209350M
Grade Level	6-8
Standard Length	Semester
Teacher Certification	BUS ED 1 @2 VOE @7 MKTG 1 SECRETAR 7 G COMP SCI 6 @2 COMM ART @7 7G PRINTING @7 7G TV PRO TEC @7 7G TEC ED 1@2 TC COOP ED @7
CTSO	SkillsUSA
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in the Arts, A/V Technology and Communication career cluster. The content includes but is not limited to technology literacy, importance of Arts and AV, the role of science, math, reading, writing, history, and technology in Arts and AV, and Digital Media. Reinforcement of academic skills occurs through classroom instruction and applied laboratory procedures.

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

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

## **Standards**

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

- 01.0 Demonstrate an understanding of the Audio and Video Technology and Film career pathway.
- 02.0 Demonstrate an understanding of the Telecommunications career pathway.
- 03.0 Demonstrate an understanding of the Printing Technology career pathway.
- 04.0 Demonstrate an understanding of the Visual Arts career pathway
- 05.0 Demonstrate an understanding of the Performing Arts career pathway
- 06.0 Apply leadership and communication skills.
- 07.0 Describe how information technology is used in the Arts, A/V Technology and Communication career cluster.
- 08.0 Use information technology tools.

Florida Department of Education  
Student Performance Standards

**Course Title:** Introduction to Arts, A/V Technology and Communication  
**Course Number:** 8209350  
**Course Length:** Semester

**Course Description:**

Beginning with a broad overview of the Arts, A/V Technology and Communication career cluster, students are introduced to the terminology, careers, history, required skills, and technologies associated with each pathway in the Arts, A/V Technology and Communication career cluster. Additionally, they will be provided with opportunities to acquire and demonstrate beginning leadership skills as well as opportunities for hands-on activities.

<b>CTE Standards and Benchmarks</b>	
01.0	Demonstrate an understanding of the Audio and Video Technology and Film career pathway–The student will be able to:
01.01	Define and use proper terminology associated with the Audio and Video Technology and Film career pathway.
01.02	Describe some of the careers available in the Audio and Video Technology and Film career pathway.
01.03	Identify common characteristics of the careers in the Audio and Video Technology and Film career pathway.
01.04	Research the history of the Audio and Video Technology and Film career pathway and describe how the associated careers have evolved and impacted society.
01.05	Identify skills required to successfully enter any career in the Audio and Video Technology and Film career pathway.
01.06	Describe technologies associated in careers within the Audio and Video Technology and Film career pathway.
02.0	Demonstrate an understanding of the Telecommunications career pathway–The student will be able to:
02.01	Define and use proper terminology associated with the Telecommunications career pathway.
02.02	Describe some of the careers available in the Telecommunications career pathway.
02.03	Identify common characteristics of the careers in the Telecommunications career pathway.
02.04	Research the history of the Telecommunications career pathway and describe how the associated careers have evolved and impacted society.
02.05	Identify skills required to successfully enter any career in the Telecommunications career pathway.

## CTE Standards and Benchmarks

02.06 Describe technologies associated in careers within the Telecommunications career pathway.

03.0 Demonstrate an understanding of the Printing Technology career pathway–The student will be able to:

03.01 Define and use proper terminology associated with the Printing Technology career pathway.

03.02 Describe some of the careers available in the Printing Technology career pathway.

03.03 Identify common characteristics of the careers in the Printing Technology career pathway.

03.04 Research the history of the Printing Technology career pathway and describe how the associated careers have evolved and impacted society.

03.05 Identify skills required to successfully enter any career in the Printing Technology career pathway.

03.06 Describe technologies associated in careers within the Printing Technology career pathway.

04.0 Demonstrate an understanding of the Visual Arts career pathway–The student will be able to:

04.01 Define and use proper terminology associated with the Visual Arts career pathway.

04.02 Describe some of the careers available in the Visual Arts career pathway.

04.03 Identify common characteristics of the careers in the Visual Arts career pathway.

04.04 Research the history of the Visual Arts career pathway and describe how the associated careers have evolved and impacted society.

04.05 Identify skills required to successfully enter any career in the Visual Arts career pathway.

04.06 Describe technologies associated in careers within the Visual Arts career pathway.

05.0 Demonstrate an understanding of the Performing Arts career pathway–The student will be able to:

05.01 Define and use proper terminology associated with the Performing Arts career pathway.

05.02 Describe some of the careers available in the Performing Arts career pathway.

05.03 Identify common characteristics of the careers in the Performing Arts career pathway.

05.04 Research the history of the Performing Arts career pathway and describe how the associated careers have evolved and impacted society.

05.05 Identify skills required to successfully enter any career in the Performing Arts career pathway.

05.06 Describe technologies associated in careers within the Performing Arts career pathway.

## CTE Standards and Benchmarks

06.0 Apply leadership and communication skills–The student will be able to:

06.01 Discuss the establishment and history of the Skills USA organization.

06.02 Identify the characteristics and responsibilities of organizational leaders.

06.03 Demonstrate parliamentary procedure skills during a meeting.

06.04 Participate on a committee which has an assigned task and report to the class.

06.05 Demonstrate effective communication skills through delivery of a speech, a slide presentation, or conducting a demonstration.

06.06 Use a computer to assist in the completion of project related to Arts, A/V Technology and Communication career cluster.

07.0 Describe how information technology is used in the Arts, A/V Technology and Communication career cluster–The student will be able to:

07.01 Identify information technology (IT) careers in the Arts, A/V Technology and Communication career cluster, including the responsibilities, tasks and skills they require.

07.02 Relate information technology project management concepts and terms to careers in the Arts, A/V Technology and Communication career cluster.

07.03 Manage information technology components typically used in professions of the Arts, A/V Technology and Communication career cluster.

07.04 Identify security-related ethical and legal IT issues faced by professionals in the Arts, A/V Technology and Communication career cluster.

08.0 Use information technology tools–The student will be able to:

08.01 Identify the functions of web browsers, and use them to access the World Wide Web and other computer resources typically used in the Arts, A/V Technology and Communication career cluster.

08.02 Use e-mail clients to send simple messages and files to other Internet users.

08.03 Demonstrate ways to communicate effectively using Internet technology.

08.04 Use different types of web search engines effectively to locate information relevant to the Arts, A/V Technology and Communication career cluster.

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

### **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. 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 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>

Florida Department of Education  
Curriculum Framework

**Course Title:** Introduction to Arts, A/V Technology and Communication and Career Planning  
**Course Type:** Orientation/Exploratory  
**Career Cluster:** Arts, A/V Technology and Communication

**Secondary – Middle School**

Program Number	8209360
CIP Number	148209360M
Grade Level	6-8
Standard Length	Semester
Teacher Certification	BUS ED 1 @2 VOE @7 MKTG 1 SECRETAR 7 G COMP SCI 6 @2 COMM ART @7 7G PRINTING @7 7G TV PRO TEC @7 7G TC COOP ED @7
CTSO	SkillsUSA
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in the Arts, A/V Technology and Communication career cluster. The content includes but is not limited to technology literacy, importance of Arts and AV, the role of science, math, reading, writing, history, and technology in Arts and AV, and Digital Media. Reinforcement of academic skills occurs through classroom instruction and applied laboratory procedures.

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

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



## **Standards**

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

- 01.0 Demonstrate an understanding of the Audio and Video Technology and Film career pathway.
- 02.0 Demonstrate an understanding of the Telecommunications career pathway.
- 03.0 Demonstrate an understanding of the Printing Technology career pathway.
- 04.0 Demonstrate an understanding of the Visual Arts career pathway
- 05.0 Demonstrate an understanding of the Performing Arts career pathway
- 06.0 Apply leadership and communication skills.
- 07.0 Describe how information technology is used in the Arts, A/V Technology and Communication career cluster.
- 08.0 Use information technology tools.

### **Listed below are the standards that must be met to satisfy the requirements of Section 1003.4156, Florida Statutes.**

- 09.0 Describe the influences that societal, economic, and technological changes have on employment trends and future training.
- 10.0 Develop skills to locate, evaluate, and interpret career information.
- 11.0 Identify and demonstrate processes for making short and long term goals.
- 12.0 Demonstrate employability skills such as working in a group, problem-solving and organizational skills, and the importance of entrepreneurship.
- 13.0 Understand the relationship between educational achievement and career choices/postsecondary options.
- 14.0 Identify a career cluster and related pathways through an interest assessment that match career and education goals.
- 15.0 Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/career goals.
- 16.0 Demonstrate knowledge of technology and its application in career fields/clusters.

Florida Department of Education  
Student Performance Standards

**Course Title:** Introduction to Arts, A/V Technology and Communication and Career Planning  
**Course Number:** 8209350  
**Course Length:** Semester

**Course Description:**

Beginning with a broad overview of the Arts, A/V Technology and Communication career cluster, students are introduced to the terminology, careers, history, required skills, and technologies associated with each pathway in the Arts, A/V Technology and Communication career cluster. Additionally, they will be provided with opportunities to acquire and demonstrate beginning leadership skills as well as opportunities for hands-on activities.

<b>CTE Standards and Benchmarks</b>	
01.0	Demonstrate an understanding of the Audio and Video Technology and Film career pathway–The student will be able to:
01.01	Define and use proper terminology associated with the Audio and Video Technology and Film career pathway.
01.02	Describe some of the careers available in the Audio and Video Technology and Film career pathway.
01.03	Identify common characteristics of the careers in the Audio and Video Technology and Film career pathway.
01.04	Research the history of the Audio and Video Technology and Film career pathway and describe how the associated careers have evolved and impacted society.
01.05	Identify skills required to successfully enter any career in the Audio and Video Technology and Film career pathway.
01.06	Describe technologies associated in careers within the Audio and Video Technology and Film career pathway.
02.0	Demonstrate an understanding of the Telecommunications career pathway–The student will be able to:
02.01	Define and use proper terminology associated with the Telecommunications career pathway.
02.02	Describe some of the careers available in the Telecommunications career pathway.
02.03	Identify common characteristics of the careers in the Telecommunications career pathway.
02.04	Research the history of the Telecommunications career pathway and describe how the associated careers have evolved and impacted society.
02.05	Identify skills required to successfully enter any career in the Telecommunications career pathway.

## CTE Standards and Benchmarks

02.06 Describe technologies associated in careers within the Telecommunications career pathway.

03.0 Demonstrate an understanding of the Printing Technology career pathway–The student will be able to:

03.01 Define and use proper terminology associated with the Printing Technology career pathway.

03.02 Describe some of the careers available in the Printing Technology career pathway.

03.03 Identify common characteristics of the careers in the Printing Technology career pathway.

03.04 Research the history of the Printing Technology career pathway and describe how the associated careers have evolved and impacted society.

03.05 Identify skills required to successfully enter any career in the Printing Technology career pathway.

03.06 Describe technologies associated in careers within the Printing Technology career pathway.

04.0 Demonstrate an understanding of the Visual Arts career pathway–The student will be able to:

04.01 Define and use proper terminology associated with the Visual Arts career pathway

04.02 Describe some of the careers available in the Visual Arts career pathway

04.03 Identify common characteristics of the careers in the Visual Arts career pathway

04.04 Research the history of the Visual Arts career pathway and describe how the associated careers have evolved and impacted society.

04.05 Identify skills required to successfully enter any career in the Visual Arts career pathway.

04.06 Describe technologies associated in careers within the Visual Arts career pathway

05.0 Demonstrate an understanding of the Performing Arts career pathway–The student will be able to:

05.01 Define and use proper terminology associated with the Performing Arts career pathway.

05.02 Describe some of the careers available in the Performing Arts career pathway.

05.03 Identify common characteristics of the careers in the Performing Arts career pathway.

05.04 Research the history of the Performing Arts career pathway and describe how the associated careers have evolved and impacted society.

05.05 Identify skills required to successfully enter any career in the Performing Arts career pathway.

05.06 Describe technologies associated in careers within the Performing Arts career pathway.

## CTE Standards and Benchmarks

06.0 Apply leadership and communication skills–The student will be able to:

06.01 Discuss the establishment and history of the SkillsUSA organization.

06.02 Identify the characteristics and responsibilities of organizational leaders.

06.03 Demonstrate parliamentary procedure skills during a meeting.

06.04 Participate on a committee which has an assigned task and report to the class.

06.05 Demonstrate effective communication skills through delivery of a speech, a slide presentation, or conducting a demonstration.

06.06 Use a computer to assist in the completion of project related to Arts, A/V Technology and Communication career cluster.

07.0 Describe how information technology is used in the Arts, A/V Technology and Communication career cluster–The student will be able to:

07.01 Identify information technology (IT) careers in the Arts, A/V Technology and Communication career cluster, including the responsibilities, tasks and skills they require.

07.02 Relate information technology project management concepts and terms to careers in the Arts, A/V Technology and Communication career cluster.

07.03 Manage information technology components typically used in professions of the Arts, A/V Technology and Communication career cluster.

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08.01 Identify the functions of web browsers, and use them to access the World Wide Web and other computer resources typically used in the Arts, A/V Technology and Communication career cluster.

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08.04 Use different types of web search engines effectively to locate information relevant to the Arts, A/V Technology and Communication career cluster.

**Listed below are the standards that must be met to satisfy the requirements of Section 1003.4156, Florida Statutes.**

The student will be able to:

09.0 Describe the influences that societal, economic, and technological changes have on employment trends and future training.

10.0 Develop skills to locate, evaluate, and interpret career information.

## CTE Standards and Benchmarks

11.0	Identify and demonstrate processes for making short and long term goals.
12.0	Demonstrate employability skills such as working in a group, problem-solving and organizational skills, and the importance of entrepreneurship.
13.0	Understand the relationship between educational achievement and career choices/postsecondary options.
14.0	Identify a career cluster and related pathways that match career and education goals.
15.0	Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/career goals.
16.0	Demonstrate knowledge of technology and its application in career fields/clusters.

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

### **Career Planning**

The requirements of section 1003.4156 (1) (e), Florida Statutes, have been integrated into this course. The statute requires that students take a career and education planning course that must result in a completed personalized academic and career plan for the student; must emphasize the importance of entrepreneurship skills; must emphasize technology or the application of technology in career fields; and, beginning in the 2014-2015 academic year, must provide information from the Department of Economic Opportunity's economic security report as described in section 445.07, Florida Statutes. For additional information on the Middle School Career and Education Planning course requirements, go to <http://www.fldoe.org/workforce/ced/>.

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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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

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

**Note:** The BTE Core, which is part of this program, will undergo major changes in the 2016 – 2017 school year. Please access the [BTE Core](#) document for more information.

Secondary – Career Preparatory	
Program Number	8209600
CIP Number	0510030306
Grade Level	9-12, 30, 31
Standard Length	8 credits
Teacher Certification	BUS ED 1 @2 VOE @7 BUS DP @7 %G ELECT DP @7 %G CLERICAL @7 7G SECRETAR 7 G STENOGRAPH @4 @7 TEC ELEC \$7 G COMP SCI 6 @2 COMM ART @7 7G PRINTING @7 7G TEC ED 1 @2 TC COOP ED @7
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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>



## Purpose

The purpose of this program is to prepare students for employment in digital publishing positions, such as Information Technology Assistants, Production Assistants, Digital Assistant Designers, Graphic Designers, and Multi-Media Designers.

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 enhanced practical experiences in computer generated art and text, graphic design, graphic production, electronic design skills, preparation of electronic layouts and illustrations, and electronic scanning; and development of specialized skills in 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 the Business Technology Education Core and three additional occupational completion points. Secondary or postsecondary students who have previously completed the Business Technology Education Core will not have to repeat the core. A student who completes the applicable competencies at any occupational completion point may either continue with the training program or exit as an occupational completer.

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A  <a href="#">BTE Core</a>	8200320	Applied Computer Business Skills I <b>And</b>	.5 credit	15-1151	2	VO
	8200330	Applied Computer Business Skills II <b>OR</b>	.5 credit		2	VO
	8209020	Computing for College and Careers <b>OR</b>	1 credit		2	PA
	8207310	Introduction to Information Technology	1 credit		2	PA
B	8209510	Digital Design 1	1 credit	43-9031	2	PA
C	8209520	Digital Design 2	1 credit	43-9031	3	PA
	8209530	Digital Design 3	1 credit		3	PA
D	8209540	Digital Design 4	1 credit	27-1024	3	PA
	8209550	Digital Design 5	1 credit		3	PA
E	8209560	Digital Design 6	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, VO= Career and Technical Education)*

**Note:** The BTE Core, which is part of this program, will undergo major changes in the **2016 – 2017** school year. Please access the [BTE Core](#) document for more information.

**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
8200320	11/87 13%	11/80 14%	24/83 29%	11/69 16%	24/67 36%	9/70 13%	11/69 16%	24/82 29%	11/66 17%	24/74 32%	10/72 14%
8200330	11/87 13%	11/80 14%	5/83 6%	11/69 16%	5/67 7%	9/70 13%	11/69 16%	5/82 6%	11/66 17%	5/74 7%	10/72 14%
8209020	13/87 15%	25/80 31%	35/83 42%	20/69 29%	35/67 52%	23/70 33%	13/69 19%	33/82 40%	24/66 36%	40/74 54%	20/72 28%
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
8200320	25/67 37%	14/75 19%	18/54 33%	40/46 87%	40/45 89%	40/45 89%	40/45 89%
8200330	37/67 55%	23/75 31%	22/54 41%	32/46 70%	32/45 71%	32/45 71%	32/45 71%

8209020	27/67 40%	19/75 25%	18/54 33%	40/46 87%	40/45 89%	40/45 89%	40/45 89%
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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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:

**For competencies associated with the BTE Core visit the following link:**  
[http://www.fldoe.org/core/fileparse.php/9943/urlt/bte\\_core\\_standards\\_1516.rtf](http://www.fldoe.org/core/fileparse.php/9943/urlt/bte_core_standards_1516.rtf).

**The BTE Core includes the Technical Competencies of the first OCP A of this program.**

### **Technical competencies following OCP A:**

- 01.0 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Design.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Design.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Design.
- 04.0 Demonstrate proficiency in computer skills.
- 05.0 Demonstrate knowledge of digital publishing concepts.
- 06.0 Perform decision-making activities.
- 07.0 Perform layout, design, and measurement activities.
- 08.0 Demonstrate proficiency in digital publishing operations.
- 09.0 Demonstrate proficiency in digital imaging.
- 10.0 Demonstrate proficiency in creating a simple website.
- 11.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Design.
- 12.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Design.
- 13.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Design.
- 14.0 Demonstrate comprehension and communication skills.
- 15.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goal.
- 16.0 Perform decision-making activities.
- 17.0 Demonstrate proficiency in digital publishing operations.
- 18.0 Demonstrate proficiency in digital imaging.
- 19.0 Demonstrate proficiency in multimedia presentation.
- 20.0 Demonstrate promotion applications for the selected marketing industry.
- 21.0 Demonstrate comprehension and communication skills.
- 22.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals.
- 23.0 Demonstrate proficiency in page design applicable to the WWW.
- 24.0 Demonstrate proficiency using specialized web design software.
- 25.0 Perform decision-making activities.
- 26.0 Demonstrate proficiency in digital imaging.
- 27.0 Demonstrate proficiency in multimedia presentation.

- 28.0 Demonstrate promotion applications for the selected marketing industry.
- 29.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals.
- 30.0 Demonstrate proficiency in digital publishing operations.
- 31.0 Demonstrate proficiency in digital imaging.
- 32.0 Demonstrate proficiency in multimedia presentation.
- 33.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals.
- 34.0 Demonstrate proficiency in digital publishing operations.
- 35.0 Demonstrate proficiency in multimedia presentation.
- 36.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals.
- 37.0 Demonstrate proficiency in multimedia presentation.
- 38.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals.
- 39.0 Demonstrate proficiency in multimedia presentation.

Florida Department of Education  
Student Performance Standards

**BTE Core:**

The first course recommended in this program is a selection from the BTE Core (**Applied Computer Business Skills I and II, or Computing for College and Careers, or Introduction to Information Technology**). The course selections and their descriptions are located here: [http://www.fldoe.org/core/fileparse.php/9943/urlt/bte\\_core\\_standards\\_1516.rtf](http://www.fldoe.org/core/fileparse.php/9943/urlt/bte_core_standards_1516.rtf). Student course enrollment in the BTE Core, as with all other secondary courses, requires the reporting of a program in which the student is enrolled. The BTE Core is not an independent program, but a selection of courses for the initial OCP of a program. Student enrollment in the BTE Core cannot be reported without an accompanying program number. Teacher certification and other information regarding the BTE Core is identified by the program in which the student is enrolled. See the selected program framework for the appropriate information.

**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, measurement activities; and digital imaging as well as communication, collaboration and decision-making activities; critical thinking; and problem solving. After successful completion of Digital Design 1 students will have met occupational completion point - B, Production Assistant - SOC Code 43-9031.

Florida Standards		Correlation to CTE Program Standard #
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Design.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	

Florida Standards		Correlation to CTE Program Standard #
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.910.RST.1.3	
01.02 Craft and Structure		
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics. LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy). LAFS.910.RST.2.5	
01.02.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address. LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Design.	



Florida Standards		Correlation to CTE Program Standard #
02.01	Text Types and Purposes	
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02	Production and Distribution of Writing	
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in	

Florida Standards		Correlation to CTE Program Standard #
Technical Subjects for student success in Digital Design.		
03.01	Make sense of problems and persevere in solving them.	MAFS.K12.MP.1.1
03.02	Reason abstractly and quantitatively.	MAFS.K12.MP.2.1
03.03	Construct viable arguments and critique the reasoning of others.	MAFS.K12.MP.3.1
03.04	Model with mathematics.	MAFS.K12.MP.4.1
03.05	Use appropriate tools strategically.	MAFS.K12.MP.5.1
03.06	Attend to precision.	MAFS.K12.MP.6.1
03.07	Look for and make use of structure.	MAFS.K12.MP.7.1
03.08	Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1

**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
04.0	Demonstrate proficiency in computer skills--The student will be able to:		
04.01	Identify basic computer parts (e.g., RAM, ROM).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
04.02	Demonstrate an understanding of all functions of a computer.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
04.03	Utilize appropriate font management techniques (e.g., true type, postscript, install and remove fonts).		
04.04	Perform storage management (e.g., hard drive, DVD, CD).		
04.05	Perform basic maintenance of computers and peripherals.		
05.0	Demonstrate knowledge of digital publishing concepts--The student will be able to:		
05.01	Identify the skills needed by a digital designer.		
05.02	Define commonly used terms in graphic communications.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
05.03	Identify characteristics of paper.	MAFS.912.N-Q.1.1,2,3	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
	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	
05.04 Identify different kinds of color (e.g., spot, process).	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
05.05 Identify software used in digital publishing.		
05.06 Demonstrate knowledge of copyright laws.	LAFS.910.L.3.6 LAFS.1112.L.3.6 MAFS.912.A-REI.1.1	
06.0 Perform decision-making activities--The student will be able to:		
06.01 Determine work priorities.	MAFS.912.N-Q.1.1,2,3	
06.02 Evaluate information to be used and choose 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
06.03 Determine the audience.	LAFS.910.W.2.4,5 LAFS.1112.W.2.4,5	
06.04 Demonstrate an understanding of various advertising mediums.		
06.05 Recognize and maintain ethical standards.		
07.0 Perform layout, design, and measurement activities--The student will be able to:		
07.01 Identify characteristics of type, type families, type series, and type styles.	MAFS.912.N-Q.1.1,2,3	
07.02 Assemble mechanical elements electronically.		
07.03 Prepare rough layout designs.		
07.04 Identify elements of design.		
08.0 Demonstrate proficiency in digital publishing operations--The student will be able to:		
08.01 Key with speed and accuracy to meet industry standards.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.02 Demonstrate core publishing skills, including creating tables, text boxes, manipulating graphics and inserting images.	LAFS.910.W.2.6 LAFS.1112.W.2.6	
08.03 Insert and format references and captions.	LAFS.910.W.2.6 LAFS.1112.W.2.6	
08.04 Complete projects using a variety of fonts, sizes, leading, and alignments.	LAFS.910.W.2.6 LAFS.1112.W.2.6	
08.05 Output projects using a variety of devices (e.g., printers, image setters).	LAFS.910.W.2.6 LAFS.1112.W.2.6	
08.06 Design with type using kerning, tracking, horizontal/vertical scale, baseline shift, etc.	LAFS.910.W.2.6 LAFS.1112.W.2.6	
08.07 Produce projects using tables, layouts and templates.	LAFS.910.W.2.6 LAFS.1112.W.2.6 MAFS.912.F-IF.2.4,5	
08.08 Produce projects using white space.		
08.09 Assemble multipage documents.		
08.10 Create documents that use master pages.		
08.11 Use a variety of styles to produce effective layouts		
08.12 Produce a document using printer and reader spreads.	LAFS.910.W.2.6 LAFS.1112.W.2.6	
08.13 Use publishing software to create a pre-press profile.	LAFS.910.W.2.6 LAFS.1112.W.2.6	
08.14 Produce a variety of designs using layout/paste up software.		
08.15 Create various print and digital publications, including: business cards, letterheads, brochures, newsletters, and calendars.		
08.16 Create electronic forms.		
08.17 Assign passwords and create restrictions with portable document formats.		
08.18 Design an electronic portfolio.	LAFS.910.W.2.6 LAFS.1112.W.2.6	
09.0 Demonstrate proficiency in digital imaging--The student will be able to:		
09.01 Demonstrate proper use of a scanner/input devices/ digital camera.		
09.02 Proofread electronically and manually.	LAFS.910.W.2.5 LAFS.1112.W.2.5	
10.0 Demonstrate proficiency in creating a simple website--The student will be able to:		
10.01 Create a webpage.	MAFS.912.S-IC.2.3	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
10.02 Create a simple website and use hyperlinks.		
10.03 Convert publications for viewing on the Internet.		
10.04 Save files in multiple formats.		
10.05 Create, send and manage a survey and survey results.		

**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 basic entry-level skills required for careers in the digital publishing industry. The content includes computer skills; digital publishing operations; layout, design, and measurement activities; and digital imaging as well as communication, collaboration and decision-making activities; critical thinking; and problem solving. After successful completion of Digital Design 2 and 3, students will have met occupational completion point -C, Digital Assistant Designer - SOC Code 43-9031.

Florida Standards		Correlation to CTE Program Standard #
11.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Design.	
11.01	Key Ideas and Details	
11.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
11.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
11.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
11.02	Craft and Structure	
11.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
11.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
11.02.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important	

Florida Standards		Correlation to CTE Program Standard #
	issues that remain unresolved. LAFS.1112.RST.2.6	
<b>11.03 Integration of Knowledge and Ideas</b>		
11.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
11.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
11.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
<b>11.04 Range of Reading and Level of Text Complexity</b>		
11.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
11.04.2		
<b>12.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Design.</b>		
<b>12.01 Text Types and Purposes</b>		
12.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
12.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
<b>12.02 Production and Distribution of Writing</b>		
12.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
12.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	

Florida Standards		Correlation to CTE Program Standard #
12.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
12.03	Research to Build and Present Knowledge	
12.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
12.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
12.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
12.04	Range of Writing	
12.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
13.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Design.	
13.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
13.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
13.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
13.04	Model with mathematics. MAFS.K12.MP.4.1	
13.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
13.06	Attend to precision. MAFS.K12.MP.6.1	
13.07	Look for and make use of structure.	



Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
13.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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 comprehension and communication skills--The student will be able to:		
14.01 Collaborate with individuals and teams to complete tasks	LAFS.910.SL.1.1 LAFS.1112.SL.1.1	
14.02 Apply the writing process to the creation of appropriate documents following designated business formats.	LAFS.910.W.2.5 LAFS.1112.W.2.5	
15.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goal—The student will be able to:		
15.01 Prepare a hard copy portfolio.	LAFS.910.W.2.4,6 LAFS.1112.W.2.4,6	
15.02 Prepare an electronic portfolio	LAFS.910.W.2.4,6 LAFS.1112.W.2.4,6	
15.03 Present a portfolio to an audience.	LAFS.910.SL.2.4,6 LAFS.1112.SL.2.4,6	
15.04 Refine and implement a plan to facilitate personal growth and skill development related to information technology career opportunities.		
15.05 Develop and maintain an electronic career portfolio, to include, but not limited to the resume and letter of application	LAFS.910.L.1.1,2 LAFS.1112.L.1.1,2 LAFS.910.W.2.5 LAFS.1112.W.2.5	
16.0 Perform decision-making activities—The student will be able to:		
16.01 Determine work priorities		
16.02 Evaluate information to be used and choose relevant material.	LAFS.910.W.2.5 LAFS.1112.W.2.5 LAFS.910.L.1.1,2 LAFS.1112.L.1.1,2 LAFS.910.W.3.8 LAFS.1112.W.3.8	
16.03 Determine the audience.	LAFS.910.W.2.4,5 LAFS.1112.W.2.4,5	

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
16.04	Recognize and maintain ethical standards.		
17.0	Demonstrate proficiency in digital publishing operations—The student will be able to:		
17.01	Produce multiple color designs using different color techniques including process color and spot color.		SC.912.P.10.18
17.02	Prepare output files using pre-press preparations (e.g., color separation, font management, file management, use of postscript fonts, etc.)		
17.03	Read work orders and prepare electronic files that meet all specifications.	LAFS.910.RL.4.10	
17.04	Design a document using grids and formats.	MAFS.912.A-REI.4.10	SC.912.N.1.1
17.05	Produce documents integrating elements and principles of design.		
17.06	Demonstrate proficiency in the use of a vector based illustration program.	MAFS.912.N-VM.1.1	SC.912.P.12.1
17.07	Demonstrate proficiency in the use of a vector based animation program	MAFS.912.N-VM.1.1	SC.912.P.12.1
17.08	Demonstrate proficiency in saving documents to various storage media (e.g. locally, CD, DVD, USB		
18.0	Demonstrate proficiency in digital imaging—The student will be able to:		
18.01	Complete projects using proper resolution and screen values (e.g., PPI, LPI, DPI).		
18.02	Produce electronically retouched photographs.		
18.03	Produce projects using a digital camera.		
19.0	Demonstrate proficiency in multimedia presentation—The student will be able to:		
19.01	Create PDF files.		
19.02	Incorporate audio and video into a presentation		
20.0	Demonstrate promotion applications for the selected marketing industry--The student will be able to:		
20.01	Identify types of promotion used in the industry.		
20.02	Discuss importance of advertising media.	LAFS.910.SL.1.1 LAFS.1112.SL.1.1	
20.03	Use design principles in preparing promotional messages.		
20.04	Write a promotional message to appeal to a target market.	LAFS.910.W.1.3 LAFS.1112.W.1.3 LAFS.910.W.2.4	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
	LAFS.1112.W.2.4	

**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 the digital publishing industry. The content includes the use of a variety of software and equipment to perform digital publishing and digital imaging activities as well as communication, collaboration and decision-making activities; critical thinking; and problem solving. After successful completion of Digital Design 3, students will have met occupational completion point -C, Digital Assistant Designer - SOC Code 43-90331.

**Abbreviations:**

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

Florida Standards		Correlation to CTE Program Standard #
11.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Design.	
11.01	Key Ideas and Details	
11.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
11.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
11.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
11.02	Craft and Structure	
11.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
11.02.2	Analyze how the text structures information or ideas into categories or	

Florida Standards		Correlation to CTE Program Standard #
	hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
11.02.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. LAFS.1112.RST.2.6	
11.03 Integration of Knowledge and Ideas		
11.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
11.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
11.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
11.04 Range of Reading and Level of Text Complexity		
11.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
11.04.2		
12.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Design.		
12.01 Text Types and Purposes		
12.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
12.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
12.02 Production and Distribution of Writing		
12.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	

Florida Standards		Correlation to CTE Program Standard #
12.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
12.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
<b>12.03 Research to Build and Present Knowledge</b>		
12.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
12.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
12.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
<b>12.04 Range of Writing</b>		
12.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
<b>13.0</b>	<b>Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Design.</b>	
13.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
13.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
13.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
13.04	Model with mathematics. MAFS.K12.MP.4.1	
13.05	Use appropriate tools strategically.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.5.1
13.06 Attend to precision.	MAFS.K12.MP.6.1
13.07 Look for and make use of structure.	MAFS.K12.MP.7.1
13.08 Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
21.0 Demonstrate comprehension and communication skills--The student will be able to:		
21.01 Collaborate with individuals and teams to complete tasks	LAFS.910.SL.1.1 LAFS.1112.SL.1.1	
21.02 Apply the writing process to the creation of appropriate documents following designated business formats.	LAFS.910.W.1.2 LAFS.1112.W.1.2	
22.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals—The student will be able to:		
22.01 Prepare a hard portfolio.	LAFS.910.W.2.4 LAFS.1112.W.2.4 LAFS.910.L.1.1,2 LAFS.1112.L.1.1,2	
22.02 Prepare an electronic portfolio	LAFS.910.W.2.4 LAFS.1112.W.2.4 LAFS.910.L.1.1,2 LAFS.1112.L.1.1,2	
22.03 Present a portfolio to an audience.	LAFS.910.SL.2.4,6 LAFS.1112.SL.2.4,6	
22.04 Refine and implement a plan to facilitate personal growth and skill development related to information technology career opportunities.		
22.05 Develop and maintain an electronic career portfolio, to include, but not limited to the resume and letter of application.	LAFS.910.L.1.1,2 LAFS.1112.L.1.1,2 LAFS.910.W.2.5 LAFS.1112.W.2.5	
23.0 Demonstrate proficiency in page design applicable to the WWW—The student will be able to:		
23.01 Develop an awareness of acceptable web page design, including index pages in relation to the rest of the web site.		
23.02 Access and digitize graphics through various resources (e.g., scanner, digital cameras, on-line graphics, clipart, CD Rom's).		
23.03 Use image design software to create and edit images.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
23.04 Demonstrate proficiency in publishing to the internet.		
23.05 Demonstrate proficiency in adding downloadable forms to web pages.		
24.0 Demonstrate proficiency using specialized web design software--The student will be able to:		
24.01 Compare and contrast various specialized web design software (e.g., Flash, Shockwave, GoLive, Director, etc.).		
24.02 Demonstrate proficiency using use of various specialized web design software (e.g., Flash, Shockwave, GoLive, Director, etc.).		
25.0 Perform decision-making activities—The student will be able to:		
25.01 Determine work priorities		
25.02 Evaluate information to be used and choose relevant material.	LAFS.910.W.3.7 LAFS.1112.W.3.7	
25.03 Determine the audience.	LAFS.910.SL.2.4,6 LAFS.1112.SL.2.4,6	
25.04 Recognize and maintain ethical standards.		
26.0 Demonstrate proficiency in digital imaging—The student will be able to:		
26.01 Produce projects using a digital camera.		
26.02 Scan multiple documents.		
26.03 Crop and scale photographs electronically using a scanner.		
26.04 Apply the use of proper resolution and screen values (e.g., ppi, lpi, dpi in documents).		
26.05 Produce electronically retouched photographs using tones, hues, and values.		
26.06 Apply special effects to image files.		
26.07 Demonstrate proficiency in saving documents to various storage media (e.g. locally, CD, DVD, USB)		
27.0 Demonstrate proficiency in multimedia presentation—The student will be able to:		
27.01 Demonstrate proficiency using a PDF format for a multimedia presentation.		
27.02 Incorporate audio and video into a presentation		
27.03 Demonstrate proficiency using 2D and 3D animation and effects		
28.0 Demonstrate promotion applications for the selected marketing industry--The student will be able to:		



CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
28.01 Identify types of promotion used in the industry.		
28.02 Discuss importance of advertising media.	LAFS.910.SL.1.1 LAFS.1112.SL.1.1	
28.03 Use advertising guidelines to design appropriate media sample ads, i.e., print, radio, television, Internet, and others.		
28.04 Use design principles in preparing promotional messages		
28.05 Write a promotional message to appeal to a target market.	LAFS.910.W.2.4 LAFS.1112.W.2.4	
28.06 Design a web site to promote a product/service.		

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 the digital publishing industry. The content includes the use of a variety of software and equipment, including digital video cameras and video/audio editing software. After successful completion of Digital Design 4 and 5, students will have met occupational completion point - D, Graphic Designer - SOC Code 27-1014.

**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
29.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals--The student will be able to:		
29.01 Prepare a portfolio.		
29.02 Create an electronic resume.	LAFS.910.SL.2.5 LAFS.1112.SL.2.5 LAFS.910.L.1.1 LAFS.1112.L.1.2	
29.03 Create an electronic portfolio.	LAFS.910.SL.2.5 LAFS.1112.SL.2.5 LAFS.910.L.1.1 LAFS.1112.L.1.2	
29.04 Present a portfolio to an audience.	LAFS.910.SL.2.4,6 LAFS.1112.SL.2.4,6	
30.0 Demonstrate proficiency in digital publishing operations--The student will be able to:		
30.01 Produce designs integrating all elements of design.		
30.02 Produce vector illustrations using digital software.	MAFS.912.N-VM.1.1,2 MAFS.912.N-VM.2.4,5	SC.912.P.12.1
30.03 Produce multiple projects using a variety of digital software.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
30.04 Prepare output files using pre-press protocols (e.g., color separation, font management, file management, use of postscript fonts, etc.).		
30.05 Perform integrated functions using various design software applications.		
30.06 Create documents using advanced features in layout/paste-up software.		
30.07 Produce multiple color designs using proper color balance for presentation.		SC.912.P.10.18
30.08 Create electronic presentations.		
31.0 Demonstrate proficiency in digital imaging--The student will be able to:		
31.01 Produce projects using line art, grayscale, duotone, and four-color process.		SC.912.P.10.18
31.02 Emphasize, interpret, and establish mood and emotion using illustrations.		
31.03 Apply special effects to projects.		
32.0 Demonstrate proficiency in multimedia presentation--The student will be able to:		
32.01 Create PDF files.		
32.02 Create links.		
32.03 Optimize images for the Web (e.g., file size, transmission time).	MAFS.912.G-SRT.1.1,2,3 MAFS.912.G-SRT.3.6	
32.04 Build pages for media presentations and standards.		
32.05 Link media elements into Web-delivered documents.		
32.06 Create buttons.		
32.07 Create dynamic media projects.		
32.08 Create presentations using color effects.		SC.912.P.10.18
32.09 Select appropriate fonts for on-screen presentations.	MAFS.912.G-CO.1.1,2,3,4,5 MAFS.912.G-CO.4.12	
32.10 Generate presentations with fully integrated text and images.		

**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 the digital publishing industry. The content includes the use of a variety of software and equipment used to create multimedia presentations. After successful completion of Digital Design 4 and 5, students will have met occupational completion point - D, Graphic Designer - SOC Code 27-1014.

**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
33.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals--The student will be able to:		
33.01 Prepare a portfolio.	LAFS.910.W.2.4 LAFS.1112.W.2.4	
34.0 Demonstrate proficiency in digital publishing operations--The student will be able to:		
34.01 Produce designs integrating all elements of design.		
34.02 Produce vector illustrations using digital software		SC.912.P.12.1
34.03 Produce multiple projects using a variety of digital software		
34.04 Prepare output files using pre-press protocols (e.g., color separation, font management, file management, use of postscript fonts, etc.).		
34.05 Perform integrated functions using various design software applications.	MAFS.912.G-CO.1.2	
34.06 Create documents using advanced features in layout/paste-up software.		
34.07 Produce multiple color designs using proper color balance for presentation.		
34.08 Create electronic presentations.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
35.0 Demonstrate proficiency in multimedia presentation--The student will be able to:		
35.01 Create PDF files.		
35.02 Create links.		
35.03 Optimize images for the Web (e.g., file size, transmission time).	MAFS.912.G-SRT.1.1,2,3	
35.04 Build pages for media presentations and standards.		
35.05 Link media elements into Web-delivered documents.		
35.06 Create buttons.		
35.07 Create dynamic media projects.		
35.08 Create presentations using color effects.		

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 the digital publishing industry. The content includes the use of a variety of software and equipment required to perform digital publishing and digital imaging activities. After successful completion of Digital Design 6 and 7, students will have met occupational completion point – E, Media Designer - SOC Code 27-1024.

**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
36.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals--The student will be able to:		
36.01 Create an electronic resume.	LAFS.910.SL.2.5 LAFS.1112.SL.2.5 LAFS.910.L.1.1 LAFS.1112.L.1.2	
36.02 Prepare a portfolio.	LAFS.910.SL.2.5 LAFS.1112.SL.2.5 LAFS.910.L.1.1 LAFS.1112.L.1.2	
36.03 Create an electronic portfolio.	LAFS.910.SL.2.4,6 LAFS.1112.SL.2.4,6	
37.0 Demonstrate proficiency in multimedia presentation--The student will be able to:		
37.01 Select appropriate fonts for on-screen presentation.		
37.02 Generate presentations with fully integrated text and images text and images.		
37.03 Demonstrate proficiency using 2D and 3D animation and effects.	MAFS.912.G-GMD.2.4	

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 the digital design industry. The content includes the use of a variety of software and equipment, including digital video cameras and video/audio editing software. After successful completion of Digital Design 6 and 7, students will have met occupational completion point – E, Media Designer - SOC Code 27-1024.

**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
38.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals--The student will be able to:		
38.01 Create an electronic resume.	LAFS.910.SL.2.5 LAFS.1112.SL.2.5 LAFS.910.L.1.1 LAFS.1112.L.1.2	
38.02 Prepare a portfolio.	LAFS.910.SL.2.5 LAFS.1112.SL.2.5 LAFS.910.L.1.1 LAFS.1112.L.1.2	
38.03 Create an electronic portfolio.	LAFS.910.SL.2.4,6 LAFS.1112.SL.2.4,6	
38.04 Present a portfolio to an audience.	LAFS.910.SL.2.4,6 LAFS.1112.SL.2.4,6	
39.0 Demonstrate proficiency in multimedia presentation--The student will be able to:		
39.01 Select appropriate fonts for on-screen presentation.		
39.02 Generate presentations with fully integrated text and images.		
39.03 Create PDF files.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
39.04 Create links.		
39.05 Optimize images for the Web (e.g., file size, transmission time).		
39.06 Build pages for media presentations and standards.		
39.07 Link media elements into Web-delivered documents.		



## **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.

The BTE Core, which is part of this program, will undergo major changes in the **2016 – 2017** school year. Please access the [BTE Core](#) document for more information.

### **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.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Fundamentals of A/V and Print Technology  
**Program Type:** Orientation/Exploratory  
**Career Cluster:** Arts, A/V Technology and Communication

**Secondary – Middle School**

Program Number	8260300
CIP Number	148260300M
Grade Level	6-8
Standard Length	Year
Teacher Certification	PRINTING @7 7G TEC ED 1 @ 2 TV PRO TEC @7 7G
CTSO	SkillsUSA
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 course will assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in Arts, A/V Technology and Communication career cluster. The content includes but is not limited to the development of leadership skills, communication skills, and employability skills; resource management; exploration of Arts and AV careers. Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices.

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

## **Standards**

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

- 01.0 Demonstrate leadership skills.
- 02.0 Demonstrate employability skills as they relate to the Audio and Video Technology, Film, and Printing Technology industry.
- 03.0 Demonstrate effective communication skills.
- 04.0 Analyze careers in the Audio and Video Technology Film, and Printing Technology industry.
- 05.0 Select and use tools and equipment.
- 06.0 Develop a project related to Audio and Video Technology Film and, Printing Technology.
- 07.0 Utilize technology as it relates to the Audio and Video Technology, Film, and Printing Technology industry.
- 08.0 Demonstrate the skills involved in effective resource management.
- 09.0 Identify components of network systems.
- 10.0 Describe and use communication features of information technology.

Florida Department of Education  
Student Performance Standards

**Course Title:** Fundamentals of A/V and Print Technology  
**Course Number:** 8260300  
**Course Length:** Semester

**Course Description:**

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in Audio and Video Technology and Film Technology. The content includes but is not limited to the development of leadership skills, communication skills, and employability skills; resource management; exploration of Audio and Video Technology and Film Technology careers; working with; technology in the Audio and Video Technology and Film Technology industry; and completion of projects related to Audio and Video Technology and Film Technology.

<b>CTE Standards and Benchmarks</b>	
01.0	Demonstrate leadership skills–The student will be able to:
01.01	Identify roles and responsibilities of members of professional and community service organizations, including career and technical student organizations.
01.02	Work cooperatively as a group member to achieve organizational goals.
01.03	Demonstrate leadership roles and organizational responsibilities.
01.04	Identify and utilize the planning process.
01.05	Develop a personal growth project.
02.0	Demonstrate employability skills as they relate to the design industry–The student will be able to:
02.01	Identify personal talents and abilities that can contribute to positive self-esteem and success in the work place.
02.02	Practice teamwork skills.
02.03	Practice employability skills.
02.04	Practice positive work ethics and identify negative work ethics.
02.05	Exhibit work expectations of an employer in the design industry.
02.06	Apply math, reading, science, and critical thinking skills as they relate to the design industry.

## CTE Standards and Benchmarks

03.0 Demonstrate effective communication skills–The student will be able to:

03.01 Describe why communication is the basis for all relationships.

03.02 Distinguish between non-assertive, assertive, and aggressive communication.

03.03 Demonstrate communication skills that promote positive relationships in the work place.

03.04 Practice active listening skills.

03.05 Utilize conflict resolution skills.

04.0 Analyze careers in the Audio and Video Technology, Film, and Printing Technology industry–The student will be able to:

04.01 Describe careers in the Audio and Video Technology, Film, and Printing Technology industry.

04.02 Classify careers from entry level to professional level.

04.03 Explore entrepreneurship opportunities in the Audio and Video Technology, Film, and Printing Technology industry.

04.04 Research and present information on an Audio and Video Technology, Film, and Printing Technology career to include roles and responsibilities, employment opportunities and requirements for education and training.

05.0 Select and use tools and equipment–The student will be able to:

05.01 Identify and select the appropriate tool for the assignment.

05.02 Demonstrate the proper and safe use of tools and equipment.

05.03 Practice care and maintenance of tools and equipment.

06.0 Develop a project related to Audio and Video Technology and Film, Printing Technology–The student will be able to:

06.01 Select materials and supplies for an Audio and Video Technology project.

06.02 Calculate the costs of a given Audio and Video Technology project.

06.03 Interpret written directions for constructing an Audio and Video Technology project.

06.04 Apply math skills and construct an Audio and Video Technology project.

07.0 Utilize technology as it relates to the Audio and Video Technology and Film, Printing Technology industry–The student will be able to:

07.01 Identify technology utilized in the Audio and Video Technology and Film, Printing Technology industry.

07.02 Analyze technology trends impacting the Audio and Video Technology and Film, Printing Technology industry.

## CTE Standards and Benchmarks

07.03 Utilize technology.

08.0 Demonstrate the skills involved in effective resource management–The student will be able to:

08.01 Identify steps of the decision-making process.

08.02 Distinguish between a need and a want.

08.03 Explain how values and goals affect decisions.

08.04 Develop a budget and savings plan.

08.05 Analyze the relationship between resources and attainment of lifestyle goals.

09.0 Identify components of network systems–The student will be able to:

09.01 Identify structure to access internet, including hardware and software components.

09.02 Identify and configure user customization features in web browsers, including preferences, caching, and cookies.

09.03 Recognize essential database concepts.

09.04 Define and use additional networking and internet services.

10.0 Describe and use communication features of information technology–The student will be able to:

10.01 Define important internet communications protocols and their roles in delivering basic Internet services.

10.02 Identify basic principles of the Domain Name System (DNS).

10.03 Identify security issues related to Internet clients.

10.04 Identify and use principles of personal information management (PIM), including common applications.

10.05 Efficiently transmit text and binary files using popular Internet services.

10.06 Represent technical issues to a non-technical audience.

## **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 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>



Florida Department of Education  
Curriculum Framework

**Program Title:** Fundamentals of Telecommunications  
**Program Type:** Orientation/Exploratory  
**Career Cluster:** Arts, A/V Technology and Communication

**Secondary – Middle School**

Program Number	8260400
CIP Number	148260400M
Grade Level	6-8
Standard Length	Year
Teacher Certification	ELECTRONIC @ 7 7G ELECTRICAL @7 7G COMP SVC 7G TELCOM 7G BUS MACH 7G TV PRO TEC @7 7G
CTSO	SkillsUSA
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 course will assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in Arts, A/V Technology and Communication career cluster. The content includes but is not limited to the development of leadership skills, communication skills, and employability skills; resource management; exploration of Arts and AV careers; Telecommunications the science and technology of transmitting information electronically by wires or radio signals with integrated encoding and decoding equipment.

**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 leadership skills.
- 02.0 Demonstrate employability skills as they relate to the Telecommunication industry.
- 03.0 Demonstrate effective communication skills.
- 04.0 Analyze careers in the Telecommunication industry.
- 05.0 Select and use tools and equipment.
- 06.0 Develop a project related to Telecommunication.
- 07.0 Utilize technology as it relates to the Telecommunication industry.
- 08.0 Demonstrate the skills involved in effective resource management.
- 09.0 Identify components of network systems.
- 10.0 Describe and use communication features of information technology.

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Fundamentals of Telecommunications  
**Course Number:** 8260400  
**Course Length:** Semester

**Course Description:**

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in Telecommunications.

<b>CTE Standards and Benchmarks</b>	
01.0	Demonstrate leadership skills–The student will be able to:
01.01	Identify roles and responsibilities of members of professional and community service organizations, including career and technical student organizations.
01.02	Work cooperatively as a group member to achieve organizational goals.
01.03	Demonstrate leadership roles and organizational responsibilities.
01.04	Identify and utilize the planning process.
01.05	Develop a personal growth project.
02.0	Demonstrate employability skills as they relate to the Telecommunications industry–The student will be able to:
02.01	Identify personal talents and abilities that can contribute to positive self-esteem and success in the work place.
02.02	Practice teamwork skills.
02.03	Practice employability skills.
02.04	Practice positive work ethics and identify negative work ethics.
02.05	Exhibit work expectations of an employer in the Telecommunications industry.
02.06	Apply math, reading, science, and critical thinking skills as they relate to the Telecommunications industry.
03.0	Demonstrate effective communication skills–The student will be able to:
03.01	Describe why communication is the basis for all relationships.

## CTE Standards and Benchmarks

03.02 Distinguish between non-assertive, assertive, and aggressive communication.

03.03 Demonstrate communication skills that promote positive relationships in the work place.

03.04 Practice active listening skills.

03.05 Utilize conflict resolution skills.

04.0 Analyze careers in the Telecommunication industry–The student will be able to:

04.01 Describe careers in the Telecommunications industry.

04.02 Classify careers from entry level to professional level.

04.03 Explore entrepreneurship opportunities in the Telecommunications industry

04.04 Research and present information on a Telecommunication career to include roles and responsibilities, employment opportunities and requirements for education and training.

05.0 Select and use tools and equipment–The student will be able to:

05.01 Identify and select the appropriate tool for the assignment.

05.02 Demonstrate the proper and safe use of tools and equipment.

05.03 Practice care and maintenance of tools and equipment.

06.0 Develop a project related to Telecommunication–The student will be able to:

06.01 Apply the principals and elements of design in selecting a Telecommunication project.

06.02 Interpret written directions for assembling/constructing a Telecommunication project.

06.03 Apply math skills and construct a Telecommunication project.

07.0 Utilize technology as it relates to the Telecommunications industry–The student will be able to:

07.01 Identify technology utilized in the Telecommunications industry.

07.02 Analyze technology trends impacting the Telecommunications industry.

07.03 Utilize technology.

08.0 Demonstrate the skills involved in effective resource management–The student will be able to:

08.01 Identify steps of the decision-making process.

## CTE Standards and Benchmarks

08.02 Distinguish between a need and a want.

08.03 Explain how values and goals affect decisions.

08.04 Develop a budget and savings plan.

08.05 Analyze the relationship between resources and attainment of lifestyle goals.

09.0 Identify components of network systems–The student will be able to:

09.01 Identify structure to access internet, including hardware and software components.

09.02 Identify and configure user customization features in web browsers, including preferences, caching, and cookies.

09.03 Recognize essential database concepts.

09.04 Define and use additional networking and internet services.

10.0 Describe and use communication features of information technology–The student will be able to:

10.01 Define important internet communications protocols and their roles in delivering basic Internet services.

10.02 Identify basic principles of the Domain Name System (DNS).

10.03 Identify security issues related to Internet clients.

10.04 Identify and use principles of personal information management (PIM), including common applications.

10.05 Efficiently transmit text and binary files using popular Internet services.

10.06 Represent technical issues to a non-technical audience.

## **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 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. 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 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Fundamentals of Visual and Performing Arts  
**Program Type:** Orientation/Exploratory  
**Career Cluster:** Arts, A/V Technology and Communication

**Secondary – Middle School**

Program Number	8260500
CIP Number	148260500M
Grade Level	6-8
Standard Length	Year
Teacher Certification	BUS ED 1 @2 VOE @7 MKTG 1 BUS DP @7 %G ELECT DP @7 %G CLERICAL @7 7G SECRETAR 7 G STENOGRAPH @4 TEC ELEC 7G COMP SCI 6 @2 COMM ART @7 7G GRAPH ART 4 JOURNALISM 1 PHOTOGRAPHY @7 7G PRINTING @7 7G MULTIMEDIA ENG C TV PRO TECH \$7 TEC ED 1@2
CTSO	SkillsUSA
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 course will assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in Arts, A/V Technology and Communication career cluster. The content includes but is not limited to the development of leadership skills, communication skills, and employability skills; resource management; exploration of Visual Arts, Performing Arts, Journalism and Broadcasting careers. Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices.

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



## **Standards**

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

- 01.0 Demonstrate leadership skills.
- 02.0 Demonstrate employability skills as they relate to the Visual Arts, Performing Arts, Journalism and Broadcasting industry.
- 03.0 Demonstrate effective communication skills.
- 04.0 Analyze careers in the Visual Arts, Performing Arts, Journalism and Broadcasting industry.
- 05.0 Select and use tools and equipment.
- 06.0 Develop a project related to Visual Arts, Performing Arts, Journalism and Broadcasting.
- 07.0 Utilize technology as it relates to the Visual Arts, Performing Arts, Journalism and Broadcasting industry.
- 08.0 Demonstrate the skills involved in effective resource management.

Florida Department of Education  
Student Performance Standards

**Course Title:** Fundamentals of Visual and Performing Arts  
**Course Number:** 8260500  
**Course Length:** Semester

**Course Description:**

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in interior design and fashion design. The content includes but is not limited to the development of leadership skills, communication skills, and employability skills; resource management; exploration of design careers; working with textiles and elements of design; basic sewing skills; clothing choices; technology in the design industry; and completion of projects related to fashion and interior design.

<b>CTE Standards and Benchmarks</b>	
01.0	Demonstrate leadership skills–The student will be able to:
01.01	Identify roles and responsibilities of members of professional and community service organizations, including career and technical student organizations.
01.02	Work cooperatively as a group member to achieve organizational goals.
01.03	Demonstrate leadership roles and organizational responsibilities.
01.04	Identify and utilize the planning process.
01.05	Develop a personal growth project.
02.0	Demonstrate employability skills as they relate to the design industry–The student will be able to:
02.01	Identify personal talents and abilities that can contribute to positive self-esteem and success in the work place.
02.02	Practice teamwork skills.
02.03	Practice employability skills.
02.04	Practice positive work ethics and identify negative work ethics.
02.05	Exhibit work expectations of an employer in the design industry.
02.06	Apply math, reading, science, and critical thinking skills as they relate to the design industry.
03.0	Demonstrate effective communication skills–The student will be able to:

## CTE Standards and Benchmarks

03.01 Describe why communication is the basis for all relationships.

03.02 Distinguish between non-assertive, assertive, and aggressive communication.

03.03 Demonstrate communication skills that promote positive relationships in the work place.

03.04 Practice active listening skills.

03.05 Utilize conflict resolution skills.

04.0 Analyze careers in the Visual Arts, Performing Arts, Journalism and Broadcasting industry–The student will be able to:

04.01 Describe careers in the design industry.

04.02 Classify careers from entry level to professional level.

04.03 Explore entrepreneurship opportunities in the design industry

04.04 Research and present information on a design career to include roles and responsibilities, employment opportunities and requirements for education and training.

05.0 Select and use tools and equipment–The student will be able to:

05.01 Identify and select the appropriate tool for the assignment.

05.02 Demonstrate the proper and safe use of tools and equipment.

05.03 Practice care and maintenance of tools and equipment.

06.0 Develop a project related to Visual Arts, Performing Arts, Journalism and Broadcasting–The student will be able to:

06.01 Select materials and supplies for a Visual Arts, Performing Arts, Journalism and Broadcasting project.

06.02 Calculate the costs of a given Visual Arts, Performing Arts, Journalism and Broadcasting project.

06.03 Interpret written directions for constructing a Visual Arts, Performing Arts, Journalism and Broadcasting project.

06.04 Apply math skills and construct a Visual Arts, Performing Arts, Journalism and Broadcasting project.

07.0 Utilize technology as it relates to the Visual Arts, Performing Arts, Journalism and Broadcasting industry–The student will be able to:

07.01 Identify technology utilized in the design industry.

07.02 Analyze technology trends impacting the design industry.

07.03 Utilize technology.

## CTE Standards and Benchmarks

08.0 Demonstrate the skills involved in effective resource management–The student will be able to:

08.01 Identify steps of the decision-making process.

08.02 Distinguish between a need and a want.

08.03 Explain how values and goals affect decisions.

08.04 Develop a budget and savings plan.

08.05 Analyze the relationship between resources and attainment of lifestyle goals.

## **Additional Information**

### **Laboratory Activities**

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

### **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. 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 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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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, 30, 31
Standard Length	.5 credit
Teacher Certification	FAM CON SC 1
CTSO	FCCLA
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 a planned sequence of instruction consisting of one half-credit course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Length	Level	Graduation Requirement
8500380	Fabric Construction	0.5 credit	2	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics, VO= Career and Technical Education)

### **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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Fabric Construction.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Fabric Construction.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Fabric Construction.
- 04.0 Analyze characteristics, cost and care of fabric and fibers.
- 05.0 Demonstrate use of pattern envelope information and guide sheet instructions at the beginner level.
- 06.0 Demonstrate use of basic sewing equipment.
- 07.0 Demonstrate construction techniques at the beginning level.
- 08.0 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.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Fabric Construction.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Fabric Construction.		
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's	

Florida Standards		Correlation to CTE Program Standard #
	capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Fabric Construction.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure. MAFS.K12.MP.7.1	

Florida Standards	Correlation to CTE Program Standard #
03.08 Look for and express regularity in repeated reasoning.  MAFS.K12.MP.8.1	

**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
04.0 Analyze characteristics, cost and care of fabric and fibers--The student will be able to:		
04.01 Identify basic fibers and fabrics, characteristics, use and care of these.		SC.912.N.1.1 SC.912.L.15.4
04.02 Identify methods of constructing fabrics.		
04.03 Explain the use and purpose of fabric finishes.		
04.04 Explain the differences between hangtags and required labeling.		SC.912.N.1.1
04.05 Identify consumer laws as related to clothing and textiles.		
04.06 Interpret purposes of labeling to protect the consumer.		
05.0 Demonstrate use of pattern envelope information and guide sheet instructions at the beginner level--The student will be able to:		
05.01 Identify factors to consider when selecting patterns and garments.	MAFS.912.SRT.1.1	
05.02 Determine pattern size based on measurements.		SC.912.N.1.1
05.03 Demonstrate use of tape measure to take accurate measurements for garment.		SC.912.N.1.1
05.04 Determine yardage and notions needed to complete garment.	MAFS.912.N-Q.1.1, 2,3	SC.912.N.1.1
05.05 Complete pattern preparation.		SC.912.N.1.1
05.06 Correctly pin, mark and cut pieces of the pattern.		SC.912.N.1.1
05.07 Identify and interpret symbols found on pattern pieces.		SC.912.N.1.1
05.08 Determine the order in which pieces are to be assembled.		SC.912.N.1.1
05.09 Read and comprehend instructions in the guide sheet.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
06.0 Demonstrate use of basic sewing equipment--The student will be able to:		
06.01 Identify and use small sewing equipment.		SC.912.N.1.1 SC.912.L.15.4
06.02 Identify parts of sewing machine, their function, safety and how to maintain.		SC.912.N.1.1 SC.912.L.15.4
06.03 Read and understand instructions in sewing machine manual.		
06.04 Demonstrate how to correctly thread the machine and bobbin.	MAFS.912.N-Q.1.1, 3	SC.912.P.12.3
06.05 Demonstrate proper stitching techniques.		
06.06 Identify and use correct pressing materials.		SC.912.L.18.12
06.07 Determine the uses of various presser feet and attachments to machine.		
07.0 Demonstrate construction techniques at the beginning level--The student will be able to:		
07.01 Construct a machine stitched hem.		
07.02 Complete appropriate seam and edge finishes including serging.	MAFS.912.N-Q.1.1, 2,3	
07.03 Attach a button by hand using a needle and thread.	MAFS.912.A-REI.4.10	
07.04 Make a casing using elastic.		
07.05 Create a pillow using straight and curved seams.	MAFS.912.A-REI.4.10	SC.912.N.1.1
07.06 Construct a dart.	MAFS.912.G-CO.2.6,7 MAFS.912.G-CO.1.1,2,3,4,5	
07.07 Apply a facing to a garment.		
07.08 Complete a hem using a machine stitch and a hand stitch.	MAFS.912.G-CO.1.1	
07.09 Demonstrate the ability to interpret instructions from the guide sheet to create a simple garment.		
07.10 Complete a project to be donated to a local charity.		SC.912.N.1.1
07.11 Demonstrate mending techniques for existing garments.		
07.12 Recycle an old garment and create something new using basic sewing techniques.		SC.912.L.17.20
08.0 Demonstrate use of reading and writing skills--The student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.01 Create a written description of the skills used in creating their garment.		SC.912.N.1.1
08.02 Create a label for care of the garment using writing skills.		SC.912.N.1.1
08.03 Design a fictional product line to include: 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.

### **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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **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.



### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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, 30, 31
Standard Length	4 credits
Teacher Certification	HME EC OCC $\phi$ 7 HOMEMAKING $\phi$ 2 $\phi$ 7 FAM CON SC 1 APPRL MFG $\phi$ 7 @7G TEC ED 1 @2 TAILORING $\phi$ 7 FASH TECH 7G
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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for initial employment or continued study in the Fashion 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 the following aspects of the fashion 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.

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A	8506405	Design Services Core	1 credit	41-2031	2	PA
B	8506410	Principles of Fashion Design Services	1 credit	51-6052	2	PA
C	8506420	Pattern Design Techniques	1 credit	51-6092	2	PA
D	8506430	Fashion Design Specialist	1 credit	27-1022	3	PA

*(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics, VO= Career and Technical Education)*

**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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Fashion Technology and Design Services.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Fashion Technology and Design Services.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Fashion Technology and Design Services.
- 04.0 Demonstrate leadership and organizational skills.
- 05.0 Demonstrate appropriate basic skills essential to working in occupations in design services.
- 06.0 Identify and exhibit employment skills.
- 07.0 Describe the relationship of human factors to design services.
- 08.0 Identify textile characteristics and care.
- 09.0 Select and use tools and equipment safely.
- 10.0 Operate and maintain a conventional and commercial/industrial sewing machine.
- 11.0 Operate specialty machines (minimum of four machines if available).
- 12.0 Select and prepare materials.
- 13.0 Construct a machine sewn design project for inclusion in portfolio.
- 14.0 Develop a design portfolio.
- 15.0 Identify employment opportunities in Fashion Design Services.
- 16.0 Identify and exhibit employment skills for occupations related to Fashion Design Services.
- 17.0 Demonstrate an understanding of the elements and principles of design.
- 18.0 Demonstrate an understanding of the terminology used in the apparel industry.
- 19.0 Operate specialty machines (if available).
- 20.0 Demonstrate skill in construction of simple garments.
- 21.0 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.
- 22.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Fashion Technology and Design Services.
- 23.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Fashion Technology and Design Services.
- 24.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Fashion Technology and Design Services.
- 25.0 Research how fashion design is affected by history and culture.
- 26.0 Demonstrate sketching and free hand drawing skills.
- 27.0 Demonstrate an understanding of how technology is used in the fashion industry.
- 28.0 Identify the psychological and practical needs for clothing for special markets.
- 29.0 Create an original pattern for a garment.
- 30.0 Demonstrate alteration skills on a sample or garment.
- 31.0 Demonstrate clothing repair on a garment or sample.

- 32.0 Identify and describe the different specialties related to Fashion Design Services: Window Display, Fashion Design Assistant, Tailor's Assistant, Personal Shopper, Stylist.
- 33.0 Select one specialty area and complete the student performance standards for that area.
- 34.0 (Optional) Schedule and participate in Fashion Design Services job shadowing.
- 35.0 Finalize a fashion portfolio per 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 the core course of the fashion design services program. It is designed to develop competencies in the areas of the fashion design industry. It includes essential basic skills for working in design services, leadership and organizational skills, basic principles of design, textile characteristics and care, employability skills, relationship of human factors to design services, safe use of tools and equipment, and selection of appropriate materials.

Florida Standards		Correlation to CTE Program Standard #
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Fashion Technology and Design Services.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics. LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy). LAFS.910.RST.2.5	
01.02.3	Analyze the author's purpose in providing an explanation, describing a	



Florida Standards		Correlation to CTE Program Standard #
	procedure, or discussing an experiment in a text, defining the question the author seeks to address. LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
01.04.2		
02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Fashion Technology and Design Services.		
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	

Florida Standards		Correlation to CTE Program Standard #
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Fashion Technology and Design Services.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
03.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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 leadership and organizational skills–The student will be able to:		
04.01 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	
04.02 Identify 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	
04.03 Identify 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	
04.04 Demonstrate cooperation as a group member in achieving	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	
04.05 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	
05.0 Demonstrate appropriate basic skills essential to working in occupations in design services– The student will be able to:		
05.01 Identify the communication knowledge, skills, and attitudes necessary to perform the occupational tasks.	LAFS.910.SL.2.4 LAFS.910.L.3.6	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
05.02 Demonstrate communication competencies necessary to perform the occupational tasks.	LAFS.910.SL.2.4 LAFS.910.L.3.6	
06.0 Identify and exhibit employment skills–The student will be able to:		
06.01 Conduct a job search using the internet, media center, phone, or a computerized model.	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	
06.02 Secure information about a job and advanced training opportunities for the job and 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.3.9 MAFS.912.S.ID.1.1	
06.03 Demonstrate computer proficiency through creating, revising, retrieving and verifying 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	
06.04 Apply the principles of time management, work simplification, and teamwork when performing assigned tasks.		
06.05 Demonstrate pride in the quality of work performed.		
07.0 Describe the relationship of human factors to design services–The student will be able to:		
07.01 Define the elements of design that are applicable to fashion and/or interior design (space, line, shape, form, texture, color).	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
07.02 Define the principles of design that are applicable to fashion and/or interior 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	

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
07.03	Explain the impact of human factors (psychological, physiological, and social needs) on decisions relating to the design services process.	LAFS.910.SL.1.3 LAFS.910.W.4.10	SC.912.L.17.20
07.04	Identify and describe 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
07.05	Identify and describe the impact of human needs and wants on the cost of design services and customized garments.	LAFS.910.L.3.6 MAFS.912.N-Q.1.1,2,3	
07.06	Identify and describe the importance of barrier-free design and accessibility related to design services.	LAFS.910.L.3.6	
07.07	Identify and describe characteristics of properly fitted garments/interior spaces and furnishings.	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
07.08	Take accurate measurements to determine correct size of garments or home furnishings items.	LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	SC.912.N.1.1
08.0	Identify textile characteristics and care—After teacher demonstration, textbook/multi-media research or following sample instruction the student will be able to:		
08.01	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
08.02	Identify and describe types of fabric construction.	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
08.03	Identify and describe types of fabric finishes.	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
08.04	Identify and describe types of textiles.	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
08.05	Identify laws and regulations governing the textile industry including labeling laws.	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
09.0	Select and use tools and equipment safely—After teacher demonstration or textbook/multi-media research the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
09.01 Identify the tools and equipment used in design services.	LAFS.910.L.3.6	SC.912.N.1.1
09.02 Select the appropriate tools and equipment for assigned projects.		SC.912.N.1.1
09.03 Demonstrate the proper and safe use of tools and equipment.	LAFS.910.SL1.1	SC.912.N.1.1
09.04 Identify and demonstrate safety procedures in using conventional sewing machines and home sergers.	LAFS.910.SL1.1	
09.05 Identify and demonstrate safety procedures in using pressing equipment.	LAFS.910.SL1.1	SC.912.L.18.12
09.06 Clean and maintain various types of tools and equipment.	LAFS.910.SL1.1	
09.07 Keep an inventory record of tools, equipment, supplies, and materials using computer application software.	LAFS.910.SL1.1 LAFS.910.W.4.10	
09.08 Explain the importance of observing occupational safety and health administration (OSHA) rules and regulations.	LAFS.910.SL1.1 LAFS.910.RI.4.10 LAFS.910.W.4.10	
09.09 Research innovations in materials and technologies that have contributed to safeguards in the tools and equipment used in design services.	LAFS.910.RI.4.10 LAFS.910.W.3.7,8,9	
09.10 Identify the development of tools, equipment and technology used in design services as they relate to particular historical periods.	LAFS.910.RI.4.10 LAFS.910.W.3.7,8,9	
09.11 Identify and apply drafting tools and techniques to a specific design services project.	LAFS.910.L.3.6 MAFS.912.G-MG.1.1	SC.912.L.15.4
10.0 Operate and maintain a conventional and commercial/industrial sewing machine—After teacher demonstration, textbook/multi-media research or following manufacturer’s instructions, the student will be able to:		
10.01 Identify the parts of the sewing machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.P.10.18
10.02 Identify the process and demonstrate needle insertion, selecting the needle that is appropriate for various fabrics.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10 MAFS.912.G-MG.1.2,3	
10.03 Identify the steps and demonstrate threading the sewing machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	
10.04 Diagram and demonstrate bobbin winding, threading the bobbin case, and inserting the bobbin correctly into the 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
10.05 Demonstrate straight stitching.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
10.06 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	
10.07 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	
10.08 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
10.09 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
11.0 Operate specialty machines (minimum of four machines if available)–After a teacher demonstration the student will be able to identify and operate at least four of the following machines:		
11.01 Electronic programmable machines.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
11.02 Serger	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
11.03 Pleater	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
11.04 Blindstitch machine	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
11.05 Straight stitch machine	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
11.06 Chain stitch machine	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
11.07 Cutting machine	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
11.08 Bar tack	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
11.09 Zigzag machine	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
12.0 Select and prepare materials–The student will be able to:		
12.01 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	
12.02 Read and interpret instructions and specifications.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	
12.03 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
12.04 Prepare fabric.	LAFS.910.L.3.6 MAFS.912.G-CO.1.1	
12.05 Adjust patterns following pattern directions.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3, 4,5	
12.06 Lay out, pin, cut, and mark fabric according to pattern directions.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3, 4,5	
12.07 Demonstrate stay stitching and ease stitching.	LAFS.910.L.3.6	
12.08 Lay out fabrics 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 MAFS.912.G-CO.1.4	
12.09 Match grain lines and 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	
12.10 Mark fabric for assembly according to pattern/teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	SC.912.L.18.12 SC.912.P.8.2
12.11 Mark fabric for trims according to pattern/teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	SC.912.L.18.12 SC.912.P.8.2
12.12 Match thread with fabric synthesizing visual arts knowledge.	LAFS.910.L.3.6	
12.13 Identify, select, and use content label(s) according to fabric requirements.	LAFS.910.RI.4.10 LAFS.910.L.3.6	



<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
13.0	Construct a machine sewn design project for inclusion in portfolio–The student will be able to:		
13.01	Construct a project that includes a seaming, darts, interfacing, seam finishing, hem, closure and pocket.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	
13.02	Line up notches, dots, or clips according to pattern/teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
13.03	Stitch on woven, stretch, or specialty fabrics using appropriate stitch length for fabrics.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
13.04	Demonstrate correct pressing techniques following fabric requirements.	LAFS.910.RI.4.10 LAFS.910.L.3.6	SC.912.L.18.12 SC.912.P.8.2
13.05	Demonstrate machine hemming following machine manual instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
14.0	Develop a design portfolio–The student will be able to:		
14.01	Assemble a portfolio including all samples:	LAFS.910.W.2.4,5,6	
14.02	Construct basic hand techniques.	LAFS.910.L.3.6	
14.03	Stay stitching and ease stitching.	LAFS.910.L.3.6	
14.04	Straight seams, clean finish and various seam finishes.	LAFS.910.L.3.6	
14.05	Hemming techniques.	LAFS.910.L.3.6	

**Florida Department of Education  
Student Performance Standards**

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

**Course Description:**

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

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Fashion Technology and Design Services.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author's purpose in providing an explanation, describing a	

Florida Standards		Correlation to CTE Program Standard #
	procedure, or discussing an experiment in a text, defining the question the author seeks to address. LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
01.04.2		
02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Fashion Technology and Design Services.		
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	

Florida Standards		Correlation to CTE Program Standard #
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Fashion Technology and Design Services.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
03.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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 Identify employment opportunities in Fashion Design Services–The student will be able to:		
15.01 Secure information about a job and advanced training opportunities for the job and 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	
15.02 Demonstrate computer proficiency through creating, revising, retrieving and verifying 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	
15.03 Apply the principles of time management, work simplification, and teamwork when performing assigned tasks.	LAFS.910.SL.1.1	
15.04 Demonstrate pride in the quality of work performed.		
15.05 Identify career options in Fashion Design Services such as 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	
15.06 Create a presentation on non-traditional career paths (costume design, theater, entertainment, buyers, fabric store owners etc.) 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	

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
		LAFS.910.W.3.7,8,9	
15.07	Analyze current trends as they may affect the future of occupations in Fashion 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	
15.08	Identify different earning and wage level options for occupations in Fashion 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	
16.0	Identify and exhibit employment skills for occupations related to Fashion Design Services–The student will be able to:		
16.01	Identify and list documents that may be required when applying for a job.	LAFS.910.L.3.6 LAFS.910.W.2.4	
16.02	Complete a job application form accurately.	LAFS.910.L.3.6 LAFS.910.W.2.4	
16.03	Demonstrate competence in job interview techniques using role playing techniques.	LAFS.910.SL.2.6	
16.04	Identify and demonstrate appropriate responses to criticism from an employer, supervisor, or co-worker.		
16.05	Identify and demonstrate acceptable work habits including a positive attitude.		
16.06	Demonstrate knowledge of how to make job changes appropriately.	LAFS.910.L.3.6 LAFS.910.W.2.4	
16.07	Identify and describe acceptable employee health and hygiene habits.	LAFS.910.L.3.6 LAFS.910.W.2.4	
16.08	Demonstrate customer relations skills synthesizing given instructions.	LAFS.910.L.3.6 LAFS.910.W.2.4	
16.09	Develop and create a resume' and portfolio following a given format.	LAFS.910.L.3.6 LAFS.910.W.2.4	
17.0	Demonstrate an understanding of the elements and principles of design–After teacher demonstration, textbook/multimedia research or professional presentation, the student will be able to:		
17.01	Identify and explain the elements of design and how various effects can be achieved in relation to Fashion Design Services through written/oral reporting or demonstrations: texture, pattern, line, form and shape, space, color, and light.	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
17.02	Identify and explain the principles of design and how they can be used effectively in Fashion Design Services using a variety of research and reporting methods: proportion, scale, balance, rhythm, emphasis, and harmony.	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9 LAFS.910.W.4.10	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
	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	
17.03 Apply the elements and principles of design to Fashion 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
17.04 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
17.05 Evaluate good design by using the laws of 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.N.1.1
17.06 Create elements and principles of 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	
18.0 Demonstrate an understanding of the terminology used in the apparel industry–The student will be able to:		
18.01 Complete a research project dealing with aspects of fashion retail and production including terminology, labels, 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	
19.0 Operate specialty machines (if available)–After a teacher demonstration the student will be able to identify and operate at least four of the following machines:		
19.01 Electronic programmable machines.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
19.02 Serger.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
19.03 Straight stitch machine.	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
19.04 Zigzag machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
19.05 Embroidery machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
20.0 Demonstrate skill in construction of simple garments–The student will be able to:		
20.01 Identify common ready to wear sizes.		
20.02 Identify and describe 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	
20.03 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
20.04 Interpret verbal, written, and visual directions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
20.05 Prepare fabric and adjust patterns following pattern directions.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1	
20.06 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	
20.07 Demonstrate stay stitching and ease stitching.		
20.08 Demonstrate stitching darts and tucks.	MAFS.912.G-CO.4.12 MAFS.912.G-MG.1.3	
20.09 Identify and match garment pieces using markings and stitching following directions.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	
20.10 Match plaids, stripes and one-way designs following specified instructions.	MAFS.912.G-CO.1.1,4 MAFS.912.G-CO.4.12	
20.11 Demonstrate correct pressing techniques following fabric requirements.		SC.912.L.18.12 SC.912.P.8.2
20.12 Demonstrate casing and elastic installation.		



CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
20.13 Demonstrate machine hemming following machine manual instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
20.14 Identify types of sergers and their characteristics.		
21.0 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:		
21.01 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
21.02 Identify materials that can be used to make eco-friendly fashions and accessories and 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
21.03 Compare the working conditions of employees in the workplace 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
21.04 Research methods for using vegetable and plant materials for eco-friendly fashions and replacing these materials back 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
21.05 Describe ways to be eco-friendly and the environmental and social responsibility of eco-friendly methods.	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
21.06 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 the third course in the Fashion Design Services program. It is designed to further develop competencies in the area of fashion design services. It includes researching history and culture’s effect on design, sketching and free hand drawing, use of technology in the fashion industry, clothing needs for special populations, and creation of an original pattern.

Florida Standards		Correlation to CTE Program Standard #
22.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Fashion Technology and Design Services.	
22.01	Key Ideas and Details	
22.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
22.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
22.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
22.02	Craft and Structure	
22.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
22.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
22.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.1112.RST.2.6	
22.03	Integration of Knowledge and Ideas	
22.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
22.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
22.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
22.04	Range of Reading and Level of Text Complexity	
22.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
22.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
23.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Fashion Technology and Design Services.	
23.01	Text Types and Purposes	
23.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
23.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
23.02	Production and Distribution of Writing	
23.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
23.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
23.02.3	Use technology, including the Internet, to produce, publish, and update	

Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
23.03	Research to Build and Present Knowledge	
23.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
23.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
23.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
23.04	Range of Writing	
23.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
24.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Fashion Technology and Design Services.	
24.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
24.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
24.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
24.04	Model with mathematics. MAFS.K12.MP.4.1	
24.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
24.06	Attend to precision. MAFS.K12.MP.6.1	
24.07	Look for and make use of structure. MAFS.K12.MP.7.1	

Florida Standards	Correlation to CTE Program Standard #
24.08 Look for and express regularity in repeated reasoning.  MAFS.K12.MP.8.1	

**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
25.0 Research how fashion design is affected by history and culture–The student will be able to:		
25.01 Identify design periods from 1900 to the present day.	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
25.02 Explain the influence of earlier design periods on present day 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
25.03 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 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.P.10.19 SC.912.P.8.2 SC.912.N.1.1
25.04 Create a multi-media 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	SC.912.N.1.1

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
		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	
26.0	Demonstrate sketching and free hand drawing skills–The student will be able to:		
26.01	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
26.02	Create inspiration boards to display the sketches and drawings.	LAFS.1112.W.4.10	SC.912.N.1.1
26.03	Select and develop a design collection according to determined criteria using sketching and shading techniques to be used in portfolio.	LAFS.1112.W.4.10	SC.912.N.1.1
27.0	Demonstrate an understanding of how technology is used in the fashion industry–The student will be able to:		
27.01	Research and list software available in the area of fashion design.	LAFS.1112.W.4.10	SC.912.N.1.1
27.02	Demonstrate an understanding of how current technologies (CAD, electronic sewing, knitting, embroidery machines, sergers) are used in the creation of fashion products (e.g. fashion profiles, fabrics, garments).		
27.03	Analyze how certain technologies are used in the fashion design industry.		
27.04	Create a fashion product using two or more technologies appropriately.		SC.912.N.1.1
27.05	Research innovations in materials and technologies that have contributed to safeguards in the tools and equipment used in design services.	LAFS.1112.W.4.10	SC.912.N.1.1
27.06	Identify the development of tools, equipment and technology used in 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
28.0	Identify the psychological and practical needs for clothing for special markets–The student will be able to:		
28.01	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
28.02	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
29.0	Create an original pattern for a garment–The student will be able to:		
29.01	Plan and report on a fashion design project using established criteria.	LAFS.1112.SL.2.4,5,6	SC.912.N.1.1

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
29.02 Using appropriate software, insert body measurements to produce a pattern.		SC.912.N.1.1
29.03 Create a muslin prototype of the pattern.	MAFS.912.G-GMD.2.4	SC.912.N.1.1 SC.912.N.3.5
29.04 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
29.05 Construct a specialty garment(s) according to teacher instructions - project must include a minimum number of construction skills as designated by teacher.		SC.912.N.1.1 SC.912.N.3.5
<b>30.0 Demonstrate alteration skills on a sample or garment–The student will be able to:</b>		
30.01 Remove stitches in ready-made garments without damaging fabric.		
30.02 Mark and even a hemline following guidelines.		
30.03 Lengthen and shorten hems in pants, skirts, or dresses (include cuffs and use of hem tape)	MAFS.912.G-MG.1.3	
30.04 Remove the flare from pant legs following a given set of directions.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
30.05 Taper a skirt following a given set of directions.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
30.06 Shorten the crotch rise in a garment/sample.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
30.07 Take in the waist on a man's garment/sample.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
30.08 Take in the waist on a woman's garment/sample.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
30.09 Take in the side seams on a blouse/shirt.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
30.10 Shorten sleeves at the cuff on a garment/sample.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
30.11 Shorten sleeves at the shoulder cap on a garment/sample.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
30.12 Finish seams and press altered areas using pressing techniques.		SC.912.L.18.12 SC.912.P.8.2
<b>31.0 Demonstrate clothing repair on a garment or sample–The student will be able to:</b>		
31.01 Reinforce seams and buttonholes on a garment/sample.		
31.02 Replace zippers in various types of garments/samples (including fly/jeans).		
31.03 Apply patches on a garment/sample.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
31.04 Replace various types of buttons on a garment/sample.		
31.05 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 the fourth course in the Fashion Design Services program. It is designed to further develop competencies in the area of Fashion Design Services. This course focuses on five specialty areas of Fashion Design Services: Window Display, Fashion Design Assistant, Tailor’s Assistant, Personal Shopper, and Stylist. Students will select one of those specialty areas and will be expected to follow the performance standards for that area. Also included is an opportunity for job shadowing and students will be expected to finalize and submit a portfolio.

Florida Standards		Correlation to CTE Program Standard #
22.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Fashion Technology and Design Services.	
	22.01 Key Ideas and Details	
	22.01.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
	22.01.2 Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
	22.01.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
	22.02 Craft and Structure	
	22.02.1 Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
	22.02.2 Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
	22.02.3 Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important	

Florida Standards		Correlation to CTE Program Standard #
	issues that remain unresolved. LAFS.1112.RST.2.6	
<b>22.03 Integration of Knowledge and Ideas</b>		
22.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
22.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
22.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
<b>22.04 Range of Reading and Level of Text Complexity</b>		
22.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
22.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
<b>23.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Fashion Technology and Design Services.</b>		
<b>23.01 Text Types and Purposes</b>		
23.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
23.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
<b>23.02 Production and Distribution of Writing</b>		
23.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
23.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	

Florida Standards		Correlation to CTE Program Standard #
23.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
23.03	Research to Build and Present Knowledge	
23.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
23.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
23.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
23.04	Range of Writing	
23.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
24.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Fashion Technology and Design Services.	
24.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
24.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
24.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
24.04	Model with mathematics. MAFS.K12.MP.4.1	
24.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
24.06	Attend to precision. MAFS.K12.MP.6.1	
24.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
24.08 Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1

**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
32.0 Identify and describe the different specialties related to Fashion Design Services: Window Display, Fashion Design Assistant, Tailor’s Assistant, Personal Shopper, Stylist–The student will be able to:		
32.01 Identify future trends in Fashion Design Services.	LAFS.1112.W.3.7	SC.912.N.1.1
32.02 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
33.0 Select one specialty area and complete the student performance standards for that area–The student will be able to:		
<b>Window Display</b>		
33.01 Demonstrate knowledge of the elements of design: color, line, proportion, scale, harmony, and 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
33.02 Demonstrate an understanding of fashion as an ethno-cultural expression.		
33.03 Demonstrate space planning in a window display according to a given criteria.	MAFS.912.G-SRT.1.1 MAFS.912.G-SRT.2.5	SC.912.P.10.18
33.04 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
33.05 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
<b>Fashion Design Assistant</b>		
33.06 Demonstrate knowledge of pattern making.	MAFS.912.G-GMD.2.4	
33.07 Apply techniques of design draping.		
33.08 Exhibit effective communication skills.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
33.09 Demonstrate computer skills.		
33.10 Demonstrate garment construction skills.		
33.11 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	
33.12 Demonstrate appropriate customer relations skills.		
33.13 Plan and develop a project related to fashion design according to specifications given by designer.		SC.912.N.1.1
<b>Tailor's Assistant</b>		
33.14 Select suitable fabric for a tailored jacket using identified criteria.		SC.912.N.1.1
33.15 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
33.16 Prepare fabrics and alter patterns using pattern directions.	MAFS.912.G-CO.1.1	SC.912.N.1.1
33.17 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
33.18 Cut patterns, fabric, hair canvas, and linings according to given directions.		SC.912.N.1.1
33.19 Tailor tack markings using the proper techniques.		SC.912.N.1.1
33.20 Baste and fit a garment according to customer specifications.	MAFS.912.G-CO.1.3	SC.912.N.1.1
33.21 Stitch seams using correct stitches for fabric.		SC.912.N.1.1
33.22 Apply seam finishes chosen from practice samples.		SC.912.N.1.1
33.23 Apply zippers according to manufacturer's instructions and the application chosen for different types of garments.		SC.912.N.1.1
33.24 Construct tailored pockets following given directions.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4,5, 6,7	SC.912.N.1.1
33.25 Construct buttonholes following given directions.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4,5, 6,7	SC.912.N.1.1
33.26 Construct chest pieces, shoulder pads, and sleeve heads following given directions.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4,5, 6,7	SC.912.N.1.1

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
33.27 Set in sleeves following given directions.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4,5,6,7	SC.912.N.1.1
33.28 Construct and apply upper collar and facings following given directions.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4,5,6,7	SC.912.N.1.1
33.29 Construct and apply linings according to fabric requirements.	MAFS.912.G-GMD.2.4	SC.912.N.1.1
33.30 Construct hems using proper techniques for fabric/garment style.	MAFS.912.G-MG.1.3	SC.912.N.1.1
33.31 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
33.32 Alter patterns and cut fabric for tailored pants according to	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
33.33 Fit and construct tailored pants according to customer specifications.	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
33.34 Construct and apply linings to tailored pants using proper techniques.	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
33.35 Refit and alter a ready to wear garment according to customer specifications.	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
<b>Costume Design</b>		
33.36 Demonstrate taking body measurements using the correct measuring method.		SC.912.N.1.1
33.37 Compare and alter basic patterns according to given instructions.		SC.912.N.1.1
33.38 Construct a basic muslin shell using customer's measurements and/or pattern.	MAFS.912.G-GMD.2.4	SC.912.N.1.1
33.39 Transfer fitting changes to paper patterns following given directions.		SC.912.N.1.1

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
33.40 Construct an oak tag board sloper from muslin following given demonstration.		SC.912.N.1.1
33.41 Draft a pattern according to costume specifications.		SC.912.N.1.1
33.42 Identify and describe styles that suit body types.		SC.912.N.1.1
33.43 Identify and design garments to suit body types.		SC.912.N.1.1
33.44 Choose fabric for body type and design based on customer criteria.		SC.912.N.1.1
33.45 Design garments for dance, theater, sports activities, costumes, music videos, and print ads.		SC.912.N.1.1
33.46 Define draping and demonstrate the draping method of design.		SC.912.N.1.1
<b>Personal Shopper</b>		
33.47 Demonstrate effective communication skills.		
33.48 Identify different body types.		SC.912.L.15.4
33.49 Identify and demonstrate knowledge of appropriate attire for various ages, body types, and occasions.		
33.50 Demonstrate an understanding of the relationship between color and skin tones.		SC.912.P.10.17
33.51 Demonstrate the ability to work within a customer's budget.	MAFS.912.N-Q.1.1,2,3	SC.912.N.1.1
33.52 Coordinate wardrobe essentials.		SC.912.N.1.1
33.53 Plan and develop a personal shopping project according to clients' established criteria.		SC.912.N.1.1
33.54 Exhibit skills necessary for a quality presentation of selections to clients.		SC.912.N.1.1
33.55 Identify future trends in personal shopping.	MAFS.912.S-IC.2.6	SC.912.N.1.1
<b>Stylist</b>		
33.56 Demonstrate effective communication skills.		
33.57 Identify different body types.		SC.912.L.15.4
33.58 Identify and demonstrate knowledge of appropriate attire for various ages, body types, and occasions.		SC.912.N.1.1
33.59 Demonstrate an understanding of the relationship between color and skin tones.		SC.912.P.10.17 SC.912.N.1.1
33.60 Demonstrate the ability to work within a customer's budget.	MAFS.912.N-Q.1.1,2,3	SC.912.N.1.1

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
33.61 Identify future trends and future techniques in styling sets.	MAFS.912.S-IC.2.6	SC.912.N.1.1
33.62 Identify and select fashion and accessories based on specific criteria.		SC.912.N.1.1
33.63 Explain how the media has helped to define fashion and influence design trends.		SC.912.N.1.1
33.64 Coordinate wardrobe essentials.		SC.912.N.1.1
33.65 Plan and develop a stylist project based on established criteria.		SC.912.N.1.1
34.0 (Optional) Schedule and participate in Fashion Design Services job shadowing–The student will be able to:		
34.01 Research persons working in the Fashion Design Services profession within the local area.		SC.912.N.1.1
34.02 Formalize in writing, a job shadowing experience, applying knowledge gained within the program and using the guidelines set by the district, instructor and employer and using knowledge synthesized within the program.	LAFS.1112.W.1.3 LAFS.1112.W.2.4,5,6	
35.0 Finalize a fashion portfolio per industry standards–The student will be able to:		
35.01 Submit a portfolio including all work from the Fashion Technology and Design Services program.	LAFS.1112.W.2.4,5,6	
35.02 Construct basic hand techniques.		
35.03 Stay stitching and ease stitching.		



## **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.

### **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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>

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, 30, 31
Standard Length	4 credits
Teacher Certification	HME EC OCC $\phi$ 7 HOMEMAKING @2 $\phi$ 7 FAM CON SC 1 TAILORING $\phi$ 7 APPRL MFG $\phi$ 7 @7 G INT DES 7G TEC ED 1@2
CTSO	FCCLA
SOC Codes (all applicable)	27-1029 – Designers, All Other 41-2031 – Retail Salespersons
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Program Structure**

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

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A	8506405	Design Services Core	1 credit	41-2031	2	PA
B	8506540	Principles of Interior Design Services	1 credit	27-1029	2	PA
C	8506550	Interior Design Techniques	1 credit	27-1029	2	PA
D	8506560	Interior Design Specialist	1 credit	27-1029	3	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics, VO= Career and Technical Education)

**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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Interior Design Services.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Interior Design Services.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Interior Design Services.
- 04.0 Demonstrate leadership and organizational skills.
- 05.0 Demonstrate appropriate basic skills essential to working in occupations in design services.
- 06.0 Identify and exhibit employment skills.
- 07.0 Describe the relationship of human factors to design services.
- 08.0 Identify textile characteristics and care.
- 09.0 Select and use tools and equipment safely.
- 10.0 Operate and maintain a conventional and commercial/industrial sewing machine.
- 11.0 Operate specialty machines (minimum of four machines if available).
- 12.0 Select and prepare materials.
- 13.0 Construct a machine sewn design project for inclusion in portfolio.
- 14.0 Develop a design portfolio.
- 15.0 Demonstrate appropriate basic skills essential to working in occupations in Interior Design Services.
- 16.0 Identify employment opportunities in Interior Design Services.
- 17.0 Identify and exhibit employment skills for occupations related to Interior Design Services.
- 18.0 Demonstrate an understanding of the elements and principles of design.
- 19.0 Demonstrate sales techniques in Interior Design Services.
- 20.0 Demonstrate an understanding of entrepreneurship.
- 21.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Interior Design Services.
- 22.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Interior Design Services.
- 23.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Interior Design Services.
- 24.0 Identify and describe components of the design process.
- 25.0 Research how design is affected by history and culture.
- 26.0 Demonstrate sketching and free hand drawing skills.
- 27.0 Demonstrate the ability to use Interior Design Services software.
- 28.0 Explain how human, environmental, and ergonomic factors impact design solutions.
- 29.0 Demonstrate knowledge of rendering techniques for presentations.
- 30.0 Plan and develop a design project.
- 31.0 Identify and describe the different specialties related to Interior Design Services (kitchen and bath; floor, wall and window treatments; furniture, lighting, and accessories; and audio-visual and security).

- 32.0 Plan and develop a complete design project in a specialty selected to meet client's requirements and criteria.
- 33.0 (Optional) Schedule and participate in Interior Design Services job shadowing.
- 34.0 Finalize a portfolio per 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 the core course of the fashion design services program. It is designed to develop competencies in the areas of the fashion design industry. It includes essential basic skills for working in design services, leadership and organizational skills, basic principles of design, textile characteristics and care, employability skills, relationship of human factors to design services, safe use of tools and equipment, and selection of appropriate materials.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Interior Design Services.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author's purpose in providing an explanation, describing a	

Florida Standards		Correlation to CTE Program Standard #
	procedure, or discussing an experiment in a text, defining the question the author seeks to address. LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
01.04.2		
02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Interior Design Services.		
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	

Florida Standards		Correlation to CTE Program Standard #
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Interior Design Services.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
03.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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 leadership and organizational skills–The student will be able to:		
04.01 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	
04.02 Identify 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	
04.03 Identify 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	
04.04 Demonstrate cooperation as a group member in achieving	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	
04.05 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	
05.0 Demonstrate appropriate basic skills essential to working in occupations in design services– The student will be able to:		
05.01 Identify the communication knowledge, skills, and attitudes necessary to perform the occupational tasks.	LAFS.910.SL.2.4 LAFS.910.L.3.6	

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
05.02	Demonstrate communication competencies necessary to perform the occupational tasks.	LAFS.910.SL.2.4 LAFS.910.L.3.6	
06.0	Identify and exhibit employment skills–The student will be able to:		
06.01	Conduct a job search using the internet, media center, phone, or a computerized model.	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	
06.02	Secure information about a job and advanced training opportunities for the job and 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.3.9 MAFS.912.S.ID.1.1	
06.03	Demonstrate computer proficiency through creating, revising, retrieving and verifying 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	
06.04	Apply the principles of time management, work simplification, and teamwork when performing assigned tasks.		
06.05	Demonstrate pride in the quality of work performed.		
07.0	Describe the relationship of human factors to design services–The student will be able to:		
07.01	Define the elements of design that are applicable to fashion and/or interior design (space, line, shape, form, texture, color).	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9 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.P.10.19 SC.912.P.8.2 SC.912.N.1.1
07.02	Define the principles of design that are applicable to fashion and/or interior 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	

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
07.03	Explain the impact of human factors (psychological, physiological, and social needs) on decisions relating to the design services process.	LAFS.910.L.1.3 LAFS.910.W.4.10	SC.912.L.17.20
07.04	Identify and describe 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
07.05	Identify and describe the impact of human needs and wants on the cost of design services and customized garments.	LAFS.910.L.3.6 MAFS.912.N-Q.1.1,2,3	
07.06	Identify and describe the importance of barrier-free design and accessibility related to design services.	LAFS.910.L.3.6	
07.07	Identify and describe characteristics of properly fitted garments/interior spaces and furnishings.	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
07.08	Take accurate measurements to determine correct size of garments or home furnishings items.	LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	SC.912.N.1.1
08.0	Identify textile characteristics and care—After teacher demonstration, textbook/multi-media research or following sample instruction the student will be able to:		
08.01	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
08.02	Identify and describe types of fabric construction.	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
08.03	Identify and describe types of fabric finishes.	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
08.04	Identify and describe types of textiles.	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
08.05	Identify laws and regulations governing the textile industry including labeling laws.	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

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
09.0	Select and use tools and equipment safely—After teacher demonstration or textbook/multi-media research the student will be able to:		
09.01	Identify the tools and equipment used in design services.	LAFS.910.L.3.6	SC.912.N.1.1
09.02	Select the appropriate tools and equipment for assigned projects.		SC.912.N.1.1
09.03	Demonstrate the proper and safe use of tools and equipment.	LAFS.910.SL1.1	SC.912.N.1.1
09.04	Identify and demonstrate safety procedures in using conventional sewing machines and home sergers.	LAFS.910.SL1.1	
09.05	Identify and demonstrate safety procedures in using pressing equipment.	LAFS.910.SL1.1	SC.L.18.12
09.06	Clean and maintain various types of tools and equipment.	LAFS.910.SL1.1	
09.07	Keep an inventory record of tools, equipment, supplies, and materials using computer application software.	LAFS.910.SL1.1 LAFS.910.W.4.10	
09.08	Explain the importance of observing occupational safety and health administration (OSHA) rules and regulations.	LAFS.910.SL1.1 LAFS.910.RI.4.10 LAFS.910.W.4.10	
09.09	Research innovations in materials and technologies that have contributed to safeguards in the tools and equipment used in design services.	LAFS.910.RI.4.10 LAFS.910.W.3.7,8,9	
09.10	Identify the development of tools, equipment and technology used in design services as they relate to particular historical periods.	LAFS.910.RI.4.10 LAFS.910.W.3.7,8,9	
09.11	Identify and apply drafting tools and techniques to a specific design services project.	LAFS.910.L.3.6 MAFS.912.G-MG.1.1	SC.912.L.15.4
10.0	Operate and maintain a conventional and commercial/industrial sewing machine—After teacher demonstration, textbook/multi-media research or following manufacturer’s instructions, the student will be able to:		
10.01	Identify the parts of the sewing machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.P.10.18
10.02	Identify the process and demonstrate needle insertion, selecting the needle that is appropriate for various fabrics.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10 MAFS. 912.G-MG.1.2 MAFS.912.G-MG.1.3	
10.03	Identify the steps and demonstrate threading the sewing machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	
10.04	Diagram and demonstrate bobbin winding, threading the bobbin case, and inserting the bobbin correctly into the 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

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
10.05 Demonstrate straight stitching.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	
10.06 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	
10.07 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	
10.08 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
10.09 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
11.0 Operate specialty machines (minimum of four machines if available)—After a teacher demonstration the student will be able to identify and operate at least four of the following machines:		
11.01 Electronic programmable machines.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
11.02 Serger	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
11.03 Pleater	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
11.04 Blindstitch machine	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
11.05 Straight stitch machine	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
11.06 Chain stitch machine	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
11.07 Cutting machine	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
11.08 Bar tack	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
11.09 Zigzag machine	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
12.0 Select and prepare materials–The student will be able to:		
12.01 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	
12.02 Read and interpret instructions and specifications.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	
12.03 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
12.04 Prepare fabric.	LAFS.910.L.3.6 MAFS.912.G-CO.1.1	
12.05 Adjust patterns following pattern directions.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	
12.06 Lay out, pin, cut, and mark fabric according to pattern directions.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	
12.07 Demonstrate stay stitching and ease stitching.	LAFS.910.L.3.6	
12.08 Lay out fabrics 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 MAFS.912.G.C.1.4	
12.09 Match grain lines and 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	
12.10 Mark fabric for assembly according to pattern/teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	SC.912.L.18.12 SC.912.P.8.2
12.11 Mark fabric for trims according to pattern/teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	SC.912.L.18.12 SC.912.P.8.2

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
12.12 Match thread with fabric synthesizing visual arts knowledge.	LAFS.910.L.3.6	
12.13 Identify, select, and use content label(s) according to fabric requirements.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
13.0 Construct a machine sewn design project for inclusion in portfolio–The student will be able to:		
13.01 Construct a project that includes a seaming, darts, interfacing, seam finishing, hem, closure and pocket.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	
13.02 Line up notches, dots, or clips according to pattern/teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
13.03 Stitch on woven, stretch, or specialty fabrics using appropriate stitch length for fabrics.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
13.04 Demonstrate correct pressing techniques following fabric requirements.	LAFS.910.RI.4.10 LAFS.910.L.3.6	SC.912.L.18.12 SC.912.P.8.2
13.05 Demonstrate machine hemming following machine manual instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
14.0 Develop a design portfolio–The student will be able to:		
14.01 Assemble a portfolio including all samples:	LAFS.910.W.2.4,5,6	
14.02 Construct basic hand techniques.	LAFS.910.L.3.6	
14.03 Stay stitching and ease stitching.	LAFS.910.L.3.6	
14.04 Straight seams, clean finish and various seam finishes.	LAFS.910.L.3.6	
14.05 Hemming techniques.	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 the second course in the Interior Design Services program. It is designed to further develop competencies in the area of interior design services. It includes employment opportunities in interior design services, basic skills essential to working in this industry, employability skills, the elements and principles of design, sales techniques and entrepreneurship.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Interior Design Services.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question	

Florida Standards		Correlation to CTE Program Standard #
	the author seeks to address. LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Interior Design Services.		
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update	

Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Interior Design Services.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure. MAFS.K12.MP.7.1	

Florida Standards	Correlation to CTE Program Standard #
03.08 Look for and express regularity in repeated reasoning.  MAFS.K12.MP.8.1	

**Abbreviations:**

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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 appropriate basic skills essential to working in occupations in Interior Design Services–The student will be able to:		
15.01 Identify the mathematics knowledge, skills, and attitudes necessary to perform the 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	
15.02 Identify the scientific knowledge, skills, and attitudes necessary to perform the 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
15.03 Demonstrate math competencies necessary to perform the 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	
15.04 Demonstrate scientific competencies necessary to perform the 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
15.05 Distinguish between specifics of individual vs. mass production design needs.	LAFS.910.RI.1.1 LAFS.910.SL.2.4	
16.0 Identify employment opportunities in Interior Design Services–The student will be able to:		
16.01 Identify occupations in Interior Design Services.	LAFS.910.RI.4.10 LAFS.910.W.3.7	
16.02 Identify personal skills and interests that may lead to a career exploration related to Interior Design Services.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7	
16.03 Identify levels of training required for occupations in Interior Design Services.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7	

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
16.04	Identify duties and responsibilities for occupations in Interior Design Services.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7	
16.05	Identify ways to achieve job advancement in Interior Design Services occupations.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7	
16.06	Identify career options in Interior Design Services such as entrepreneurship.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7	
16.07	Analyze current trends as they may affect the future of occupations in Interior Design Services.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7 LAFS.910.RI.1.3	
16.08	Identify different earning and wage level options for occupations in Interior Design Services.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7	
17.0	Identify and exhibit employment skills for occupations related to Interior Design Services–The student will be able to:		
17.01	Identify and list documents that may be required when applying for a job.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7,8,9	
17.02	Complete a job application form accurately.	LAFS.910.W.4.10	
17.03	Demonstrate competence in job interview techniques using role playing techniques.	LAFS.910.SL.1.1,3	
17.04	Identify and demonstrate appropriate responses to criticism from an employer, supervisor, or co-worker.	LAFS.910.SL.1.3	
17.05	Identify and demonstrate acceptable work habits including a positive attitude.	LAFS.910.SL.1.2	
17.06	Demonstrate knowledge of how to make job changes appropriately.	LAFS.910.SL.1.2	
17.07	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
17.08	Demonstrate customer relations skills synthesizing given instructions.	LAFS.910.RI.4.10 LAFS.910.SL.2.6 LAFS.910.W.2.6 LAFS.910.W.4.10	
17.09	Develop and create a resume' and portfolio following a given format.		
18.0	Demonstrate an understanding of the elements and principles of design–After teacher demonstration, textbook/multimedia research or professional presentation, the student will be able to:		
18.01	Identify and explain the elements of design and how various effects can be achieved in	LAFS.910.L.3.6	SC.912.P.10.18,19,

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
	relation to Interior Design Services through written/oral reporting or demonstrations: texture, pattern, line, form and shape, space, color, and light	LAFS.910.RI.1.1 LAFS.910.SL.2.4,5,6	21
18.02	Identify and explain the principles of design and how they can be used effectively in Interior Design Services using a variety of research and reporting methods: proportion, scale, balance, rhythm, emphasis, and harmony.	LAFS.910.L.3.6 LAFS.910.RI.1.1 LAFS.910.SL.2.4,5,6 MAFS.912.G-SRT.1.1,2	
18.03	Apply the elements and principles of design to Interior Design Services.	LAFS.910.L.3.6 LAFS.910.RI.1.1 LAFS.910.SL.2.4,5,6	
18.04	Develop a plan applying color and color schemes in a design.	LAFS.910.L.3.6 LAFS.910.RI.1.1 LAFS.910.SL.2.4,5,6	SC.912.P.10.18
18.05	Evaluate good design by using the laws of design.	LAFS.910.L.3.6 LAFS.910.RI.1.1,3 LAFS.910.SL.2.4,5,6	
19.0	Demonstrate sales techniques in Interior Design Services–The student will be able to:		
19.01	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	
19.02	Read and follow written instructions and listen to and follow oral instructions.	LAFS.910.RI.4.10 LAFS.910.SL.2.6	
19.03	Give sales presentations orally and in writing.	LAFS.910.SL.2.4 LAFS.910.W.1.2 LAFS.910.W.2.4,5,6	
19.04	Find information on sales products and services.	LAFS.910.W.3.7,8 LAFS.910.W.4.10 LAFS.910.W.3.9:B	
19.05	Research and recommend products used in Interior Design Services that meet the customer’s needs based upon customer 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	
19.06	Demonstrate appropriate computer and telecommunication skills.	LAFS.910.W.2.4,6 LAFS.910.SL.2.5	
19.07	Perform sales transactions using computer skills.	LAFS.910.W.2.4,6 LAFS.910.SL.2.5	
19.08	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	
20.0	Demonstrate an understanding of entrepreneurship–The student will be able to:		
20.01	Define entrepreneurship.	LAFS.910.L.3.6 LAFS.910.RI.2.4	



CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
20.02 Debate the advantages and disadvantages of business ownership through a written or oral 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	
20.03 Identify and describe, orally or in writing, 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 the third course in the Interior Design Services program. It is designed to further develop competencies in the area of Interior Design Services. It includes components of the design process, the effect of history and culture on design, sketching and free hand drawing, the impact of human, environmental and ergonomic factors on design, rendering techniques, and the development of a design project.

Florida Standards		Correlation to CTE Program Standard #
21.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Interior Design Services.	
21.01	Key Ideas and Details	
21.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
21.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
21.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
21.02	Craft and Structure	
21.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
21.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
21.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.1112.RST.2.6	
21.03 Integration of Knowledge and Ideas		
21.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
21.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
21.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
21.04 Range of Reading and Level of Text Complexity		
21.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
21.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
22.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Interior Design Services.		
22.01 Text Types and Purposes		
22.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
22.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
22.02 Production and Distribution of Writing		
22.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
22.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
22.02.3	Use technology, including the Internet, to produce, publish, and update	

Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
22.03	Research to Build and Present Knowledge	
22.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
22.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
22.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
22.04	Range of Writing	
22.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
23.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Interior Design Services.	
23.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
23.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
23.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
23.04	Model with mathematics. MAFS.K12.MP.4.1	
23.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
23.06	Attend to precision. MAFS.K12.MP.6.1	
23.07	Look for and make use of structure. MAFS.K12.MP.7.1	

Florida Standards	Correlation to CTE Program Standard #
23.08 Look for and express regularity in repeated reasoning.  MAFS.K12.MP.8.1	

**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
24.0 Identify and describe components of the design process--The student will be able to:		
24.01 Recognize the steps in the design process.	LAFS.1112.L.3.6 LAFS.1112.RI.4.10	
24.02 Given a simple problem develop a flow chart that illustrates the steps in a design process. (the steps include: determine the need, brainstorm, design the brief, research, plan, fabricate, and evaluate.	LAFS.1112.W.3.8 LAFS.1112.W.1.2	
24.03 Conduct a presentation.	LAFS.1112.SL.2.4,5,6	
25.0 Research how design is affected by history and culture--The student will be able to:		
25.01 Identify design periods from 1900 to the present day.	LAFS.1112.W.3.8 LAFS.1112.RI.3.9 LAFS.1112.L.3.6	
25.02 Explain the influence of earlier design periods on present day design.	LAFS.1112.W.3.8 LAFS.1112.RI.3.9 LAFS.1112.L.3.6	
25.03 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	
25.04 Create a multi-media presentation detailing the design period selected.	LAFS.1112.W.3.8 LAFS.1112.RI.3.9 LAFS.1112.L.3.6 LAFS.1112.W.2.6	
26.0 Demonstrate sketching and free hand drawing skills--The student will be able to:		
26.01 Demonstrate sketching and shading techniques.	LAFS.1112.L.3.6 LAFS.1112.W.4.10	
26.02 Create mats or frames to display the sketches and drawings.	LAFS.1112.L.3.6 LAFS.1112.W.4.10	
26.03 Select and develop a design project using sketching and shading techniques to be used in portfolio.	LAFS.1112.L.3.6 LAFS.1112.W.4.10	
27.0 Demonstrate the ability to use Interior Design Services software--The student will be able to:		

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
27.01	Research and list software available in the area of interior design.	LAFS.1112.W.3.7,8,9 LAFS.1112.W.2.6	
27.02	Identify and discuss the benefits of using software in today's work place.	LAFS.1112.L.3.6 LAFS.1112.W.4.10 LAFS.1112.SL.1.1,2	
27.03	Read and interpret a blueprint.	LAFS.1112.RI.1.1,2	
27.04	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	
27.05	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	
28.0	Explain how human, environmental, and ergonomic factors impact design solutions--The student will be able to:		
28.01	List human factors that could impact a design.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.3.7	SC.912.N.4.2
28.02	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	
28.03	Plan and implement a design project using 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	
28.04	Examine the positive and negative impact that 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
29.0	Demonstrate knowledge of rendering techniques for presentations--The student will be able to:		
29.01	Given established criteria, apply all learned rendering skills to create a high quality presentation.	LAFS.1112.SL.2.4 LAFS.1112.2.5,6 LAFS.1112.W.4.10 LAFS.1112.RI.1.1	
30.0	Plan and develop a design project--The student will be able to:		
30.01	Plan and report on a design project, using established criteria.	LAFS.1112.SL.2.4,5,6 LAFS.1112.SL.1.2	
30.02	Calculate the areas, sizes, circumferences, square footage, etc. of a design project.	MAFS.912.N-Q.1.1,2,3 MAFS.912.G-SRT.1.1	
30.03	Develop a design project using drafting techniques.	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 the fourth course in the Interior Design Services program. It is designed to further develop competencies in the area of interior design services. This course focuses on four specialty areas of Interior Design Services: kitchen and bath planning; floor, wall, and window treatments; furniture, lighting and accessories; and audio visual and security systems. Students will select on one of those specialty areas and will be expected to follow the performance standards for that area. Students will develop a design project and finalize and submit a portfolio.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
21.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Interior Design Services.	
21.01	Key Ideas and Details	
21.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.  LAFS.1112.RST.1.1	
21.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.1112.RST.1.2	
21.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.1112.RST.1.3	
21.02	Craft and Structure	
21.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.  LAFS.1112.RST.2.4	
21.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.  LAFS.1112.RST.2.5	
21.02.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important	

Florida Standards		Correlation to CTE Program Standard #
	issues that remain unresolved. LAFS.1112.RST.2.6	
<b>21.03 Integration of Knowledge and Ideas</b>		
21.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
21.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
21.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
<b>21.04 Range of Reading and Level of Text Complexity</b>		
21.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
21.04.2		
<b>22.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Interior Design Services.</b>		
<b>22.01 Text Types and Purposes</b>		
22.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
22.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
<b>22.02 Production and Distribution of Writing</b>		
22.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
22.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	



Florida Standards		Correlation to CTE Program Standard #
22.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
22.03	Research to Build and Present Knowledge	
22.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
22.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
22.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
22.04	Range of Writing	
22.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
23.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Interior Design Services.	
23.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
23.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
23.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
23.04	Model with mathematics. MAFS.K12.MP.4.1	
23.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
23.06	Attend to precision. MAFS.K12.MP.6.1	
23.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #	
	MAFS.K12.MP.7.1	
23.08 Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1	

**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
31.0 Identify and describe the different specialties related to Interior Design Services (kitchen and bath; floor, wall and window treatments; furniture, lighting, and accessories; and audio-visual and security)–The student will be able to:		
31.01 Identify future trends in interior décor and design.	LAFS.1112.W.3.8 LAFS.1112.RI.3.9 LAFS.1112.L.3.6	
31.02 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 audio visual and security system specialist.	LAFS.1112.W.3.7,8 LAFS.1112.SL.W.3.9 LAFS.1112.SL.W.4.1 0 LAFS.1112.SL.W.1.2 LAFS.1112.SL.2.4,5, 6 LAFS.1112.RI.4.10	
<b>Select one specialty area (listed below) and complete the student performance standards for that area:</b>		
<b>Kitchen and Bath</b>		
31.03 Identify 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	
31.04 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	
31.05 Identify safety guidelines for materials used in kitchen and bath designs.	LAFS.1112.L.3.6 LAFS.1112.RI.1.1 LAFS.1112.SL.2.4,5, 6	

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
31.06	Analyze fixtures, equipment, appliances, carpentry, cabinets, surfaces and finished materials as well as 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
31.07	Research new trends in kitchen and bath.	LAFS.1112.L.3.6 LAFS.1112.RI.1.1 LAFS.1112.SL.2.4,5,6 LAFS.1112.W.3.7,8,9	
31.08	Demonstrate knowledge of kitchen and bath design as they relate to the total residential floor plan.	LAFS.1112.L.3.6 LAFS.1112.RI.1.1 LAFS.1112.SL.2.4,5,6	
<b>Floor, Window, and Wall Treatments</b>			
31.09	Identify and describe the characteristics of different types of floor coverings.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
31.10	List and compare durability and maintenance factors for floor covering materials.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
31.11	Develop criteria for the selection of floor coverings; include considerations of color, texture, type, style, pattern, client's life style, energy conservation, and environmental safety using multiple resources.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	SC.912.P.10.2,18
31.12	Measure and calculate space and materials for a floor covering application based upon client criteria written in a report format.	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	
31.13	Identify and describe characteristics of different types of wall treatments.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
31.14	Compare durability and maintenance factors for wall treatment materials.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
31.15	Develop criteria for the selection of wall treatments; include considerations of color, texture, type, and style, pattern, client's life style, 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
31.16	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	
31.17	Categorize window treatments as drapery or nondrapery.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
31.18	Identify and describe the characteristics of nondrapery treatments.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
31.19	Identify and describe the characteristics of fabrics used for window treatments.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
31.20	Describe the characteristics of draperies and their headings.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
31.21	Recognize the different types and uses of appropriate hardware for window treatments.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
31.22	Identify and describe in writing window treatment styles.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
31.23	Compare durability and maintenance factors for window treatment materials.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
31.24	Develop criteria for the selection of window treatments; include considerations of color, texture, type, style, pattern, client's life style, 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
31.25	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	
<b>Furniture, Lighting and Accessories</b>			
31.26	Identify and describe the historical characteristics of furniture styles.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.1.1,2,3	
31.27	Identify and describe the methods of furniture construction.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.1.1,2,3	
31.28	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	
31.29	Describe the types of finishes and the care required for each one.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.1.1,2,3	
31.30	Compare and contrast man-made fibers (i.e. polyester, metal, synthetic plastic) with natural materials (i.e. cotton, wood, leather) 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
31.31	Identify and describe different accessories for home/office/ function or appropriate setting for an oral presentation.	LAFS.1112.W.2.5 LAFS.1112.SL.2.4,5,6	
31.32	Demonstrate appropriate groupings and the placement of furniture, lighting and accessories.		
31.33	Identify and describe different types of lighting fixtures and light bulbs.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.1.1,2,3	SC.912.P.10.13,18
31.34	Select and identify appropriate lighting for specific spaces to include general, task, and ambiance, considering life-styles 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
31.35	Demonstrate knowledge of furniture, lighting, and accessories as they relate to the total residential floor plan.	LAFS.1112.W.4.10 LAFS.1112.RI.4.10 LAFS.1112.SL.2.6	
<b>Audio Visual and Security Systems</b>			
31.36	Identify and select materials and finishes for environments requiring acoustic specifications.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.1.1,2,3	SC.912.P.10.21

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
31.37	Develop criteria for the selection of audio visual and security systems for specific spaces considering life style and energy conservation or as required by local ordinance or state code.	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
31.38	Demonstrate knowledge of audio visual and security systems as they relate to the total residential floor plan.	LAFS.1112.W.4.10 LAFS.1112.RI.4.10 LAFS.1112.SL.2.6	
32.0	Plan and develop a complete design project in a specialty selected to meet client's requirements and criteria–The student will be able to:		
32.01	Read and interpret a blueprint for this specific project.	LAFS.1112.RI.1.1,2	
32.02	Plan and write a design project for a specific client profile, applying the elements and principles of design.	LAFS.1112.W.4.10 LAFS.1112.W.3.7,8,9	
32.03	Calculate areas, sizes, circumferences, square footage, etc. of the design project.	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	
32.04	Select 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	
32.05	Measure and calculate the materials needed for client specified project.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6 MAFS.912.N-Q.1,2,3	
32.06	Estimate the number of products needed for the client project.		
32.07	Determine the budgetary limitations of the client.	MAFS.912.N-Q.1,2,3	
32.08	Estimate the cost required to implement the plan and evaluate the estimate in relation to the client's budget.	MAFS.912.N-Q.1,2,3	
32.09	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	
33.0	(Optional) Schedule and participate in Interior Design Services job shadowing–The student will be able to:		
33.01	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	
33.02	Formalize in writing, a job shadowing experience, applying knowledge gained within the program and using the guidelines set by the district, instructor and employer and using knowledge synthesized within the program.	LAFS.1112.W.2.4,5,6 LAFS.1112.W.4.10	
34.0	Finalize a portfolio per industry standards–The student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
34.01 Submit a portfolio including all work from the Interior Design Services 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.

### **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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>



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, 30, 31
Standard Length	10 credits
Teacher Certification	COMM ART @7 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	43-9031 Desktop Publishers 27-1029 Designers All Others 27-1024 Graphic Designers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

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

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 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 five occupational completion points.

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A	8718010	Commercial Art Technology 1	1 credit	43-9031	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	27-1024	2	PA
	8718080	Commercial Art Technology 8	1 credit		2	PA
D	8718090	Commercial Art Technology 9	1 credit	27-1024	2	PA
	8718091	Commercial Art Technology 10	1 credit		2	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics, VO= Career and Technical Education)

### **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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Commercial Art Technology.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Commercial Art Technology.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Commercial Art Technology.
- 04.0 Demonstrate basic commercial art knowledge.
- 05.0 Demonstrate proficiency in graphic production.
- 06.0 Demonstrate proficiency in technical art skills.
- 07.0 Demonstrate proficiency in design skills.
- 08.0 Demonstrate proficiency in lettering skills.
- 09.0 Demonstrate an understanding of typography.
- 10.0 Demonstrate proficiency in layout and paste-up.
- 11.0 Demonstrate proficiency in illustration skills.
- 12.0 Demonstrate proficiency in applied design.
- 13.0 Demonstrate proficiency in graphic art computer skills.
- 14.0 Demonstrate proficiency in airbrush skills.
- 15.0 Demonstrate appropriate communication skills.
- 16.0 Demonstrate appropriate math skills.
- 17.0 Demonstrate appropriate understanding of basic science.
- 18.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Commercial Art Technology.
- 19.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Commercial Art Technology.
- 20.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Commercial Art Technology.
- 21.0 Demonstrate employability skills.
- 22.0 Demonstrate an understanding of entrepreneurship.

**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 basics of commercial art.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Commercial Art Technology.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.  LAFS.910.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Commercial Art Technology.	
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly	

Florida Standards		Correlation to CTE Program Standard #
	and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Commercial Art Technology.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure. MAFS.K12.MP.7.1	
03.08	Look for and express regularity in repeated reasoning.	

Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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 basic commercial art knowledge--The student will be able to:		
04.01 Take notes, listen and comply with instructions.		
04.02 Read instructions thoroughly.		
04.03 Request clarification of instructions (ask questions).		
04.04 Relay instructions to others orally and in writing.		
04.05 Define and explain commercial art terms.		
04.06 Document job tasks, costs and maintain records.		
04.07 Make project presentations.		
04.08 Interact with the employer, fellow employees and customers.		
16.0 Demonstrate appropriate math skills--The student will be able to:		
16.01 Solve problems for volume, weight, area, circumference and perimeter measurements for rectangles, squares, and cylinders.		
16.02 Measure tolerance(s) 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.		



**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 graphic production and basic science as it applies to commercial art.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Commercial Art Technology.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.  LAFS.910.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Commercial Art Technology.	
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly	

Florida Standards		Correlation to CTE Program Standard #
	and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Commercial Art Technology.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure. MAFS.K12.MP.7.1	
03.08	Look for and express regularity in repeated reasoning.	

Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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 graphic production--The student will be able to:		
05.01 Define the differences in production processes and estimate relative costs.		
05.02 Recognize limitations for printing.		
05.03 Identify and select different printing surfaces.		
05.04 Identify and select appropriate printing inks.		
05.05 Identify and select finishing processes.		
05.06 Identify standard industry material sizes.		
05.07 Specify types of folds.		
15.0 Demonstrate appropriate communication skills--The student will be able to:		
15.01 Write logical and understandable statements, or phrases, to accurately fill out forms/invoices commonly used in business and industry.		
15.02 Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area.		
15.03 Read and follow written and oral instructions.		
15.04 Answer and ask questions coherently and concisely.		
15.05 Read critically by recognizing assumptions and implications and by evaluating ideas.		
15.06 Demonstrate appropriate telephone/communication skills.		
17.0 Demonstrate appropriate understanding of basic science--The student will be able to:		
17.01 Understand molecular action as a result of temperature extremes, chemical reaction, and moisture content.		
17.02 Draw conclusions or make inferences from data.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
17.03 Identify health-related problems, which may result from exposure to work related chemicals and hazardous materials, and know the proper precautions required for handling such materials.		
17.04 Understand pressure measurement in terms of PSI, inches of mercury, and KPA.		

**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 computer applications for commercial art and employability skills.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
18.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Commercial Art Technology.	
18.01	Key Ideas and Details	
18.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.  LAFS.1112.RST.1.1	
18.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.1112.RST.1.2	
18.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.1112.RST.1.3	
18.02	Craft and Structure	
18.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.  LAFS.1112.RST.2.4	
18.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.  LAFS.1112.RST.2.5	
18.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.  LAFS.1112.RST.2.6	
18.03	Integration of Knowledge and Ideas	

Florida Standards		Correlation to CTE Program Standard #
18.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
18.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
18.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
18.04 Range of Reading and Level of Text Complexity		
18.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
18.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
19.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Commercial Art Technology.	
19.01 Text Types and Purposes		
19.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
19.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
19.02 Production and Distribution of Writing		
19.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
19.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
19.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	

Florida Standards		Correlation to CTE Program Standard #
		LAFS.1112.WHST.2.6
19.03	Research to Build and Present Knowledge	
19.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	LAFS.1112.WHST.3.7
19.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.	LAFS.1112.WHST.3.8
19.03.3	Draw evidence from informational texts to support analysis, reflection, and research.	LAFS.1112.WHST.3.9
19.04	Range of Writing	
19.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	LAFS.1112.WHST.4.10
20.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Commercial Art Technology.	
20.01	Make sense of problems and persevere in solving them.	MAFS.K12.MP.1.1
20.02	Reason abstractly and quantitatively.	MAFS.K12.MP.2.1
20.03	Construct viable arguments and critique the reasoning of others.	MAFS.K12.MP.3.1
20.04	Model with mathematics.	MAFS.K12.MP.4.1
20.05	Use appropriate tools strategically.	MAFS.K12.MP.5.1
20.06	Attend to precision.	MAFS.K12.MP.6.1
20.07	Look for and make use of structure.	MAFS.K12.MP.7.1
20.08	Look for and express regularity in repeated reasoning.	



Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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 graphic art computer skills--The student will be able to:		
13.01 Demonstrate graphic art computer skills using appropriate graphic art programs and hardware.		
13.02 Use software and hardware to manipulate and adjust various drawings, pictures and graphic material by computer.		
13.03 Produce finished computer projects reflecting current computer graphic art technology.		
13.04 Operate various scanners and input devices for computer graphics.		
21.0 Demonstrate employability skills--The student will be able to:		
21.01 Conduct a job search.		
21.02 Secure information about a job.		
21.03 Identify documents, which may be required when applying for a job.		
21.04 Complete a job application form correctly.		
21.05 Demonstrate competence in job interview techniques.		
21.06 Identify or demonstrate appropriate responses to criticism from employer, supervisor or other employees.		
21.07 Identify and adopt acceptable work habits.		
21.08 Demonstrate knowledge of how to make job changes appropriately.		
21.09 Demonstrate acceptable employee health habits.		
21.10 Demonstrate knowledge of the "Right-To-Know Law".		

**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 design skills and typography.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
18.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Commercial Art Technology.	
18.01	Key Ideas and Details	
18.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.  LAFS.1112.RST.1.1	
18.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.1112.RST.1.2	
18.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.1112.RST.1.3	
18.02	Craft and Structure	
18.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.  LAFS.1112.RST.2.4	
18.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.  LAFS.1112.RST.2.5	
18.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.  LAFS.1112.RST.2.6	
18.03	Integration of Knowledge and Ideas	

Florida Standards		Correlation to CTE Program Standard #
18.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
18.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
18.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
18.04 Range of Reading and Level of Text Complexity		
18.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
18.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
19.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Commercial Art Technology.	
19.01 Text Types and Purposes		
19.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
19.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
19.02 Production and Distribution of Writing		
19.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
19.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
19.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	

Florida Standards		Correlation to CTE Program Standard #
		LAFS.1112.WHST.2.6
19.03	Research to Build and Present Knowledge	
19.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	LAFS.1112.WHST.3.7
19.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.	LAFS.1112.WHST.3.8
19.03.3	Draw evidence from informational texts to support analysis, reflection, and research.	LAFS.1112.WHST.3.9
19.04	Range of Writing	
19.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	LAFS.1112.WHST.4.10
20.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Commercial Art Technology.	
20.01	Make sense of problems and persevere in solving them.	MAFS.K12.MP.1.1
20.02	Reason abstractly and quantitatively.	MAFS.K12.MP.2.1
20.03	Construct viable arguments and critique the reasoning of others.	MAFS.K12.MP.3.1
20.04	Model with mathematics.	MAFS.K12.MP.4.1
20.05	Use appropriate tools strategically.	MAFS.K12.MP.5.1
20.06	Attend to precision.	MAFS.K12.MP.6.1
20.07	Look for and make use of structure.	MAFS.K12.MP.7.1
20.08	Look for and express regularity in repeated reasoning.	

**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 design skills--The student will be able to:		
07.01 Explain proper use and care of tools.		
07.02 Apply principles and elements of design.		
07.03 Apply color theory (pigment versus light).		
07.04 Utilize tones, hues and values.		
07.05 Sketch designs using pencil and ink.		
07.06 Paint freehand or within sketched designs using mixed colors or apply colors to produce desired shades.		
07.07 Apply color for impact (color psychology).		
07.08 Differentiate between line halftone, duotone and four-color process.		
07.09 Demonstrate balance in design.		
07.10 Demonstrate designs with symmetry and asymmetry.		
07.11 Develop grids for layouts of magazine pages, ads, etc.		
07.12 Paint decorative freehand designs and objects.		
07.13 Use palette knife or brush to mix colors.		
07.14 Create designs by stripping.		
07.15 Demonstrate harmony and contrast of line and shape.		
07.16 Demonstrate harmony and contrast of color and tone.		
07.17 Demonstrate harmony and contrast of proportion.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
07.18 Demonstrate harmony and contrast of texture pattern.		
07.19 Demonstrate harmony and contrast of motion.		
07.20 Indicate style appropriate to desired impact.		
07.21 Make a collage.		
09.0 Demonstrate an understanding of typography--The student will be able to:		
09.01 Explain proper use, care and cleaning of equipment.		
09.02 Identify and select typography materials.		
09.03 Define typographic terms, including leading and kerning.		
09.04 Identify and select typographic methods.		
09.05 Demonstrate the ability to proofread and use proofreaders' marks.		
09.06 Explain picas, points and conversion to inches.		
09.07 Explain specification of type and copy fitting.		
09.08 Identify and select typographic styles.		
09.09 Define basic letter structures.		
09.10 Demonstrate mixing of families of type.		

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 layout, paste-up and 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
10.0 Demonstrate proficiency in layout and paste-up--The student will be able to:		
10.01 Explain proper use and care of tools.		
10.02 Identify parts of a layout.		
10.03 Utilize Amberlith, Rubylith, screens, overlays and register marks.		
10.04 Make thumbnail sketch pencil layouts.		
10.05 Prepare comprehensives from pencil layouts.		
10.06 Prepare camera-ready mechanicals from comprehensives.		
10.07 Prepare specific forms of instruction on mechanicals for presentations and for a printer.		
10.08 Crop and scale artwork and/or photos for layouts.		
10.09 Demonstrate enlarging or reducing with a grid, proportion wheel and other methods.		
10.10 Make a color separation with overlays.		
10.11 Demonstrate various ruling techniques.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
10.12 Demonstrate the uses of different adhesives.		
10.13 Specify the use of halftones or special effects.		
10.14 Explain layout and color trends.		
12.0 Demonstrate proficiency in applied design--The student will be able to:		
12.01 Locate and identify resource materials and develop a morgue.		
12.02 Design logos.		
12.03 Design stationery layouts.		
12.04 Design a magazine/book cover or record jacket.		
12.05 Design an ad campaign that includes newspapers, magazines and billboards.		
12.06 Design a greeting card.		
12.07 Design a business card.		
12.08 Apply advertising psychology.		
12.09 Produce an industrial brochure.		
12.10 Design a consumer brochure.		
12.11 Construct a package design.		
12.12 Produce TV story boards.		
12.13 Develop a square and half-drop repeat design.		
12.14 Produce computer-assisted artwork. (optional)		



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 computer skills and application.

**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 graphic art computer skills--The student will be able to:		
13.01 Demonstrate graphic art computer skills using appropriate graphic art programs and hardware.		
13.02 Use software and hardware to manipulate and adjust various drawings, pictures and graphic material by computer.		
13.03 Produce finished computer projects reflecting current computer graphic art technology.		
13.04 Operate various scanners and input devices for computer graphics.		

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 technical art skills and proficiency in illustration 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 technical art skills--The student will be able to:		
06.01 Explain care and respect for all tools and equipment.		
06.02 Make computations for centering, spacing and scaling drawings.		
06.03 Draw on various types of drafting media.		
06.04 Interpret information from drawings, prints and sketches.		
06.05 Draw freehand sketches.		
06.06 Draw auxiliary views.		
06.07 Draw a one and two point perspective.		
06.08 Make corrections on a drawing.		
06.09 Draw in ink on a variety of surfaces.		
06.10 Develop a glossary of technical terms.		
11.0 Demonstrate proficiency in illustration skills--The student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
11.01 Explain proper use and care of tools.		
11.02 Demonstrate elementary anatomy drawing skills.		
11.03 Illustrate using ink, pencil, washes, markers, tempera, watercolor and paints.		
11.04 Demonstrate renderings of different textures using the above media.		
11.05 Make illustrations using various subjects.		
11.06 Make a montage illustration.		
11.07 Draw a cartoon.		

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
13.0	Demonstrate proficiency in graphic art computer skills--The student will be able to:		
13.01	Demonstrate graphic art computer skills using appropriate graphic art programs and hardware.		
13.02	Use software and hardware to manipulate and adjust various drawings, pictures and graphic material by computer.		
13.03	Produce finished computer projects reflecting current computer graphic art technology.		
13.04	Operate various scanners and input devices for computer graphics.		
14.0	Demonstrate proficiency in airbrush skills--The student will be able to:		
14.01	Explain proper use and care of tools.		
14.02	Identify airbrush parts.		
14.03	Perform airbrush exercises: dots, lines and graded shadings.		
14.04	Select appropriate surfaces and painting materials.		
14.05	Define the use of masking materials.		
14.06	Airbrush a painting using masks or brushes.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
14.07 Airbrush geometric shapes.		
14.08 Airbrush freehand painting.		
14.09 Airbrush an illustration of a product.		
14.10 Retouch photos.		

**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 technical art skills for the print media artist.

**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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
06.0 Demonstrate proficiency in technical art skills--The student will be able to:		
06.01 Analyze an object to determine size and shape.		
06.02 Draw an oblique drawing.		
06.03 Draw an isometric drawing.		
06.04 Read and interpret technical charts, graphs and diagrams.		
06.05 Evaluate a drawing.		
06.06 Make an orthographic drawing using a Computer-Assisted Drafting (CAD) system as an individual or team member.		
06.07 Make a print on a plotter.		
08.0 Demonstrate proficiency in lettering skills--The student will be able to:		
08.01 Demonstrate use and care of tools, lettering pens, T-squares and triangles.		
08.02 Identify and select lettering styles.		
08.03 Perform and use pen, brush, pencil and Leroy lettering.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.04 Utilize guidelines, margins and spacing for layouts.		
08.05 Paint or draw precise lettering for reproduction.		
08.06 Utilize various types of prepared lettering processes.		
08.07 Produce a sign on poster board.		
08.08 Determine and select lettering styles for layout sketches.		
08.09 Illuminate a certificate.		

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 computer skills and application for the print media artist and an overview of free enterprise.

**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 graphic art computer skills--The student will be able to:		
13.01	Demonstrate graphic art computer skills using appropriate graphic art programs and hardware.		
13.02	Use software and hardware to manipulate and adjust various drawings, pictures and graphic material by computer.		
13.03	Produce finished computer projects reflecting current computer graphic art technology.		
13.04	Operate various scanners and input devices for computer graphics.		
22.0	Demonstrate an understanding of entrepreneurship--The student will be able to:		
22.01	Define entrepreneurship.		
22.02	Describe the importance of entrepreneurship to the American economy.		
22.03	List the advantages and disadvantages of business ownership.		
22.04	Identify the risks involved in ownership of a business.		
22.05	Identify the necessary personal characteristics of a successful entrepreneur.		
22.06	Identify the business skills needed to operate a small business efficiently and effectively.		



## **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.

### **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.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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, 30, 31
Standard Length	7 credits
Teacher Certification	BUS ED 1 @ 2 COMPU SCI 6 COMM ART @7 7G TV PRO TEC @7 7G TEC ELEC \$7 G ELECT DP @7 %G
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1014 - Multimedia Artists and Animators
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for employment in 3-D animation.

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 practical experiences in 3-D Animation design and production. Specialized skills including video editing, audio features, and 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.

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A	8718110	3-D Animation Technology 1	1 credit	27-1014	2	PA
B	8718120	3-D Animation Technology 2	1 credit	27-1014	2	PA
	8718130	3-D Animation Technology 3	1 credit		2	PA
C	8718140	3-D Animation Technology 4	1 credit	27-1014	2	PA
	8718150	3-D Animation Technology 5	1 credit		2	PA
D	8718160	3-D Animation Technology 6	1 credit	27-1014	2	PA
	8718170	3-D Animation Technology 7	1 credit		2	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics, VO= Career and Technical Education)

## 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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in 3-D Animation Technology.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in 3-D Animation Technology.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in 3-D Animation Technology.
- 04.0 Understand the history of 3D Animation.
- 05.0 Understand the production process.
- 06.0 Understand intellectual property rights, copyright laws and plagiarism as it applies to creative assets.
- 07.0 Demonstrate proficiency in computer skills.
- 08.0 Demonstrate knowledge of photo editing software.
- 09.0 Demonstrate a knowledge of production writing as it relates to 3D animation.
- 10.0 Demonstrate knowledge of art direction.
- 11.0 Demonstrate knowledge of character development.
- 12.0 Demonstrate knowledge of storyboarding.
- 13.0 Demonstrate knowledge of animatics.
- 14.0 Demonstrate knowledge of video editing software.
- 15.0 Demonstrate appropriate voice acting skills.
- 16.0 Demonstrate basic audio production.
- 17.0 Demonstrate knowledge of audio editing software.
- 18.0 Demonstrate knowledge of funding presentations and pitches.
- 19.0 Understand modeling in relation to the production process.
- 20.0 Demonstrate knowledge of animation principles as it relates to modeling.
- 21.0 Demonstrate knowledge of modeling principles.
- 22.0 Demonstrate knowledge of 3D Animation software.
- 23.0 Demonstrate knowledge of 3D Animation software navigation.
- 24.0 Demonstrate knowledge of NURBS modeling.
- 25.0 Demonstrate knowledge of polygon modeling.
- 26.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in 3-D Animation Technology.
- 27.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in 3-D Animation Technology.
- 28.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in 3-D Animation Technology.
- 29.0 Demonstrate knowledge of basic lighting.
- 30.0 Demonstrate knowledge of basic materials and textures.
- 31.0 Demonstrate knowledge of basic animation.
- 32.0 Demonstrate knowledge of basic character setup.

- 33.0 Demonstrate knowledge of basic 3D rendering.
- 34.0 Understand the role of texture artist in relation to the production process.
- 35.0 Demonstrate knowledge color theory.
- 36.0 Demonstrate knowledge of advanced material and texture creation.
- 37.0 Demonstrate knowledge of cloth and hair.
- 38.0 Demonstrate knowledge of cell-shading.
- 39.0 Demonstrate knowledge of texture baking.
- 40.0 Demonstrate knowledge of texture maps.
- 41.0 Demonstrate knowledge of 3D paint.
- 42.0 Demonstrate knowledge of rigging.
- 43.0 Demonstrate knowledge of morphing.
- 44.0 Demonstrate knowledge of facial animation.
- 45.0 Demonstrate knowledge of advanced rigging.
- 46.0 Demonstrate knowledge of motion capture systems.
- 47.0 Demonstrate knowledge of motion capture system setup.
- 48.0 Demonstrate knowledge of motion capture preproduction.
- 49.0 Demonstrate knowledge of motion capture production.
- 50.0 Demonstrate knowledge of motion capture post production.
- 51.0 Understand the role of a 3D Animator in relation to the production process.
- 52.0 Demonstrate knowledge of advanced animation.
- 53.0 Demonstrate knowledge of motion graphics.
- 54.0 Demonstrate knowledge animation behaviors and scripting.
- 55.0 Demonstrate knowledge of particle systems.
- 56.0 Demonstrate knowledge of advanced audio production.
- 57.0 Demonstrate knowledge of dynamics (physics).
- 58.0 Demonstrate knowledge of distributed rendering.
- 59.0 Demonstrate knowledge of video compositing software.
- 60.0 Demonstrate knowledge of post-production.
- 61.0 Develop 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, production process, intellectual property rights, computer skills and animation development.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in 3-D Animation Technology.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.  LAFS.910.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in 3-D Animation Technology.	
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly	

Florida Standards		Correlation to CTE Program Standard #
	and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in 3-D Animation Technology.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure. MAFS.K12.MP.7.1	
03.08	Look for and express regularity in repeated reasoning.	

Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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
04.0 Understand the history of 3D Animation--The student will be able to:		
04.01 Understand the history of animation (2D, cell, stop motion).		
04.02 Understand the history of computer animation.		
04.03 Identify the advantages and limitations of computer animation.		
04.04 Identify industry and business use of 3D animation.		
04.05 Identify 3D assets and associated end products.		
05.0 Understand the production process--The student will be able to:		
05.01 Identify the job titles associated with animation production.		
05.02 Identify various tools and equipment used to produce 3D animation.		
05.03 Understand speed and efficiency concepts		
05.04 Understand a production pipeline.		
05.05 Identify the departments of an animation studio.		
05.06 Understand the interrelationships between departments.		
05.07 Understand basic communication concepts (verbal, memos, paperwork).		
05.08 Identify the stages of production.		
05.09 Understand studio terms and jargon.		
05.10 Create and organize production paperwork into production bibles or prepare for presentations.		
06.0 Understand intellectual property rights, copyright laws and plagiarism as it applies to creative assets--The student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
06.01 Understand the limits and expectations of copyright protection.		
06.02 Understand the use of "Fair use and Fair Dealing".		
06.03 Understand the transfer and licensing of creative works.		
06.04 Understand the use of "exclusive rights" to intellectual creations.		
06.05 Demonstrate the use of digital watermarking.		
07.0 Demonstrate proficiency in computer skills--The student will be able to:		SC.912.P.10.15; SC.912.P.10.18
07.01 Identify all computer parts.		
07.02 Demonstrate understanding of computer performance specifications.		
07.03 Compare and contrast difference between business machines and workstations.		
07.04 Demonstrate best practices of computer safety and ergonomics.		
07.05 Demonstrate understanding of operating systems.		
07.06 Perform software installation and setup.		
07.07 Perform peripheral device installation and setup.		
07.08 Perform computer upgrades. (memory/hard disk/cards)		
07.09 Perform storage management operations (project/file).		
07.10 Demonstrate knowledge of computer maintenance.		
07.11 Demonstrate ability to troubleshoot computer hardware and software issues.		
08.0 Demonstrate knowledge of photo editing software--The student will be able to:		
08.01 Demonstrate understanding file formats and storage options.		
08.02 Identify parts of the software interface. (menus/palettes)		
08.03 Demonstrate ability to use each of the basic tool sets.		
08.04 Demonstrate ability to import, export and save images.		
08.05 Demonstrate understanding of layers and channels.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.06 Demonstrate understanding of filters, effects and plug-ins.		
08.07 Demonstrate understanding of file presets.		
08.08 Demonstrate ability to select portions of an image for manipulation.		
08.09 Demonstrate ability to transforms selections and images. (crop, scale)		
08.10 Demonstrate ability to color correct images (brightness, hue, contrast)		
08.11 Demonstrate ability to use brushes for image creation and correction.		
08.12 Understand non-destructive and destructive operations.		
08.13 Demonstrate the ability to import, paint and export 3D objects		
08.14 Demonstrate the basic use of video in Photoshop		
09.0 Demonstrate a knowledge of production writing as it relates to 3D animation--The student will be able to:		
09.01 Understand the job of a scriptwriter.		
09.02 Identify target audiences, markets, and demographics.		
09.03 Identify the elements of a script.		
09.04 Develop the intended message of a script.		
09.05 Demonstrate ability to write a treatment.		
09.06 Demonstrate ability to write a professionally formatted script.		
09.07 Identify the genre of a story.		
09.08 Define characters and setting for a story.		
09.09 Demonstrate ability to breakdown a script into production elements (cast, props).		
10.0 Demonstrate knowledge of art direction--The student will be able to:		
10.01 Develop the overall visual appearance of an animation.		
10.02 Demonstrate the ability to create moods with style.		
10.03 Determine the geographic location and time period of the story.		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
10.04	Understand the importance of art direction as it pertains to the message.		
10.05	Understand the use of color in art direction.		
10.06	Document the technical aspects of the art direction for use in production.		
10.07	Perform the various assignments in a professional manner according to industry standards.		
11.0	Demonstrate knowledge of character development--The student will be able to:		
11.01	Demonstrate and understanding of character profiles.		
11.02	Demonstrate the ability to develop character resumes/profiles.		
11.03	Develop a look and design of a character that reflects the art direction.		
11.04	Understand the technical challenges/limitations of a character.		
12.0	Demonstrate knowledge of storyboarding--The student will be able to:		
12.01	Demonstrate understanding of visual storytelling and how storyboards are used during production.		
12.02	Identify common aspect ratios and how to calculate ratios.		
12.03	Demonstrate understanding of camera framing and camera movement.		
12.04	Develop a visual style using the art direction.		
12.05	Break down a script into the various camera shots and character action.		
12.06	Demonstrate understanding of perspective and depth of field.		
12.07	Demonstrate knowledge of lighting and color use.		
12.08	Demonstrate ability to sketch a storyboard including characters.		
12.09	Demonstrate ability to use storyboarding software or illustration software.		
13.0	Demonstrate knowledge of animatics--The student will be able to:		
13.01	Demonstrate understanding of animatics and how they are used during production.		
13.02	Identify the different types of animatics.		
13.03	Demonstrate understanding of shot timing.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
13.04 Break down a script into the various camera shots and character action.		
13.05 Understand the concept of a working print.		
14.0 Demonstrate knowledge of video editing software--The student will be able to:		
14.01 Demonstrate understanding file formats and storage options.		
14.02 Identify parts of the software interface. (menus/palettes)		
14.03 Demonstrate ability to use each of the basic tool sets.		
14.04 Demonstrate ability to import, export and save video.		
14.05 Demonstrate understanding of layers and compositing.		
14.06 Demonstrate understanding of filters, effects and plug-ins.		
14.07 Demonstrate understanding of file presets.		
14.08 Demonstrate understanding of rendering process.		
14.09 Demonstrate ability to transform video (crop, scale).		
14.10 Demonstrate ability to color correct images (brightness, hue, contrast)		
14.11 Demonstrate ability to use brushes for image creation and correction.		
14.12 Understand non-destructive and destructive operations.		
14.13 Demonstrate the compositing integration of rendered 3D animation with video.		
15.0 Demonstrate appropriate voice acting skills--The student will be able to:		
15.01 Demonstrate an understanding of how to mark a script for voice over.		
15.02 Demonstrate the ability to read aloud in a professional manner.		
15.03 Demonstrate the ability to receive and properly act upon direction.		
15.04 Demonstrate an understanding of the use of phonemes and facial morphs for lip-sync animation.		
15.05 Understand the concept of voice acting and playing a role while speaking.		
15.06 Perform the various assignments in a professional manner according to industry standards.		



<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
16.0	Demonstrate basic audio production--The student will be able to:		
16.01	Demonstrate to set up a recording environment.		
16.02	Demonstrate understanding of digital audio recording hardware.		
16.03	Demonstrate understanding of the proper use of microphones.		
16.04	Demonstrate knowledge of audio codecs and media.		
16.05	Understand the history of Foley and sound effects production.		
16.06	Demonstrate the ability to record location sounds.		
17.0	Demonstrate knowledge of audio editing software--The student will be able to:		
17.01	Demonstrate understanding file formats and storage options.		
17.02	Identify parts of the software interface. (menus/palettes)		
17.03	Demonstrate ability to use each of the basic tool sets.		
17.04	Demonstrate ability to import, export and save audio.		
17.05	Demonstrate understanding of multiple tracks.		
17.06	Demonstrate understanding of filters, effects and plug-ins.		
17.07	Demonstrate understanding of file presets.		
17.08	Demonstrate understanding of audio rendering process.		
17.09	Demonstrate ability to edit, cut, and delete.		
17.10	Understand non-destructive and destructive operations.		
18.0	Demonstrate knowledge of funding presentations and pitches--The student will be able to:		
18.01	Understand the ecosystem associated with product distribution.		
18.02	Identify the job titles and roles of the distributors.		
18.03	Identify potential markets, target audiences, and products.		
18.04	Develop the materials needed to effectively convey the message.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
18.05 Develop a script of talking points.		
18.06 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 animation modeling.

Florida Standards	Correlation to CTE Program Standard #
01.0 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in 3-D Animation Technology.	
01.01 Key Ideas and Details	
01.01.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. LAFS.910.RST.1.1	
01.01.2 Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.910.RST.1.2	
01.01.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.910.RST.1.3	
01.02 Craft and Structure	
01.02.1 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics. LAFS.910.RST.2.4	
01.02.2 Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy). LAFS.910.RST.2.5	
01.02.3 Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address. LAFS.910.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in 3-D Animation Technology.	
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly	

Florida Standards		Correlation to CTE Program Standard #
	and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in 3-D Animation Technology.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure. MAFS.K12.MP.7.1	
03.08	Look for and express regularity in repeated reasoning.	

Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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
19.0 Understand modeling in relation to the production process--The student will be able to:		
19.01 Define modeling as a process.		
19.02 Define the role of modeler.		
19.03 Identify job titles associated with modeler.		
19.04 Identify modeling in the production pipeline.		
20.0 Demonstrate knowledge of animation principles as it relates to modeling--The student will be able to:		
20.01 Demonstrate an understanding of the principle - squash and stretch.		
20.02 Demonstrate an understanding of the principle - anticipation.		
20.03 Demonstrate an understanding of the principle - staging.		
20.04 Demonstrate an understanding of the principle - straight ahead action and pose to pose.		
20.05 Demonstrate an understanding of the principle - follow through and overlapping action.		
20.06 Demonstrate an understanding of the principle - slow in and slow out.		
20.07 Demonstrate an understanding of the principle - arcs.		
20.08 Demonstrate an understanding of the principle - secondary action.		
20.09 Demonstrate an understanding of the principle - timing.		
20.10 Demonstrate an understanding of the principle - exaggeration.		
20.11 Demonstrate an understanding of the principle - solid drawing.		
20.12 Demonstrate an understanding of the principle - appeal.		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
21.0	Demonstrate knowledge of modeling principles--The student will be able to:		
21.01	Understand 3D construction theory.		
21.02	Demonstrate understanding of primitives, parametric modeling.		
21.03	Demonstrate an understanding of NURBS, splines, and polygonal modeling.		
21.04	Demonstrate ability to use reference images and files while modeling.		
22.0	Demonstrate knowledge of 3D Animation Software--The student will be able to:		
22.01	Identify the computer requirements for 3D animation software.		
22.02	Compare and contrast available 3D animation software.		
22.03	Identify available file formats and protocols.		
22.04	Demonstrate an understanding of naming conventions.		
22.05	Develop software and file backup plan.		
22.06	Identify common icons within the software.		
22.07	Demonstrate use of keyboard shortcuts.		
22.08	Understand the use of a three-button mouse.		
23.0	Demonstrate knowledge of 3D Animation software navigation--The student will be able to:		
23.01	Identify the main windows of a 3D program.		
23.02	Identify common window layouts.		
23.03	Identify tool icons within the software.		
23.04	Understand the significance of keyboard shortcut use and efficiency.		
23.05	Demonstrate use of keyboard shortcuts.		
23.06	Demonstrate an understanding of the Euclidean Geometry Model (x-y-z- coordinate system).		
23.07	Demonstrate an understanding of attribute managers.		
23.08	Demonstrate an understanding of layers.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
23.09 Navigate the modeling window using pan, rotate, and zoom controls.		
23.10 Demonstrate knowledge of selection tools (lasso, loop).		
23.11 View objects in wireframe, gourard shading, lines, boxes modes.		
23.12 Demonstrate use of selection sets.		
23.13 Undo and redo an action within the program.		
23.14 Locate the help menu system.		
<b>24.0 Demonstrate knowledge of NURBS modeling--The student will be able to:</b>		
24.01 Demonstrate an understanding of points, vertices, edges, and polygons.		
24.02 Demonstrate an understanding of poly-count.		
24.03 Demonstrate an understanding of primitives.		
24.04 Define parametric primitives.		
24.05 Locate an object's properties, attributes, and coordinates.		
24.06 Demonstrate understanding of Non uniform rational b-splines (NURBS).		
24.07 Demonstrate understanding of splines and generators (extrude, lathe, sweep).		
24.08 Understand the use of hierarchy.		
24.09 Demonstrate an understanding of Boolean objects.		
24.10 Demonstrate an understanding of Null objects.		
24.11 Demonstrate an understanding of scene management (hiding and un-hiding).		
24.12 Demonstrate an understanding of arrays.		
<b>25.0 Demonstrate knowledge of polygon modeling--The student will be able to:</b>		
25.01 Demonstrate an understanding of N-gons.		
25.02 Demonstrate an understanding of subdivision.		
25.03 Demonstrate basic polygon editing and manipulation.		



CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
25.04 Demonstrate knowledge of point management (location).		
25.05 Demonstrate the ability to create polygonal models from points.		
25.06 Demonstrate an understanding of cutting/division tools.		
25.07 Demonstrate an understanding of extrudes.		
25.08 Demonstrate an understanding of symmetry.		
25.09 Demonstrate an understanding of hyper NURBS.		
25.10 Demonstrate an understanding of basic deformers (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:

This course focuses on rendering 3-D animation.

Florida Standards		Correlation to CTE Program Standard #
26.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in 3-D Animation Technology.	
26.01	Key Ideas and Details	
26.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
26.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
26.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
26.02	Craft and Structure	
26.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
26.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
26.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. LAFS.1112.RST.2.6	
26.03	Integration of Knowledge and Ideas	

Florida Standards		Correlation to CTE Program Standard #
26.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
26.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
26.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
26.04 Range of Reading and Level of Text Complexity		
26.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
26.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
27.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in 3-D Animation Technology.	
27.01 Text Types and Purposes		
27.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
27.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
27.02 Production and Distribution of Writing		
27.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
27.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
27.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	

Florida Standards		Correlation to CTE Program Standard #
		LAFS.1112.WHST.2.6
27.03	Research to Build and Present Knowledge	
27.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	LAFS.1112.WHST.3.7
27.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.	LAFS.1112.WHST.3.8
27.03.3	Draw evidence from informational texts to support analysis, reflection, and research.	LAFS.1112.WHST.3.9
27.04	Range of Writing	
27.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	LAFS.1112.WHST.4.10
28.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in 3-D Animation Technology.	
28.01	Make sense of problems and persevere in solving them.	MAFS.K12.MP.1.1
28.02	Reason abstractly and quantitatively.	MAFS.K12.MP.2.1
28.03	Construct viable arguments and critique the reasoning of others.	MAFS.K12.MP.3.1
28.04	Model with mathematics.	MAFS.K12.MP.4.1
28.05	Use appropriate tools strategically.	MAFS.K12.MP.5.1
28.06	Attend to precision.	MAFS.K12.MP.6.1
28.07	Look for and make use of structure.	MAFS.K12.MP.7.1
28.08	Look for and express regularity in repeated reasoning.	

Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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
29.0 Demonstrate knowledge of basic lighting--The student will be able to:		SC.912.P.10.18; SC.912.P.10.20
29.01 Compare and contrast real lighting with 3D lighting.		
29.02 Demonstrate an understanding 3 point lighting (key, fill, back).		
29.03 Demonstrate an understanding of low key and high key lighting.		
29.04 Use 'include/exclude' commands to target light on objects.		
29.05 Demonstrate use of negative intensity.		
29.06 Demonstrate an understanding of the hierarchy of lights.		
29.07 Demonstrate an understanding of area lights.		
29.08 Demonstrate an understanding of volumetric lights.		
29.09 Demonstrate an understanding of radiosity/global illumination.		
29.10 Demonstrate an understanding of ambient occlusion.		
29.11 Demonstrate an understanding of HDR lighting.		
29.12 Demonstrate an understanding of how light settings will effect render times.		
30.0 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
30.01 Demonstrate an understanding of material and texture storage.		
30.02 Apply textures to an object.		
30.03 Demonstrate an understanding of procedural shaders.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
30.04 Demonstrate an understanding of channels.		
30.05 Adjust the transparency, luminance, and reflection of a material.		
30.06 Demonstrate an understanding of displacement maps.		
30.07 Demonstrate an understanding of bump maps.		
30.08 Demonstrate knowledge of material projections.		
30.09 Demonstrate an understanding of UV mapping.		
30.10 Demonstrate an understanding of 3D painting.		
30.11 Understand how light affects the look of materials.		
30.12 Understand how camera angles can affect the look of materials.		
31.0 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
31.01 Apply animation principles to object animation.		
31.02 Demonstrate an understanding of animation timelines.		
31.03 Demonstrate an understanding of key framing.		
31.04 Demonstrate an understanding of F-curves.		
31.05 Record and edit key frames.		
31.06 Demonstrate an understanding in the use of controllers.		
31.07 Demonstrate an understanding of ease in, ease out.		
31.08 Demonstrate an understanding of camera animation.		
31.09 Render low quality reference animation.		
32.0 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
32.01 Compare and contrast rigging approaches and styles.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
32.02 Demonstrate an understanding of the rig as it relates to the model.		
32.03 Demonstrate an understanding of mesh morphing (targets, driver, driven).		
32.04 Demonstrate an understanding of skeletal systems.		
32.05 Demonstrate an understanding of bones or joints.		
32.06 Demonstrate an understanding of bone/joint hierarchies and naming conventions.		
32.07 Demonstrate an understanding of controllers.		
32.08 Demonstrate an understanding of IK (Inverse Kinetics) splines.		
32.09 Demonstrate an understanding of IK (Inverse Kinetics) chains.		
32.10 Demonstrate an understanding of skins and weights.		
32.11 Demonstrate ability to create a visual selector for the rig.		
33.0 Demonstrate knowledge of basic 3D rendering–The student will be able to:		SC.912.P.10.18; SC.912.P.10.20
33.01 Demonstrate an understanding of processor, hardware and software rendering techniques.		
33.02 Determine the final render format (size, codec, quality).		
33.03 Demonstrate an understanding of basic render settings.		
33.04 Demonstrate an understanding of title safe, action safe, render safe.		
33.05 Select the range of frames to be rendered.		
33.06 Demonstrate an understanding of global illumination (radiosity) render settings.		
33.07 Demonstrate an understanding of anti-aliasing.		
33.08 Demonstrate an understanding of net rendering.		
33.09 Demonstrate an understanding of alpha channels.		
33.10 Render animation as a movie or image sequence.		
33.11 Compile image sequence into a movie.		
33.12 Demonstrate an understanding of benefits, purpose and workflow of multi-pass rendering.		

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
33.13 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:

This course focuses on advanced animation and theory.

Florida Standards	Correlation to CTE Program Standard #
26.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in 3-D Animation Technology.	
26.01 Key Ideas and Details	
26.01.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
26.01.2 Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
26.01.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
26.02 Craft and Structure	
26.02.1 Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
26.02.2 Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
26.02.3 Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. LAFS.1112.RST.2.6	
26.03 Integration of Knowledge and Ideas	

Florida Standards		Correlation to CTE Program Standard #
26.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
26.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
26.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
26.04 Range of Reading and Level of Text Complexity		
26.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
26.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
27.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in 3-D Animation Technology.	
27.01 Text Types and Purposes		
27.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
27.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
27.02 Production and Distribution of Writing		
27.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
27.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
27.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	

Florida Standards		Correlation to CTE Program Standard #
		LAFS.1112.WHST.2.6
27.03	Research to Build and Present Knowledge	
27.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	LAFS.1112.WHST.3.7
27.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.	LAFS.1112.WHST.3.8
27.03.3	Draw evidence from informational texts to support analysis, reflection, and research.	LAFS.1112.WHST.3.9
27.04	Range of Writing	
27.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	LAFS.1112.WHST.4.10
28.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in 3-D Animation Technology.	
28.01	Make sense of problems and persevere in solving them.	MAFS.K12.MP.1.1
28.02	Reason abstractly and quantitatively.	MAFS.K12.MP.2.1
28.03	Construct viable arguments and critique the reasoning of others.	MAFS.K12.MP.3.1
28.04	Model with mathematics.	MAFS.K12.MP.4.1
28.05	Use appropriate tools strategically.	MAFS.K12.MP.5.1
28.06	Attend to precision.	MAFS.K12.MP.6.1
28.07	Look for and make use of structure.	MAFS.K12.MP.7.1
28.08	Look for and express regularity in repeated reasoning.	

**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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
34.0	Understand the role of 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
34.01	Define texturing as a process.		
34.02	Define the role of texture artist.		
34.03	Identify job titles associated with texture artist.		
34.04	Identify texture creation in the production pipeline.		
34.05	Demonstrate knowledge of the difference between textures and shaders.		
34.06	Demonstrate an understanding of texture projection methods.		
34.07	Demonstrate an understanding on UV coordinates and their application to texture mapping.		
34.08	Demonstrate an understanding of the round-trip integration of Photoshop and a 3D host for texture development.		
34.09	Demonstrate an understanding of how to link texture and shade properties to object movement via either visual or scripted programming relationships.		
35.0	Demonstrate knowledge color theory--The student will be able to:		SC.912.P.10.18; SC.912.P.10.20
35.01	Demonstrate an understanding of additive and subtractive color mixtures.		
35.02	Demonstrate an understanding of hue, saturation and brightness.		
35.03	Demonstrate an understanding of complimentary colors and composition.		
35.04	Identify warm and cool colors.		
35.05	Demonstrate an understanding of the psychology of color influence.		

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
36.0	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
36.01	Determine required materials and textures needed for a model based on production design sheets and reference images.		
36.02	Determine material and texture properties to be created.		
36.03	Determine appropriate style (realistic, hyper-real, simplified)		
36.04	Determine appropriate color pallets to be used based on art direction.		
36.05	Determine appropriate image resolution and file format for use in 3D application.		
36.06	Demonstrate knowledge of material and texture creation techniques and approaches.		
36.07	Define the tools and software used to create materials and textures.		
36.08	Acquire raw texture images from digital stills or scans.		
36.09	Create tiled textures using photo-editing software.		
36.10	Demonstrate a true working understanding of the correspondent relationship between UV polys and their related polygons.		
37.0	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
37.01	Determine cloth or hair requirements based on production design sheets and reference images.		
37.02	Define physical properties associated with cloth and hair.		
37.03	Demonstrate knowledge of hair and cloth toolsets.		
37.04	Determine appropriate materials to be use with the hair.		
37.05	Demonstrate knowledge of hair manipulation and management.		
37.06	Demonstrate knowledge of hair and cloth lighting techniques.		
37.07	Demonstrate knowledge of the dynamic simulation parameters required to make cloth and hair perform to production requirements.		
37.08	Demonstrate knowledge of how cloth and hair interact with other objects.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
38.0 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
38.01 Understand the history behind cell-shading.		
38.02 Determine the appropriate use of cell shading techniques.		
38.03 Determine cell-shading requirements needed for a model based on production design sheets and reference images.		
38.04 Demonstrate knowledge of lighting techniques used with cell-shading.		
38.05 Determine appropriate render settings for cell-shading.		
38.06 Determine appropriate materials and shaders to be used with cell-shading.		
39.0 Demonstrate knowledge of texture baking--The student will be able to:		
39.01 Describe the advantages of baking textures.		
39.02 Determine the appropriate use of baking textures.		
39.03 Demonstrate texture-baking procedures.		
39.04 Export models with baked textures.		
39.05 Determine appropriate render settings needed for baked textures.		
40.0 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
40.01 Define the properties of a displacement, bump, and normal maps.		
40.02 Determine the appropriate texture mapping requirements for a model based on production design sheets and reference images.		
40.03 Demonstrate knowledge of displacement map placement tools and techniques.		
40.04 Demonstrate knowledge of bump map tools and techniques.		
40.05 Demonstrate knowledge of normal map tools and techniques.		
41.0 Demonstrate knowledge of 3D paint--The student will be able to:		SC.912.P.10.18; SC.912.P.10.20; SC.912.N.3.5
41.01 Identify available 3D paint programs		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
41.02 Demonstrate knowledge of UV mapping tools.		
41.03 Demonstrate knowledge of UV unwrapping and organizational techniques.		
41.04 Prepare a UV map for export for use with photo editing software.		
41.05 Demonstrate knowledge of 3D painting tools within 3D software.		
41.06 Apply painted image map to 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
42.0 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
42.01 Define rigging as a process.		
42.02 Define the role of rigger.		
42.03 Identify job titles associated with a rigger.		
42.04 Identify rigging creation in the production pipeline.		
42.05 Demonstrate knowledge of forward kinematics vs. inverse kinematics		
42.06 Demonstrate an understanding of the joint weighting process		
42.07 Demonstrate the proper hierarchical structure of goals and nulls to construct effective control objects.		
43.0 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	NGSS-Sci
		SC.912.L.14.17; SC.912.L.14.19
43.01 Define morphing as it relates to animation.		
43.02 Demonstrate knowledge of morphing tools.		
43.03 Demonstrate knowledge of model meshes.		
43.04 Define the model area to be morphed.		
43.05 Create morph target points.		
43.06 Demonstrate knowledge of controllers and relational morphs (driver, driven)		
43.07 Demonstrate knowledge of rotational morphs.		
43.08 Demonstrate knowledge of key frame animation and morph tags.		
44.0 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
44.01 Demonstrate knowledge of facial modeling techniques in respect to animation.		
44.02 Demonstrate knowledge of phoneme-viseme principles for lip synchronization.		
44.03 Apply facial expression animation to complement lip synchronization.		
44.04 Break down a script into a sound chart.		
44.05 Create a set of controls for each sound and expression.		
45.0 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
45.01 Determine use for advanced rigging.		
45.02 Demonstrate knowledge of advanced rigging tools.		
45.03 Prepare rigged model for animation.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
45.04 Demonstrate knowledge of advanced scripting as it relates to rigging.		
45.05 Create complex rigs for greater precision and control.		
45.06 Demonstrate knowledge of deformers (muscle).		
45.07 Demonstrate knowledge of motion capture rigging.		
45.08 Determine necessary joint, bone hierarchy for motion capture rigging.		
45.09 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 and 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
46.0 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
46.01 Demonstrate knowledge of the history of motion capture.		
46.02 Demonstrate the awareness of emerging technologies in the industry.		
46.03 Demonstrate understanding of motion capture for 3D production.		
46.04 Define the role of a motion capture technician.		
46.05 Demonstrate understanding of optical, magnetic, and mechanical systems.		
46.06 Demonstrate understanding of software based or simulated motion capture systems.		
46.07 Demonstrate understanding of the motion capture production pipeline.		
47.0 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; SC.912.L.14.17;

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
		SC.912.L.14.19; SC.912.P.10.18; SC.912.P.10.20
47.01 Determine the capture volume based on available space and cameras.		
47.02 Demonstrate understanding of XYZ perimeters in lab orientation.		
47.03 Demonstrate ability to properly position and calibrate capture cameras or sensors.		
47.04 Demonstrate ability to safely connect camera/sensor cables to the capture computer station securing cables across walkways.		
47.05 Demonstrate understanding of motion capture computer hardware requirements and software security dongles.		
47.06 Determine hardware and software requirements for motion capture software; update computer operating system as needed and install or update motion capture software.		
47.07 Demonstrate understanding of motion capture specific tools and instruments.		
47.08 Demonstrate ability to create individual optical markers and arrays using optical tape and Velcro strapping.		
47.09 Connect and verify real-time motion capture performance software video systems.		
47.10 Verify capture area to be safe including but not limited to camera/sensor mounts, sand bags, tethers, securing cables, camera power connections and electrical power connections.		
47.11 Complete Mocap Facility Log indicating system user, inventory, previous session review, session time in/out, and any problems or damage parts.		
48.0 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
48.01 Identify the use of motion capture as it relates to a production plan.		
48.02 Mark script and shot list for motion capture.		
48.03 Understand the role of a motion capture talent/actor.		
48.04 Rehearse performance with talent to be captured.		
48.05 Identify necessary captured performance props.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
48.06 Determine real-time video needs.		
49.0 Demonstrate knowledge of motion capture production–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
49.01 Verify marker locations and connections to be used.		
49.02 Demonstrate ability to properly fit motion capture suit for talent/actor.		
49.03 Demonstrate ability to properly place markers on talent/actor/prop.		
49.04 Demonstrate understanding of static system calibration and markers.		
49.05 Demonstrate understanding of dynamic calibration or range of motion.		
49.06 Open, create, and adjust skeletal rig within motion capture software.		
49.07 Label markers for use in motion capture software.		
49.08 Demonstrate understanding of real-time live motion capture.		
49.09 Demonstrate use of naming conventions and file storage protocol as it relates to the motion capture pipeline.		
49.10 Record session, saving after each motion capture.		
50.0 Demonstrate knowledge of motion capture post production–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
50.01 Load session for post clean up.		
50.02 Identify gaps in data collected.		
50.03 Determine appropriate cleaning method, correct for physical discrepancies including but not limited to: occlusions, marker fall off, incorrect marker numbers.		
50.04 Prepare cleaned motion capture data for export.		
50.05 Import motion capture data into 3D animation or motion package.		

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
51.0 Understand the role of a 3D Animator in relation to the production process--The student will be able to:		
51.01 Define animation as a process.		
51.02 Define the role of an animator.		
51.03 Identify job titles associated with an animator.		
51.04 Identify animation in the production pipeline.		
52.0 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
52.01 Demonstrate knowledge of how nondestructive deformers affect animation.		
52.02 Demonstrate knowledge of how muscle deformers integrate with a character rig.		

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
52.03	Demonstrate knowledge of transform and animation transfers from one object (or object hierarchy) to another.		
53.0	Demonstrate knowledge of motion graphics--The student will be able to:		
53.01	Demonstrate knowledge of 3D animated motion graphics.		
53.02	Demonstrate knowledge of motion graphics tools and techniques.		
53.03	Demonstrate knowledge of integrated dynamics to simulate gravitational and collision effects.		
53.04	Demonstrate the integration of standard animation techniques to drive motion graphics elements abased on node-based visual programming.		
53.05	Demonstrate the applied working knowledge of motion graphics for broadcast application in TV show opens and commercials.		
54.0	Demonstrate knowledge animation behaviors and scripting--The student will be able to:		
54.01	Determine appropriate use of behaviors and automated animation.		
54.02	Demonstrate ability to apply behavior to an object.		
54.03	Demonstrate ability to apply multiple behaviors using node or visual system.		
54.04	Demonstrate ability to use object-oriented programming language to create scripts.		
54.05	Demonstrate understanding of scripting console and commands.		
55.0	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
55.01	Demonstrate understanding of particle emitters.		
55.02	Prepare objects to be emitted.		
55.03	Determine direction of emission and coordinate.		
55.04	Determine birthrate and lifetime.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
55.05 Determine scale, speed, and rotation.		
55.06 Demonstrate ability to use animated particles.		
55.07 Demonstrate ability to create smoke, fire, sparks using emitters and materials.		
55.08 Apply dynamics to an emitter including wind/gravity.		
55.09 Demonstrate use of keyframe animation or triggers.		
56.0 Demonstrate knowledge of advanced audio production--The student will be able to:		
56.01 Demonstrate ability to record final audio vocal tracks and sound effects.		
56.02 Edit and export sound effects for use in video editing software.		
56.03 Demonstrate the ability to place audio in 3D space using the 3D animation software.		
56.04 Demonstrate the ability to control motion graphics using audio file frequency and amplitude characteristics.		
57.0 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
57.01 Demonstrate a basic understanding physics principles (mass, velocity and collision).		
57.02 Determine when to use physics instead of key frame animation.		
57.03 Apply physics tools and commands to models in a simulation.		
57.04 Demonstrate an understanding of rigid and soft bodies.		
57.05 Demonstrate an understanding of forces (gravity, drag, wind).		
57.06 Demonstrate an understanding of collision detection.		
58.0 Demonstrate knowledge of distributed rendering–The student will be able to:		
58.01 Demonstrate understanding of network-based rendering.		



CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
58.02 Demonstrate understanding of computer networks and protocols (DHCP,TCP IP)		
58.03 Identify network server and data storage options.		
58.04 Identify minimum system requirements for client computer nodes.		
58.05 Install render software on server and client computers and verify connection to server using name conventions.		
58.06 Prepare 3D project for rendering and submit through web client to the server.		
58.07 Download completed render sequence from server.		
59.0 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; 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;
59.01 Demonstrate understanding file formats and storage options.		
59.02 Identify parts of the software interface. (menus/palettes)		
59.03 Demonstrate ability to use each of the basic tool sets.		
59.04 Demonstrate ability to import file and video to be composited.		
59.05 Demonstrate understanding of layers and compositing.		
59.06 Demonstrate understanding of filters, effects and plug-ins.		
59.07 Demonstrate understanding of motion paths.		
59.08 Demonstrate understanding of lighting effects.		
59.09 Demonstrate understanding of rendering process.		
59.10 Demonstrate ability to mask video.		
59.11 Demonstrate ability to color correct video (brightness, hue, contrast)		
59.12 Demonstrate ability to use vector and color keying tools.		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
59.13	Demonstrate understanding of particle systems.		
59.14	Demonstrate understanding of time correction.		
59.15	Demonstrate ability to export final video to be used with video editing software.		
59.16	Demonstrate ability to prepare the 3D scene for compositing using alpha channel setting in the 3D host as well as object buffers that will be assigned video sources in the compositing software.		
59.17	Demonstrate ability to add camera and lighting positions and rotations for use in the compositing software.		
60.0	Demonstrate knowledge of post-production--The student will be able to:		
60.01	Import composited video into the timeline.		
60.02	Import final audio into the timeline.		
60.03	Edit video using the animatic as a reference.		
60.04	Export video for use in websites, DVDs and other media formats.		
60.05	Encode and assemble DVD for distribution.		
61.0	Develop professional portfolio of work--The student will be able to:		
61.01	Identify elements of a professional portfolio and resume.		
61.02	Examine and determine student work to include in a portfolio and resume.		
61.03	Gather illustrations, audio, video, and work history details to include into portfolio and resume.		
61.04	Understand the use of Internet websites for portfolio distribution.		
61.05	Determine the format for portfolio and resume.		
61.06	Produce resume 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.

### **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.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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, 30, 31
Standard Length	4 credits
Teacher Certification	ELECTRONIC @7 7G COMP SVC 7G ELECTRICAL @7 7G TELCOM 7G BUS MACH 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	49-2022 – Telecommunications Equipment Installers and Repairers, Except Line Installers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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 courses content includes, but is not limited to, installation, maintenance and servicing of telecommunication systems; and 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.

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A	8730210	Telecommunications Technology 1	1 credit	49-2022	2	VO
B	8730220	Telecommunications Technology 2	1 credit	49-2022	2	VO
C	8730230	Telecommunications Technology 3	1 credit	49-2022	2	VO
	8730240	Telecommunications Technology 4	1 credit		2	VO

*(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics, VO= Career and Technical Education)*

## **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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Telecommunications Technology.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Telecommunications Technology.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Telecommunications Technology.
- 04.0 Explain and practice workplace safety.
- 05.0 Demonstrate basic work practices.
- 06.0 Demonstrate the use of safety equipment.
- 07.0 Inspect tools and equipment.
- 08.0 Inspect test equipment.
- 09.0 Explain industry code of conduct.
- 10.0 Demonstrate traffic control.
- 11.0 Demonstrate pole climbing.
- 12.0 Explain roadside safety.
- 13.0 Explain electrical hazards.
- 14.0 Perform data line safety checks.
- 15.0 Demonstrate proficiency in making electrical connections, splices and basic field repair.
- 16.0 Troubleshoot and repair telecommunication system wiring.
- 17.0 Demonstrate proficiency in customer relations.
- 18.0 Demonstrate proficiency in basic DC circuits.
- 19.0 Demonstrate appropriate understanding of basic math.
- 20.0 Demonstrate proficiency in the use of tools and test equipment used in the telecommunications industry.
- 21.0 Demonstrate science knowledge and skills.
- 22.0 Demonstrate proficiency in basic AC circuits.
- 23.0 Analyze technical data associated with cable validation and fault location.
- 24.0 Install repair terminate and test network cabling.
- 25.0 Demonstrate advanced skills in test equipment usage to locate faults.
- 26.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Telecommunications Technology.
- 27.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Telecommunications Technology.
- 28.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Telecommunications Technology.
- 29.0 Demonstrate advanced cable repair techniques. (Optional)
- 30.0 Demonstrate usage of test equipment validate network and telecommunication cabling systems.
- 31.0 Demonstrate a basic understanding of computer systems architecture.
- 32.0 Demonstrate proficiency in peripheral equipment.



- 33.0 Demonstrate proficiency in electronic information exchange.
- 34.0 Demonstrate proficiency in site requirements and considerations.
- 35.0 Use tables and charts.
- 36.0 Prepare worksite plans.
- 37.0 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.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Telecommunications Technology.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.  LAFS.910.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Telecommunications Technology.	
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly	

Florida Standards		Correlation to CTE Program Standard #
	and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Telecommunications Technology.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure. MAFS.K12.MP.7.1	
03.08	Look for and express regularity in repeated reasoning.	

Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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 Explain and practice workplace safety--The student will be able to:		
04.01 Demonstrate office safety.		
04.02 Demonstrate safety outside of the office.		
04.03 Explain fiber optics safety.		
04.04 Demonstrate safety for splicing.		
04.05 Demonstrate or explain bucket truck safety. (Optional)		
05.0 Demonstrate basic work practices--The student will be able to:		
05.01 Demonstrate good work attitudes.		
05.02 Explain work and business ethics.		
05.03 Explain general code of conduct.		
06.0 Demonstrate the use of safety equipment--The student will be able to:		
06.01 Correctly use personal safety equipment used in the telecommunications industry.		
06.02 Explain the hazards associated with telecommunications industry.		
07.0 Inspect tools and equipment--The student will be able to:		
07.01 Safety, inspect support equipment.		
07.02 Safety, inspect tools.		
08.0 Inspect test equipment--The student will be able to:		
08.01 Evaluate and inspect test equipment.		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
09.0	Explain industry code of conduct--The student will be able to:		
09.01	Explain the purpose of a code of conduct.		
09.02	List the basic parts of his/her Industry code of conduct.		
09.03	Explain how the code of conduct protects both customers and workers.		
09.04	Explain the relationship between code of conduct and the laws governing privacy of telephone conversations.		
10.0	Demonstrate traffic control--The student will be able to:		
10.01	Use roadside signals. (Optional)		
10.02	Use signage, barricades and cones. (Optional)		
10.03	Perform flagging, and hand signals. (Optional)		
10.04	Explain general outside safety procedures.		
11.0	Demonstrate pole climbing--The student will be able to:		
11.01	Conduct pole-climbing safety inspection. (Optional)		
11.02	Use pole-climbing equipment in a safe and correct manner. (Optional)		
11.03	Explain the hazards of pole climbing.		
11.04	Demonstrate safe and correct ladder usage.		
11.05	Select correct ladder for telecommunication work.		
11.06	Demonstrate ladder rigging for aerial installation.		
11.07	Demonstrate pole climbing to install drops and perform splicing. (Optional)		
12.0	Explain roadside safety--The student will be able to:		
12.01	Explain the hazards encountered around roadways.		
12.02	Work in a safe manner around roadways. (Optional)		
13.0	Explain electrical hazards--The student will be able to:		
13.01	Identify the hazards associated with work on telecommunication lines and equipment.		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
13.02	Test and analyze various telecommunications equipment and lines for safety hazards.		
14.0	Perform data line safety checks--The student will be able to:		
14.01	Check and identify hazardous line currents and voltages.		
15.0	Demonstrate proficiency in making electrical connections, splices and basic field repair--The student will be able to:		
15.01	Apply proper Occupational Safety Health Administration (OSHA) Safety Standards.		
15.02	Make electrical connections.		
15.03	Identify and use hand tools properly.		
15.04	Identify and use power tools properly.		
15.05	Demonstrate acceptable soldering techniques.		
15.06	Demonstrate acceptable de-soldering techniques.		
15.07	Demonstrate Electrostatic Discharge (ESD) safety procedures.		
15.08	Describe the construction of Printed Circuit Boards (PCB's). (Optional)		
15.09	Demonstrate rework and repair techniques. (Optional)		
16.0	Troubleshoot and repair telecommunication system wiring--The student will be able to:		
16.01	Test telecommunication systems and evaluate based on established criteria.		
16.02	Identify range of fault conditions for telecommunication systems.		
16.03	Demonstrate telecommunication fault identification skills.		
16.04	Use field documentation techniques for repair of systems.		
16.05	Use test equipment and logic to locate faults.		
16.06	Demonstrate proficiency in repair techniques using splices, closure assembly and punch-down terminations.		
16.07	Validate repaired system to industry criteria.		
17.0	Demonstrate proficiency in customer relations--The student will be able to:		
17.01	Describe and demonstrate appropriate personal hygiene and professional attire.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
17.02 Describe and demonstrate effective listening techniques.		
17.03 Describe and apply techniques for installing customer confidence and satisfaction.		
17.04 Describe and apply techniques for keeping the customer informed		
17.05 Describe and apply effective follow-up techniques.		
17.06 Demonstrate discretion in interacting with customers in field and retail environments.		
17.07 Demonstrate an understanding of basic conflict resolution.		
18.0 Demonstrate proficiency in basic DC circuits--The student will be able to:		
18.01 Solve problems in electronics units utilizing metric prefixes.		
18.02 Identify sources of electricity.		
18.03 Define voltage, current, resistance, power and energy.		
18.04 Apply ohm's law and power formulas.		
18.05 Identify and interpret industry appropriate, color codes and symbols to identify electrical components and values.		
18.06 Measure properties of a circuit using Volt-Ohm Meter (VOM) and Digital Volt-Com Meter (DVM) and oscilloscopes.		
18.07 Compute conductance and compute and measure resistance of conductors and insulators.		
18.08 Apply ohm's law to series circuits.		
18.09 Construct and verify operation of series circuits.		
18.10 Analyze and troubleshoot series circuits.		
18.11 Apply ohm's law to parallel circuits.		
18.12 Construct and verify the operation of parallel circuits.		
18.13 Analyze and troubleshoot parallel circuits.		
19.0 Demonstrate appropriate understanding of basic math--The student will be able to:		
19.01 Solve problems for volume, weight, area and circumference and perimeter measurements for rectangles, square and cylinders.		
19.02 Measure tolerance(s) on horizontal and vertical surfaces using millimeters, centimeters,		



CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
and feet and inches.		
19.03 Add, subtract, multiply and divide using fractions, decimals and whole numbers.		
19.04 Determine the correct purchase price, to include sales tax for a materials list containing a minimum of six items.		
19.05 Demonstrate an understanding of federal, state and local taxes and their computation.		
19.06 Use basic algebra to solve job related problems.		
20.0 Demonstrate proficiency in the use of tools and test equipment used in the telecommunications industry--The student will be able to:		
20.01 Install twisted pair cabling systems.		
20.02 Terminate twisted pair cords, plugs, and outlets.		
20.03 Test installed cables.		
20.04 Troubleshoot cables.		
20.05 Demonstrate proficiency in the current techniques and equipment used in the telecommunications industry.		
20.06 Demonstrate proficiency in usage of the NEC codes.		
20.07 Demonstrate proficiency in usage of the color codes and configuration.		
20.08 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.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Telecommunications Technology.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.  LAFS.910.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Telecommunications Technology.	
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly	

Florida Standards		Correlation to CTE Program Standard #
	and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Telecommunications Technology.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure. MAFS.K12.MP.7.1	
03.08	Look for and express regularity in repeated reasoning.	

Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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 science knowledge and skills--The student will be able to:		
21.01 Demonstrate an understanding of the effects of temperature extremes and moisture content in regards to electronic equipment.		
21.02 Demonstrate an understanding of the impact and effects of Electrostatic Discharge (ESD), power surges, grounding, and lightning strikes.		
21.03 Apply the scientific method to draw conclusions or make inferences from data.		
21.04 Demonstrate deductive reasoning techniques when troubleshooting		
21.05 Demonstrate an understanding of the effects of heat load and ventilation in regards to electronic equipment.		
21.06 Identify safety and health related issues including exposure to work related chemicals and hazardous materials, and demonstrate the appropriate precautionary measures.		
21.07 Demonstrate an understanding of environmental impact and regulations in regards to the appropriate disposal of electronic equipment.		
22.0 Demonstrate proficiency in basic AC circuits--The student will be able to:		
22.01 Identify properties of an AC signal.		
22.02 Identify AC sources.		
22.03 Analyze and measure AC signals utilizing VOM, DVM.		
22.04 Perform AC safety checks.		
22.05 Perform AC safety checks.		
22.06 Explain high voltage power systems and hazards.		
23.0 Analyze technical data associated with cable validation and fault location--The student will be able to:		
23.01 Read and understand telecommunications technical data.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
23.02 Interpret diagrams, schematics.		
23.03 Document work.		
24.0 Install repair terminate and test network cabling--The student will be able to:		
24.01 Terminate cable using industry standard configuration termination RJ11, RJ12, RJ45, BNC, and AUI.		
24.02 Install cabling using industry standard tools, telepole, and fish tape.		
24.03 Punch down cables on standard wiring blocks. (66 Block, 110 Block)		
24.04 Route cable over aerial and buried drops.		
25.0 Demonstrate advanced skills in test equipment usage to locate faults--The student will be able to:		
25.01 Operate butt-in test sets.		
25.02 Operate toners.		
25.03 Operate subscriber line test set.		
25.04 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.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
26.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Telecommunications Technology.	
26.01	Key Ideas and Details	
26.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.  LAFS.1112.RST.1.1	
26.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.1112.RST.1.2	
26.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.1112.RST.1.3	
26.02	Craft and Structure	
26.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.  LAFS.1112.RST.2.4	
26.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.  LAFS.1112.RST.2.5	
26.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.  LAFS.1112.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
26.03 Integration of Knowledge and Ideas		
26.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
26.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
26.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
26.04 Range of Reading and Level of Text Complexity		
26.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
26.04.2		
27.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Telecommunications Technology.	
27.01 Text Types and Purposes		
27.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
27.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
27.02 Production and Distribution of Writing		
27.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
27.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
27.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback,	



Florida Standards		Correlation to CTE Program Standard #
	including new arguments or information. LAFS.1112.WHST.2.6	
27.03	Research to Build and Present Knowledge	
27.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
27.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
27.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
27.04	Range of Writing	
27.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
28.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Telecommunications Technology.	
28.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
28.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
28.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
28.04	Model with mathematics. MAFS.K12.MP.4.1	
28.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
28.06	Attend to precision. MAFS.K12.MP.6.1	
28.07	Look for and make use of structure. MAFS.K12.MP.7.1	

Florida Standards	Correlation to CTE Program Standard #
28.08 Look for and express regularity in repeated reasoning.  MAFS.K12.MP.8.1	

**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
29.0 Demonstrate advanced cable repair techniques--The student will be able to: (Optional)		
29.01 Prepare buried cable for splicing.		
29.02 Splice buried cable.		
29.03 Make various closure devices for spliced buried cable.		
29.04 Prepare aerial cable for splicing.		
29.05 Splice aerial cable.		
29.06 Make various closure devices for spliced aerial cable.		
30.0 Demonstrate usage of test equipment validate network and telecommunication cabling systems--The student will be able to:		
30.01 Validate telephone lines using standard industry procedures.		
30.02 Validate high-speed digital lines using industry standard procedures.		
30.03 Validate advanced signal lines. (Fiber optics).		
31.0 Demonstrate a basic understanding of computer systems architecture--The student will be able to:		
31.01 Identify network configurations.		
31.02 Distinguish between faults caused by wiring verses architecture configuration.		
31.03 Install cable connectors to match architecture.		
31.04 Explain cable limitations due to architecture.		
32.0 Demonstrate proficiency in peripheral equipment--The student will be to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
32.01 Demonstrate an understanding of input/output devices.		
32.02 Identify and define serial and parallel interface standards.		
32.03 Troubleshoot, install and upgrade telecommunications devices and adapter cards. (i.e. NIC, Modem)		
32.04 Demonstrate professional connector assembly procedures.		
33.0 Demonstrate proficiency in electronic information exchange--The student will be able to:		
33.01 Install, connect and maintain network clients to various network operating systems.		
33.02 Connect and configure computers for network connectivity.		
33.03 Describe use and system maintenance of a WAN and telecommunications system.		
33.04 Demonstrate knowledge of network protocols.		
33.05 Demonstrate knowledge of fundamentals of an Internet system.		
33.06 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.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
26.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Telecommunications Technology.	
26.01	Key Ideas and Details	
26.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.  LAFS.1112.RST.1.1	
26.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.1112.RST.1.2	
26.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.1112.RST.1.3	
26.02	Craft and Structure	
26.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.  LAFS.1112.RST.2.4	
26.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.  LAFS.1112.RST.2.5	
26.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.  LAFS.1112.RST.2.6	
26.03	Integration of Knowledge and Ideas	

Florida Standards		Correlation to CTE Program Standard #
26.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
26.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
26.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
26.04 Range of Reading and Level of Text Complexity		
26.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
26.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
27.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Telecommunications Technology.	
27.01 Text Types and Purposes		
27.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
27.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
27.02 Production and Distribution of Writing		
27.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
27.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
27.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.1112.WHST.2.6	
27.03	Research to Build and Present Knowledge	
27.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
27.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
27.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
27.04	Range of Writing	
27.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
28.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Telecommunications Technology.	
28.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
28.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
28.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
28.04	Model with mathematics. MAFS.K12.MP.4.1	
28.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
28.06	Attend to precision. MAFS.K12.MP.6.1	
28.07	Look for and make use of structure. MAFS.K12.MP.7.1	
28.08	Look for and express regularity in repeated reasoning.	

Florida Standards	Correlation to CTE Program Standard #
MAFS.K12.MP.8.1	

**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
34.0 Demonstrate proficiency in site requirements and considerations--The student will be able to:		
34.01 Demonstrate knowledge of data communication test equipment.		
34.02 Demonstrate knowledge of telecommunication wiring systems.		
34.03 Demonstrate knowledge of cable and LAN topology.		
34.04 Demonstrate knowledge of hubs, switches and routers.		
34.05 Calculate and determine power requirements.		
34.06 Calculate and determine requirements of the working environment.		
34.07 Install, configure and troubleshoot LAN cable systems (twisted pair, coax, or fiber).		
34.08 Configure and troubleshoot patch bay, hubs and transceivers.		
35.0 Use tables and charts--The student will be able to:		
35.01 Determine expected levels of resistance for wiring configuration.		
35.02 Determine changes in resistance due to temperature changes.		
35.03 Determine capacitance of a given cable configuration.		
35.04 Demonstrate quick test methods using Quick Test Charts.		
36.0 Prepare worksite plans--The student will be able to:		
36.01 Draw site plans.		
36.02 Review and evaluate and plan for site electrical considerations.		
36.03 Draw cable runs (cutsheet).		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
36.04 Evaluate and select wiring room.		
37.0 Demonstrate proficiency in twisted pair design--The student will be able to:		
37.01 Select correct cable for CAT5 installations.		
37.02 Ensure cable rating at patch panels conforms to industry standards.		
37.03 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.

### **Career and Technical Student Organization (CTSO)**

SkillsUSA is are 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.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Printing and Graphic Communications  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts, A/V Technology and Communication

**Secondary – Career Preparatory**

Program Number	8739000
CIP Number	0610030500
Grade Level	9-12, 30, 31
Standard Length	12 credits
Teacher Certification	PRINTING @7 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	51-5113 – Print Binding and Finishing Workers 51-5112 – Printing Press Operators 51-5111 – Prepress Technicians and Workers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for initial employment in the Printing and Graphics 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 the following: Administrative support operations, pre-press/imaging operations, press operations and finishing operations.

**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, five occupational completion points.

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A	8739010	Printing & Graphic Communications 1	1 credit	51-5112	2	PA
	8739020	Printing & Graphic Communications 2	1 credit		2	PA
	8739030	Printing & Graphic Communications 3	1 credit		2	PA
B	8739040	Printing & Graphic Communications 4	1 credit	51-5111	3	PA
	8739050	Printing & Graphic Communications 5	1 credit		3	PA
C	8739060	Printing & Graphic Communications 6	1 credit	51-5111	3	PA
	8739070	Printing & Graphic Communications 7	1 credit		3	PA
	8739080	Printing & Graphic Communications 8	1 credit		3	PA
D	8739090	Printing & Graphic Communications 9	1 credit	51-5112	3	PA
	8739091	Printing & Graphic Communications 10	1 credit		3	PA
	8739092	Printing & Graphic Communications 11	1 credit		3	PA
E	8739093	Printing & Graphic Communications 12	1 credit	51-5113	3	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics, VO= Career and Technical Education)

### **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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Printing and Graphic Communications.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Printing and Graphic Communications.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Printing and Graphic Communications.
- 04.0 Demonstrate an understanding of safety and first aid practices.
- 05.0 Demonstrate an understanding of graphic communications and processes.
- 06.0 Demonstrate proficiency in art and copy preparation.
- 07.0 Demonstrate proficiency in prepress/imaging operations.
- 08.0 Demonstrate proficiency in reproduction photography.
- 09.0 Demonstrate proficiency in image assembly/plate making.
- 10.0 Demonstrate proficiency in performing basic offset press operation.
- 11.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Printing and Graphic Communications.
- 12.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Printing and Graphic Communications.
- 13.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Printing and Graphic Communications.
- 14.0 Demonstrate proficiency in basic finishing/binding operations.
- 15.0 Demonstrate appropriate math skills.
- 16.0 Demonstrate proficiency in performing basic film assembly and plate making competencies.
- 17.0 Demonstrate proficiency in basic electronic imaging competencies.
- 18.0 Demonstrate proficiency in the use of type and typography.
- 19.0 Demonstrate proficiency in using page layout operations.
- 20.0 Demonstrate proficiency in scanning operations.
- 21.0 Demonstrate an understanding of a vector base graphics program.
- 22.0 Demonstrate proficiency in electronic pre-press operations.
- 23.0 Demonstrate proficiency in operation of basic offset press.
- 24.0 Demonstrate proficiency in performing basic finishing and distribution competencies.

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Printing & Graphic Communications 1  
**Course Number:** 8739010  
**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.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Printing and Graphic Communications.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.910.RST.2.6	
01.03	Integration of Knowledge and Ideas	
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04	Range of Reading and Level of Text Complexity	
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Printing and Graphic Communications.	
02.01	Text Types and Purposes	
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02	Production and Distribution of Writing	
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update	



Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
<b>02.03 Research to Build and Present Knowledge</b>		
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
<b>02.04 Range of Writing</b>		
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
<b>03.0</b>	<b>Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Printing and Graphic Communications.</b>	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
03.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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 understanding of safety and first aid practices--The student will be able to:		
04.01 Identify location(s) of fire safety equipment.		
04.02 Describe proper use of fire safety equipment.		
04.03 List safety rules involving flammable liquids.		
04.04 List the steps to be taken in case of injury in the lab.		
04.05 Identify location(s) of first aid kit(s) and eye wash station(s).		
04.06 Discuss the importance of the Material Safety Data Sheets (MSDS).		
04.07 Identify protective safety equipment where needed (gloves, goggles, ear plugs, etc.).		
04.08 Practice proper safety procedures when operating equipment.		
04.09 Practice approved shop dress code for safe operation including necessary personal safety equipment.		
04.10 Pass a general lab safety test.		
04.11 Demonstrate acceptable employee health habits.		
04.12 Demonstrate knowledge of the "Right-to-Know Law".		
04.13 Pass a safety test in an individual's specialty area(s).		
04.14 Practice approved methods to dispose of waste materials.		
04.15 Read, comprehend and follow instructions on warning labels.		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
04.16	Demonstrate common sense when working with others.		
04.17	Demonstrate a working knowledge of the safety color code.		
05.0	Demonstrate understanding of graphic communications occupations and processes--The student will be able to:		
05.01	Define the role of graphics in the enterprise system.		
05.02	Identify printing markets and types of printing business.		
05.03	List printing's ranking among other industries.		
05.04	Identify the major printing process.		
05.05	List the advantages of each major process.		
05.06	List the disadvantages of each major process.		
05.07	Identify the products produced by each major process.		
05.08	List in order of business flow of printing from initial need to a final product.		
05.09	List in order the technical production flow from idea to a finished product.		
05.10	Identify major occupations in the graphic arts.		
05.11	List the major responsibilities for each occupation.		
05.12	Identify basic salary/wage expectation ranges for local area.		
06.0	Demonstrate proficiency in art and copy preparation--The student will be able to:		
06.01	Identify basic equipment and tools for a paste-up.		
06.02	Identify basic materials and hand tools for a paste-up.		
06.03	Demonstrate how to prepare thumbnail layouts.		
06.04	Demonstrate how to prepare rough layouts.		
06.05	Demonstrate how to prepare comprehensive layouts including a finished working dummy.		
06.06	Employ the use of printers' measurements to compute inches and fractions, points and picas, decimals, percentages, and proportions.		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
06.07	Demonstrate how to use copy fitting and mark up procedures to specify type sizes, styles and etc.		
06.08	Prepare a paste-up mechanical with elements including key line for photographs, title blocks and rulings.		
06.09	Prepare a tissue overlay and specify color break, tint percentages and reverses.		
06.10	Check and compare completed mechanical to comprehensive layouts for final proofing.		
07.0	Demonstrate proficiency in prepress/imaging operations--The student will be able to:		
07.01	Identify basic equipment and tools and the safety rules pertaining to prepress/imaging operation.		
07.02	Demonstrate how to choose type using the correct size and format.		
07.03	Identify fundamentals of type and its uses.		
07.04	Identify the various kinds of items that can be designed and produced using a page layout program.		
07.05	Demonstrate keyboarding skills.		
07.06	State how to organize a file management system for opening, copying, saving and deleting files.		
07.07	Demonstrate file management operations for opening, copying, saving and deleting files.		
07.08	Demonstrate how to log-on/boot-up and print out a page layout program and demonstrate a functional knowledge of computer commands/codes/menu/palette for the software in use.		
07.09	Demonstrate how to set text with appropriate margins, formatting, gutters, leading, headings, etc.		
07.10	Demonstrate how to flow copy from a word processing program according to job specifications.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:**        **Printing & Graphic Communications 2**  
**Course Number:**   **8739020**  
**Course Credit:**     **1**

**Course Description:**

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

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Printing and Graphic Communications.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.910.RST.2.6	
01.03	Integration of Knowledge and Ideas	
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04	Range of Reading and Level of Text Complexity	
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Printing and Graphic Communications.	
02.01	Text Types and Purposes	
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02	Production and Distribution of Writing	
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update	

Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
<b>02.03 Research to Build and Present Knowledge</b>		
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
<b>02.04 Range of Writing</b>		
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
<b>03.0</b>	<b>Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Printing and Graphic Communications.</b>	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
03.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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 proficiency in reproduction photography--The student will be able to:		
08.01 Identify the equipment and materials used in reproduction photography and the safety rules pertaining to each.		
08.02 Identify the parts of the process camera and explain their use.		
08.03 Apply basic principles of light pertaining to copy board illuminations and exposure calculations for all camera functions.		
08.04 Apply basic principles of darkroom chemistry.		
08.05 Prepare darkroom chemistry.		
08.06 Demonstrate how to establish basic line exposure and exposure time at 100% using standard time and temperature development.		
08.07 Apply basic principles of Kodak halftone computer and density guide.		
08.08 Demonstrate how to establish basic exposure to determine screen range, basic flash, main exposure, and bump exposure at 100% using standard time and temperature development.		
08.09 Demonstrate how to produce line negatives to size.		
08.10 Demonstrate how to inspect and compare line negatives to original mechanical.		
08.11 Demonstrate how to produce a halftone to size.		
08.12 Demonstrate how to inspect and compare halftones to original copy.		
08.13 Demonstrate how to make line and halftone diffusion transfer prints.		
08.14 Demonstrate how to inspect and compare prints to original mechanical.		



CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.15 Identify the parts of a contact frame and point light source and explain their use.		
08.16 Demonstrate how to reduce contacts using orthochromatic and duplicating film, transmission density guide and standard time and temperature development.		
09.0 Demonstrate proficiency in image assembly/plate making--The student will be able to:		
09.01 Identify basic stripping equipment and hand tools.		
09.02 Identify basic stripping materials and supplies.		
09.03 Demonstrate how to produce a single color flat with correct dimensions and window(s).		
09.04 Demonstrate how to make necessary corrections to flat (IE, opaque/scribing).		
09.05 Identify plate making equipment and tools for offset metal plates.		
09.06 Identify plate material types and processing chemicals for making offset metal plates.		
09.07 Demonstrate how to produce a correctly exposed and processed metal plate for offset printing.		
09.08 Identify direct transfer plate making equipment.		
09.09 Identify direct transfer plate and processing materials.		
09.10 Demonstrate how to produce a direct transfer plate for offset printing.		
09.11 Identify pin registration systems.		
10.0 Demonstrate proficiency in performing basic offset press operations--The student will be able to:		
10.01 Identify basic offset duplicator parts and operations.		
10.02 Identify basic safety and operation procedures for an Offset Duplicator 1 or single color printing.		
10.03 Demonstrate basic setup procedures for printing a single color job.		
10.04 Produce a printed single color job using an offset duplicator.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:**        **Printing & Graphic Communications 3**  
**Course Number:**    **8739030**  
**Course Credit:**     **1**

**Course Description:**

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

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
11.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Printing and Graphic Communications.	
11.01	Key Ideas and Details	
11.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.  LAFS.1112.RST.1.1	
11.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.1112.RST.1.2	
11.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.1112.RST.1.3	
11.02	Craft and Structure	
11.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.  LAFS.1112.RST.2.4	
11.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.  LAFS.1112.RST.2.5	
11.02.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.  LAFS.1112.RST.2.6	
11.03	Integration of Knowledge and Ideas	

Florida Standards		Correlation to CTE Program Standard #
11.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
11.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
11.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
<b>11.04 Range of Reading and Level of Text Complexity</b>		
11.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
11.04.2		
12.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Printing and Graphic Communications.	
<b>12.01 Text Types and Purposes</b>		
12.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
12.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
<b>12.02 Production and Distribution of Writing</b>		
12.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
12.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
12.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback,	

Florida Standards		Correlation to CTE Program Standard #
	including new arguments or information. LAFS.1112.WHST.2.6	
12.03	Research to Build and Present Knowledge	
12.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
12.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
12.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
12.04	Range of Writing	
12.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
13.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Printing and Graphic Communications.	
13.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
13.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
13.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
13.04	Model with mathematics. MAFS.K12.MP.4.1	
13.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
13.06	Attend to precision. MAFS.K12.MP.6.1	
13.07	Look for and make use of structure. MAFS.K12.MP.7.1	

Florida Standards	Correlation to CTE Program Standard #
13.08 Look for and express regularity in repeated reasoning.  MAFS.K12.MP.8.1	

**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 finishing/binding operations--The student will be able to:		
11.01 Identify operational and safety parts of a paper cutter.		
11.02 Identify grain direction of paper.		
11.03 Demonstrate how to calculate basic paper cuts from a stock sheet.		
11.04 Demonstrate how to draw a master cutting diagram for making cuts.		
11.05 Demonstrate how to make accurate paper cuts using a mechanized paper cutter.		
11.06 Identify basic paper types, weights, grades and classifications used in the printing industry.		
11.07 Identify padding materials.		
11.08 Demonstrate how to produce correctly made pads of paper.		
11.09 Identify stapling and stitching equipment and hand tools.		
11.10 Identify stapling and stitching materials and supplies.		
11.11 Demonstrate how to produce side and saddle stitched/stapled products.		
11.12 Identify punching/drilling equipment and hand tools.		
11.13 Demonstrate how to measure to drill 3 ring notebook pages.		
11.14 Demonstrate how to make holes for 3 ring notebooks.		
11.15 Identify folding equipment and hand tools.		
11.16 Identify basic folds for printed products.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
11.17 Demonstrate how to make a single fold using an automatic folding machine.		
11.18 Identify collating equipment and hand tools.		
11.19 Demonstrate how to make sets of paper using collating equipment in proper sequence.		
11.20 Demonstrate how to hand collate sets in proper sequence.		
11.21 Identify the cut products and the basic procedure for die cutting.		
11.22 Identify hot foil stamped products, basic equipment materials and procedures for foil stamping.		
15.0 Demonstrate appropriate math skills--The student will be able to:		
15.01 Demonstrate how to solve addition, subtraction, multiplication and division of whole numbers.		
15.02 Demonstrate how to solve addition, subtraction, multiplication and division of fractions.		
15.03 Demonstrate how to solve addition, subtraction, multiplication and division of decimals.		
15.04 Demonstrate how to solve fraction to decimal and decimal to fraction conversion problems.		
15.05 Demonstrate how to solve decimal to percent and percent to decimal conversion problems.		
15.06 Demonstrate how to solve basic ratio and proportion problems.		
15.07 Demonstrate how to solve basic liner measurement problems.		
15.08 Demonstrate how to solve basic inches to picas and picas to inches conversion problems.		
15.09 Demonstrate how to solve inches to points and points to inches conversion problems.		
15.10 Demonstrate how to solve cost calculating problems.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:**        **Printing & Graphic Communications 4**  
**Course Number:**   **8739040**  
**Course Credit:**     **1**

**Course Description:**

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

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
11.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Printing and Graphic Communications.	
11.01	Key Ideas and Details	
11.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. <p align="right">LAFS.1112.RST.1.1</p>	
11.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. <p align="right">LAFS.1112.RST.1.2</p>	
11.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. <p align="right">LAFS.1112.RST.1.3</p>	
11.02	Craft and Structure	
11.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. <p align="right">LAFS.1112.RST.2.4</p>	
11.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. <p align="right">LAFS.1112.RST.2.5</p>	
11.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p align="right">LAFS.1112.RST.2.6</p>	

Florida Standards		Correlation to CTE Program Standard #
11.03	Integration of Knowledge and Ideas	
11.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
11.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
11.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
11.04	Range of Reading and Level of Text Complexity	
11.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
11.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
12.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Printing and Graphic Communications.	
12.01	Text Types and Purposes	
12.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
12.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
12.02	Production and Distribution of Writing	
12.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
12.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
12.02.3	Use technology, including the Internet, to produce, publish, and update	



Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
12.03 Research to Build and Present Knowledge		
12.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
12.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
12.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
12.04 Range of Writing		
12.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
13.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Printing and Graphic Communications.	
13.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
13.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
13.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
13.04	Model with mathematics. MAFS.K12.MP.4.1	
13.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
13.06	Attend to precision. MAFS.K12.MP.6.1	
13.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #	
	MAFS.K12.MP.7.1	
13.08 Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1	

**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
16.0 Demonstrate proficiency in performing basic film assembly and plate making competencies-- The student will be able to:		
16.01 Read and comprehend production information on a job jacket/ticket.		
16.02 Identify the equipment, tools and materials used in film assembly operations their parts, functions, and safety rules relating to their operation.		
16.03 Apply basic math skills to the film assembly operations.		
16.04 Demonstrate how to establish the "true edge" and "vertical alignment" on a film assembly table (squaring the table).		
16.05 Demonstrate how to layout, measure and rule an unlined masking sheet showing relevant guidelines (guide edge of the sheet, gripper margins, plate clamp, center marks, etc.) for 8 1/2" X 11" single color work.		
16.06 Demonstrate how to assemble and properly attach negatives to an 8 1/2" X 11" or larger size color flat.		
16.07 Demonstrate how to make appropriate corrections to a film negative and flat.		
16.08 Demonstrate how to layout, measure and rule an unlined masking sheet showing relevant guidelines (guide edge of the sheet, gripper margins, plate clamp, center marks, side guides, etc.) for an 11" X 17" or larger single color work.		
16.09 Demonstrate how to assemble and properly attach negatives to an 11" X 17" or larger single color flat.		
16.10 Demonstrate how to assemble and properly attach negatives to a 10" X 15" or larger single color pre-ruled flat.		
16.11 Demonstrate how to layout, measure and rule an unlined masking sheet showing relevant guidelines (guide edge of the sheet, gripper margins, plate clamp, center marks, side guides, etc.) for an 8 1/2" X 11" multicolor work using pin register system.		
16.12 Demonstrate how to assemble a single color flat for an envelope.		

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
16.13 Demonstrate how to assemble a single color flat for a work and turn imposition.		
16.14 Demonstrate how to assemble a single color flat for a work and tumble imposition.		
16.15 Demonstrate how to assemble a single color flat for a screen tint.		
16.16 Demonstrate how to assemble a single color flat for a 4-page sheet wise imposition.		
16.17 Demonstrate how to assemble a single color flat for an 8-page signature.		
16.18 Demonstrate how to assemble a single color flat for a line and halftone combination flat.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:**        **Printing & Graphic Communications 5**  
**Course Number:**   **8739050**  
**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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
16.0	Demonstrate proficiency in performing basic film assembly and plate making competencies -- The student will be able to:		
16.21	Demonstrate how to assemble a single color flat for step and repeat with a pin register system.		
16.22	Demonstrate how to assemble a multi-color job that uses masking film as a mechanical negative.		
16.23	Demonstrate how to perform exposure tests for light-sensitive materials used in the film assembly area.		
16.24	Demonstrate how to check registration of multiple flats using daylight proofing material.		
16.25	Demonstrate how to prepare a spread negative or positive for image fit using a contact control wedge as a guide.		
16.26	Demonstrate how to produce a choke negative or positive for image fit using a contact wedge as a guide.		
16.27	Demonstrate how to produce a composite negative.		
16.28	Demonstrate how to assembly multicolor, emulsion-up, flats with registration marks, color bars and slur bars on clear masking material.		
16.29	Demonstrate how to expose and process a multicolor job using blue line/color proofing materials.		
16.30	Demonstrate how to inspect and compare proof to originals.		

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
16.31 Identify the equipment, tools, and materials used in plate making operations, their parts, functions, and safety rules relating to their operation.		
16.32 Apply the basic math skills to the plate making operations.		
16.33 Demonstrate how to perform exposure tests for light-sensitive materials used in the plate making area using a sensitivity guide.		
16.34 Identify the different plate materials, types and processing chemicals and methods used for each.		
16.35 Demonstrate how to expose, process and preserve metal plates.		
16.36 Demonstrate how to make additions, deletions and repairs to metal plates.		
16.37 Demonstrate how to expose, process and protect photo direct or transfer plates.		
16.38 Demonstrate how to make additions, deletions and repairs to photo direct or transfer plates.		
16.39 Demonstrate how to inspect and compare plates to proofs.		
16.40 Demonstrate how to properly handle, file, store and retrieve flats and plates.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:**        **Printing & Graphic Communications 6**  
**Course Number:**   **8739060**  
**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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
17.0 Demonstrate proficiency in basic electronic imaging competencies--The student will be able to:		
17.01 Read and comprehend production information on a job jacket/ticket.		
17.02 Identify the various kinds of items that can be designed and produced using desktop publishing.		
17.03 Identify the basic principles of design (i.e. unity, contrast, page proportions, balance, etc.)		
17.04 Demonstrate how to incorporate the basic design principles in hand drawn sketches and measured layouts.		
17.05 Identify line copy.		
17.06 Identify continuous tone, halftone copy.		
17.07 Identify basic process color principles and four kinds of color printing.		
17.08 Demonstrate understanding of electronic color proofing techniques.		
17.09 Identify basic desktop publishing equipment.		
17.10 Define the limitations and capabilities of desktop publishing.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
17.11 Define the differences in quality of photo-processed output and laser printer output.		
17.12 Demonstrate understanding of postscript software capabilities.		
17.13 Define the operation of the hardware components of a computer aided publishing system.		
17.14 Demonstrate how to select appropriate software for word processing, graphics, scanning and page layout.		
17.15 Demonstrate a keyboard typing proficiency of a minimum of 30 WPM.		
17.16 State how to organize a file management system for opening, copying, saving and deleting files.		
17.17 Demonstrate file management operations for opening, copying, saving and deleting files.		
17.18 Demonstrate how to prepare a series of hand drawn sketches for layouts incorporating appropriate marks (i.e. gutters, register marks, fold lines, etc.).		
17.19 Demonstrate how to prepare a dummy for a multi-page signature.		
17.20 Demonstrate an understanding of data exchange.		
<b>18.0 Demonstrate proficiency in the use of type and typography--The student will be able to:</b>		
18.01 Demonstrate how to measure copy/text in points and picas using a line gauge.		
18.02 Demonstrate how to measure type using a type fitting gauge.		
18.03 Demonstrate how to identify x-height, mean-line, baseline, ascenders, descenders, and their roles in measuring and designing with type.		
18.04 Demonstrate how to identify caps, lowercase, uppercase, small caps and ligatures.		
18.05 Define dingbats, bullets, rules, and symbols and their uses in publications.		
18.06 Demonstrate how to distinguish between display (headline) type and body (text) type by their point sizes and styles.		
18.07 Demonstrate how to identify the basic type styles and their uses.		
18.08 Define the "weight" and "posture" of type.		
18.09 Demonstrate how to distinguish between serif and sans serif type styles.		
18.10 Define letter spacing and kerning of type characters.		
18.11 Define word spacing and the relationship of em and en in paragraph spacing.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
18.12 Define line spacing and explain the measurement principles for the leading of text.		
18.13 Define the type arrangements: flush left, ragged right, flush right, ragged left, centered, justified, and forced justified.		
18.14 Define and demonstrate copy fitting.		



**Florida Department of Education  
Student Performance Standards**

**Course Title:**        **Printing & Graphic Communications 7**  
**Course Number:**    **8739070**  
**Course Credit:**     **1**

**Course Description:**

This course is designed to provide instruction in page layout operations and scanning 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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
19.0	Demonstrate proficiency in using page layout operations--The student will be able to:		
19.01	Demonstrate how to markup a copy for production of a printed piece.		
19.02	Demonstrate how to select appropriate page layout software for a given job.		
19.03	Demonstrate how to log-on/boot-up and print out a page layout program and demonstrate a functional knowledge of computer commands/codes/menus/palette for the software in use.		
19.04	Demonstrate text alignment, element positioning and rules of page design for printed matter.		
19.05	Demonstrate how to set up column grids for electronic page layout according to job specifications.		
19.06	Demonstrate how to set up/select appropriate pagination for a given job.		
19.07	Demonstrate the uses of footers and headers.		
19.08	Demonstrate how to set text with appropriate margins, formatting, gutters, leading, headings etc.		
19.09	Demonstrate a proficiency in conducting basic search operations.		
19.10	Demonstrate how to place copy from word processing program to a page layout program according to job specifications.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
19.11 Demonstrate how to proofread, edit and make corrections/adjustment to copy on screen.		
19.12 Demonstrate how to download fonts.		
19.13 Demonstrate how to place graphics, rules, dingbats, from an existing file into a publication.		
19.14 Demonstrate the procedure for cropping graphics electronically.		
19.15 Demonstrate how to create a 2 sided, 3 panel brochure using graphics and text for publication.		
19.16 Demonstrate how to create a 4-page newsletter using windows, blocks, text, graphics, frames and headings.		
19.17 Demonstrate how to create a 2-page newsletter using drop caps for paragraph openings, wraparound (run-around) and graphics.		
19.18 Demonstrate how to create a printed piece using tints, reverses and manipulated type for effect.		
19.19 Demonstrate how to produce a multicolor flyer using electronic spot color separations.		
19.20 Demonstrate knowledge of available page layout programs - capabilities, advantage, and disadvantages.		
19.21 Demonstrate the use of an electronic dictionary, spell checker, and automatic hyphenation.		
20.0 Demonstrate proficiency in scanning operations--The student will be able to:		
20.01 Identify scanner hardware and its basic components and operations.		
20.02 Identify basic scanner software, its uses and limitations.		
20.03 Demonstrate appropriate scanner/program operations for continuous tone copy.		
20.04 Demonstrate how to place scanned graphics/photos into existing page layout program.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:**        **Printing & Graphic Communications 8**  
**Course Number:**    **8739080**  
**Course Credit:**     **1**

**Course Description:**

This course is designed to provide instruction in vector based graphics and electronic pre-press operation.

**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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
21.0	Demonstrate understanding of a vector base graphics program--The student will be able to:		
21.01	Demonstrate how to log-on/boot-up vector-based graphics program and demonstrate a functional knowledge of commands/codes/menus/hand tools and procedures for their uses.		
21.02	Demonstrate how to draw a design appropriate for a given job using a graphic program.		
21.03	Demonstrate how to create a design using tints, fills and paint for a given job using a graphics program.		
21.04	Demonstrate how to create a design using manipulated type (rotated, circled, extended, etc.) for a publication.		
21.05	Demonstrate how to trace a drawing/photograph using a graphics program.		
21.06	Demonstrate how to create a design/publication using electronic clip art.		
22.0	Demonstrate proficiency in electronic prepress operations--The student will be able to:		
22.01	Define the application of digital photography in electronic imaging.		
22.02	List the capabilities and functions of image setters.		
22.03	Identify and compare digital proofs.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
22.04 Identify and compare networking systems.		
22.05 Define the current systems/techniques for outputting files direct to plate material.		
22.06 Demonstrate an understanding of the PostScript page description language.		
22.07 Demonstrate how to compare the leading operating systems in performance, use and capabilities.		
22.08 Define storage guidelines and limitations.		
22.09 List the advantages and disadvantages of different storage media, such as syquest, optical, etc.		
22.10 List the use and capabilities of storage devices for electronic imaging work, transport and storage.		
22.11 Describe the strengths and weaknesses of TIFF, EPS, PICT and DCS in a Postscript environment.		
22.12 Demonstrate how to translate files from DOS to Mac formats.		
22.13 Demonstrate how to use a file compression utility for file transfer or storage.		
22.14 Describe the differences between True Type and PostScript fonts.		
22.15 Demonstrate how to use a telecommunications program and a modem to transfer files.		
22.16 Demonstrate how to create a single color layout using clip art.		
22.17 Demonstrate how to create a single color layout using work and turn.		
22.18 Demonstrate how to change contrast using tint screens and shading techniques.		
22.19 Demonstrate how to create a logo design on a computer and integrate it into a brochure design.		
22.20 Demonstrate how to produce special effects type using a graphics application.		
22.21 Demonstrate how to produce a job on the computer using electronic imposition.		
22.22 Demonstrate how to create a job that incorporates electronic trapping.		
22.23 Demonstrate how to produce a multicolor job that includes scans, text and spot color artwork.		
22.24 Demonstrate how to prepare page layout files containing graphic images for remote output.		
22.25 Demonstrate how to follow instructions to produce, modify or output files according to a customer supplied criteria.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
22.26 Demonstrate how to use OCR software to capture text.		
22.27 Demonstrate how to calibrate a desktop color scanner.		
22.28 Demonstrate how to produce a color scan.		
22.29 Demonstrate how to use a photo manipulation program to perform basic color correction and basic image cloning.		
22.30 Demonstrate how to calibrate a color monitor.		
22.31 Define how film processor variations affect final output.		
22.32 Define quality control checks on the film processor.		
22.33 Define the use and capabilities of storage devices for electronic imaging work transport and storage.		
22.34 Define the strengths and weaknesses of TIFF, EPS, PICT and DCS in a Postscript environment.		
22.35 Demonstrate how to translate files from DOS to Mac formats.		
22.36 Use a file compression utility for file transfer or storage.		
22.37 Define the differences between True Type and Postscript fonts.		
22.38 Demonstrate how to use a telecommunications program and a modem to transfer files.		
22.39 Demonstrate how to create a single color layout using clip art.		
22.40 Demonstrate how to create a single color layout using work and turn.		
22.41 Demonstrate how to change contrast using tint screens and shading techniques.		
22.42 Demonstrate how to create logo design on a computer and integrate into a brochure design.		
22.43 Demonstrate how to produce special effects type using a graphics application.		
22.44 Demonstrate how to produce a job on the computer using electronic imposition.		
22.45 Demonstrate how to create a job that incorporates electronic trapping.		
22.46 Demonstrate how to produce a multicolor job that includes scans, text and spot color artwork.		
22.47 Demonstrate how to prepare page layout files containing graphic images for remote output.		

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSS-Sci</b>
22.48 Demonstrate how to follow instructions to produce, modify or output files according to customer supplied criteria.		
22.49 Demonstrate how to use OCR software to capture text.		
22.50 Demonstrate how to calibrate a desktop color scanner.		
22.51 Demonstrate how to produce a color scan.		
22.52 Demonstrate how to use a photo manipulation program to perform basic color correction and basic image cloning.		
22.53 Demonstrate how to calibrate a color monitor.		
22.54 Define how film processor variations affect final output.		
22.55 Define quality control checks on the film processor.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Printing & Graphic Communications 9  
**Course Number:** 8739090  
**Course Credit:** 1

**Course Description:**

This course is designed to provide instruction in basic offset press operation.

**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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
23.0	Demonstrate proficiency in operation of basic offset press--The student will be able to:		
23.01	Identify the equipment and materials used in offset press operations, their parts and functions, and the safety rules relating to their operation.		
23.02	Apply basic principles of offset lithography pertaining to physical and chemical properties of ink components (pigment, vehicle, and dryer).		
23.03	Apply basic principles of offset lithography pertaining to dampening systems (ducted and continuous).		
23.04	Apply basic principles of offset lithography pertaining to fountain solutions chemical components (acid, alkaline, and neutral).		
23.05	Apply basic principles of offset lithography pertaining to ph-control and its effects on the lithographic process.		
23.06	Apply basic principles of offset lithography pertaining to interrelationships upon the process of paper (coated and uncoated and various grades within).		
23.07	Demonstrate how to determine grain directions of paper.		
23.08	Demonstrate how to handle and jog paper stock (wire/felt, watermarks, and carbonless sequence).		
23.09	Demonstrate how to identify paper weight, coating and sizes.		
23.10	Demonstrate how to identify paper problems, curling, dust, moisture, flaring, etc.		

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
23.11 Apply basic principles of offset lithography pertaining to the interrelationships of textured or smooth paper; paper, plastic, metal plates, and conventional or compressible blankets.		
23.12 Apply basic principles of offset lithography pertaining to ink and its drying properties in relation to fountain solution, plate and paper used (including effects of ink film thickness and drying time and set off; and problems associated with inappropriate use of spray powder).		
23.13 Apply basic principles of plate preservation after presswork for long-time storage (use of gum Arabic and Asphaltum).		
23.14 Demonstrate how to prepare a press for operation by reviewing job-ticket specifications and then selecting appropriate press and materials.		
23.15 Demonstrate how to prepare a press for operation based on interrelationships of lithographic process.		



**Florida Department of Education  
Student Performance Standards**

**Course Title:**        **Printing & Graphic Communications 10**  
**Course Number:**   **8739091**  
**Course Credit:**     **1**

**Course Description:**

This course is designed to provide instruction basic offset press operation.

**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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
23.0 Demonstrate proficiency in operation of basic offset press--The student should be able to:		
23.16 Demonstrate how to mix fountain solution from concentrate.		
23.17 Demonstrate how to mix ink to color matching systems specifications (PMS, etc.).		
23.18 Demonstrate how to introduce ink and fountain solution to press in proper sequence.		
23.19 Demonstrate how to set up and adjust feeder to paper specifications (air blast, vacuum and choke).		
23.20 Demonstrate how to set up and adjust register system to single sheet or stream fed, side guide, and head register.		
23.21 Demonstrate how to set up and adjust delivery (chute or chain).		
23.22 Demonstrate how to mount blanket (pack if necessary) and adjust to press specifications.		
23.23 Demonstrate how to set impression cylinder to paper thickness and press specifications.		
23.24 Demonstrate how to set and adjust ink and water rollers pressures to press specifications.		
23.25 Demonstrate how to make-ready a press to assure ink and water balance for uniform coverage, volume and replenishment of ink, image position, cylinder pressure, and sheet		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
registration.		
23.26 Demonstrate how to make additions, deletions and repairs to offset plate.		
23.27 Demonstrate how to inspect and evaluate final make-ready sheet to job-ticket specifications and obtain proof approval to run.		
23.28 Demonstrate how to set spray powder.		
23.29 Demonstrate how to produce required number of press sheets to job-ticket specifications.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Printing & Graphic Communications 11  
**Course Number:** 8739092  
**Course Credit:** 1

**Course Description:**

This course is designed to provide instruction in basic offset press operation.

**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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
23.0 Demonstrate proficiency in operation of basic offset press--The student should be able to:		
23.30 Demonstrate how to preserve plate for long-term storage.		
23.31 Demonstrate how to perform press wash-up and roller treatment.		
23.32 Demonstrate how to perform press maintenance to manufacturers' specifications.		
23.33 Demonstrate how to apply basic principles of offset press operations with regard to work and turn, work and tumble and sheet wise printed products.		
23.34 Demonstrate how to produce a tight register one-color project.		
23.35 Demonstrate how to produce a tight register one or two-color, pre-collated carbonless project.		
23.36 Demonstrate how to produce a two color tight register project.		
23.37 Demonstrate how to print a two color job on a duplicator using a T-head.		
23.38 Demonstrate how to produce a one or two color tight register envelope project.		
23.39 Demonstrate how to produce a tight register one-color metallic ink project.		
23.40 Demonstrate how to produce a tight register one or two color folding two sided project.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
23.41 Demonstrate how to produce a multicolor tight register project.		
23.42 Demonstrate an understanding and identify troubleshooting problems on a duplicator.		
23.43 Define and identify direct imaging technologies.		
23.44 Demonstrate how to clean and secure duplicator for down time.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:**        **Printing & Graphic Communications 12**  
**Course Number:**    **8739093**  
**Course Credit:**     **1**

**Course Description:**

This course is designed to provide instruction in basic finishing and distribution.

**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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
24.0	Demonstrate proficiency in performing basic finishing and distribution competencies--The student will be able to:		
24.01	Demonstrate how to read and comprehend production information on a job jacket/ticket.		
24.02	Demonstrate how to identify the equipment and materials used in finishing and distribution operations, their parts, functions, and safety rules relating to their operation.		
24.03	Demonstrate how to apply basic math skills to the binding and distribution operations.		
24.04	Demonstrate how to prepare folding dummy from press sheet in accordance with job ticket specifications and approved proof.		
24.05	Demonstrate how to setup and operate folder in accordance with job ticket specifications and folding dummy		
24.06	Demonstrate how to use folding equipment to produce single, gate and accordion folds.		
24.07	Define and identify right angle folds.		
24.08	Apply basic principles of finishing and distribution following folded bound signature impositions to allow for lips, trims and bleeds according to saddle and side-stitch binding method.		
24.09	Define and identify slitting, perforating and scoring functions and equipment pertaining to folding operations.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
24.10 Define how to use and setup cutters.		
24.11 Demonstrate how to prepare rule-out of press sheet for finishing operations according to job ticket specifications and approved proof.		
24.12 Demonstrate how to setup and operate cutter in accordance with rule-out.		
24.13 Demonstrate how to square substrate.		
24.14 Define and identify problems with substrate.		
24.15 Define the proper maintenance procedures for paper cutters.		
24.16 Define how to change the blade on a paper cutter.		
24.17 Define and identify the most commonly used types of paper.		
24.18 Demonstrate knowledge of paper types related to their printing, folding and binding characteristics.		
24.19 Demonstrate how to hand-jog 8 1/2" x 11" substrate.		
24.20 Demonstrate how to hand-jog 17" x 22" or larger substrate.		
24.21 Demonstrate how to machine-jog substrate.		
24.22 Define and identify off-line finishing systems.		
24.23 Define the fundamentals of saddle stitching and perfect binding.		
24.24 Define and identify the use of automated sorting and labeling equipment.		
24.25 Define and identify mail class rates (bulk, presorted, etc.)		
24.26 Define and identify the quality control methods for bar codes in relation to postal standards.		
24.27 Define and identify embossing procedures and equipment.		
24.28 List the common problems encountered in embossing.		
24.29 Identify the components of case, spiral and perfect bound books.		
24.30 Define and identify modern book binding equipment with hand binding techniques.		
24.31 Demonstrate how to store and properly handle substrates.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
24.32 Define and identify U-V coatings.		
24.33 List the advantages and disadvantages of U-V coatings.		
24.34 Demonstrate how to estimate the cost of materials and production for performing bindery operations; cutting, scoring, folding, packaging and coating.		
24.35 Demonstrate how to setup and operate stitcher (side and saddle).		
24.36 List the techniques used to control waste production and disposal in a modern bindery.		
24.37 Define and identify spiral, comb and wire binding equipment and supplies.		
24.38 Define tipping procedures.		
24.39 Demonstrate how to perform preventive maintenance on binding and finishing equipment.		
24.40 Demonstrate methods of counting substrate (machine, measurement, weight and rapid multiple-sheet manual counting by fives).		
24.41 Define collating flat sheets.		
24.42 Demonstrate how to setup and operate a paper drill for standard loose-leaf binder.		
24.43 Define and identify packaging and shrink wrapping equipment.		
24.44 Demonstrate how to package and identify completed job according to job specifications.		

## **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.

### **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.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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, 30, 31	
Standard Length	4 credits	
Teacher Certification	<b>1006300 - Journalism I</b> ENGLISH 1 @2 @4 @8 @9 JOURNALISM1 @2 @4 MG ENGLISH C COMM ART \$7 \$G TV PRO TEC \$7 \$G BUS ED \$1 \$2 \$4 PHOTOG \$7 \$G	<b>8209510 - Digital Design 1</b> BUS ED 1 @2 VOE @7 TEACH CBE @7 BUS DP @7 G ELECT DP @7 G CLERICAL @7 G SECRETAR@7 G STENOG @4 @7 G TEC ELEC \$7 G COMP SCI 6 @2 COMM ART @7 PRINTING 7G
	<b>8771110 - Industrial Communications</b> TV PRO TEC @ 7 G PHOTOG @ 7 G COMM ART @ 7 G ENGLISH \$1 \$2 \$4 \$8 \$9 MG ENG \$C BUS ED \$1 \$2 \$4 ENGLISH 1 @2 @4 @8 @9 JOURNALISM1 @2 @4	<b>8207110 - Web Design 1 or</b> <b>9001110 - Foundations of Web Design</b> BUS ED 1 @ 2 VOE @ 7 TEACH CBE @ 7 BUS DP @7 G ELECT DP @7 G CLERICAL @7 G SECRETAR @7 G STENOG @ 4 TEC ELEC \$7 G

## Secondary – Career Preparatory

		COMP SCI 6 @2 COMM ART @7 G
CTSO	SkillsUSA	
SOC Codes (all applicable)	27-3041 – Editors	
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>	

### Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the 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.

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A	1006300	Journalism I	1 credit	27-3041	2	VO
	8771110	Industrial Communications	1 credit		2	PA
	8209510	Digital Design 1	1 credit		2	PA
	8207110	Web Design 1 <b>or</b>	1 credit		2	PA
	9001110	Foundations of Web Design	1 credit		3	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics, VO= Career and Technical Education)

**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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Journalism.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Journalism.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Journalism.
- 04.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Journalism.
- 05.0 Demonstrate fundamental skills in the use of the writing process for varied journalistic media.
- 06.0 Demonstrate fundamental use of production skills (e.g., layout design, ad design, storyboarding) for varied mass communication documents or electronic media.
- 07.0 Demonstrate awareness of the history and evolution of journalism and the responsible and ethical use of information (e.g., First Amendment, copyright, intellectual freedom).
- 08.0 Demonstrate awareness of ethical issues (e.g., manipulation, misrepresentation, fraud) when addressing social, cultural, and political issues through print and non-print photojournalism.
- 09.0 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).
- 10.0 Demonstrate fundamental use of technology for research, production, and dissemination of journalistic media.
- 11.0 Analyze varied journalistic documents or electronic media.
- 12.0 Demonstrate awareness of varied careers in journalism.
- 13.0 Produce writing appropriate to journalistic media.
- 14.0 Organize and utilize production modes appropriate to journalistic media, including desktop publishing, keyboarding, photography, commercial art, and television production.
- 15.0 Plan a set for television production.
- 16.0 Perform lighting activities for a planned production.
- 17.0 Demonstrate correct use of basic equipment used in television production.
- 18.0 Demonstrate ability to identify different types of script copy.
- 19.0 Demonstrate ability to write script in broadcast style.
- 20.0 Perform electronic/desktop publishing operations.
- 21.0 Demonstrate knowledge of electronic/desktop publishing concepts.
- 22.0 Perform mechanical creative support operations.
- 23.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Journalism.
- 24.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Journalism.
- 25.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Journalism.
- 26.0 Demonstrate proficiency in computer skills.
- 27.0 Demonstrate knowledge of digital publishing concepts.
- 28.0 Perform decision-making activities.
- 29.0 Perform layout, design, and measurement activities.

- 30.0 Demonstrate proficiency in digital publishing operations.
- 31.0 Demonstrate proficiency in digital imaging.
- 32.0 Demonstrate proficiency in creating a simple website.
- 33.0 Participate in work-based learning experiences.
- 34.0 Perform decision making activities.
- 35.0 Perform e-mail activities.
- 36.0 Demonstrate proficiency using operating systems.
- 37.0 Demonstrate proficiency navigating the internet, intranet, and the WWW.
- 38.0 Demonstrate proficiency using HTML commands.
- 39.0 Demonstrate proficiency in page design applicable to the WWW.
- 40.0 Develop an awareness of internet/intranet tools.
- 41.0 Demonstrate proficiency in website planning and the design process.
- 42.0 Develop markup language structures.
- 43.0 Create basic web pages.
- 44.0 Incorporate images and graphical formatting on a web page.
- 45.0 Create a basic table structure.
- 46.0 Incorporate form structures in a web page.
- 47.0 Describe frame structures and their usage.
- 48.0 Use Cascading Style Sheets (CSS).
- 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.
- 53.0 Demonstrate language arts knowledge and skills.
- 54.0 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.

Florida Standards		Correlation to CTE Program Standard #
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Journalism.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.  LAFS.910.RST.2.6	
01.03	Integration of Knowledge and Ideas	
01.03.1	Translate quantitative or technical information expressed in words in a	

Florida Standards		Correlation to CTE Program Standard #
	text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
<b>01.04 Range of Reading and Level of Text Complexity</b>		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Journalism.	
<b>02.01 Text Types and Purposes</b>		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
<b>02.02 Production and Distribution of Writing</b>		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.	

Florida Standards		Correlation to CTE Program Standard #
		LAFS.910.WHST.2.6
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	LAFS.910.WHST.3.7
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.	LAFS.910.WHST.3.8
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research.	LAFS.910.WHST.3.9
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	LAFS.910.WHST.4.10
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Journalism.	
03.01	Make sense of problems and persevere in solving them.	MAFS.K12.MP.1.1
03.02	Reason abstractly and quantitatively.	MAFS.K12.MP.2.1
03.03	Construct viable arguments and critique the reasoning of others.	MAFS.K12.MP.3.1
03.04	Model with mathematics.	MAFS.K12.MP.4.1
03.05	Use appropriate tools strategically.	MAFS.K12.MP.5.1
03.06	Attend to precision.	MAFS.K12.MP.6.1
03.07	Look for and make use of structure.	MAFS.K12.MP.7.1
03.08	Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1

**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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
04.0	Demonstrate fundamental skills in the use of the writing process for varied journalistic media.		
04.01	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		
04.02	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		
04.03	Analyze the validity and reliability of primary source information and use the information appropriately. LA.A.2.4.7		
04.04	Synthesize information from multiple sources to draw conclusions. LA.A.2.4.8		
04.05	Select and use appropriate prewriting strategies, such as brainstorming, graphic organizers, and outlining. LA.B.1.4.1		
04.06	Draft and revise writing that LA.B.1.4.2		
	<ul style="list-style-type: none"> <li>is focused, purposeful, and reflects insight into the writing situation;</li> </ul>		
	<ul style="list-style-type: none"> <li>has an organizational pattern that provides for a logical progression of ideas;</li> </ul>		
	<ul style="list-style-type: none"> <li>has effective use of transitional devices that contribute to a sense of completeness;</li> </ul>		
	<ul style="list-style-type: none"> <li>has support that is substantial, specific, relevant, and concrete;</li> </ul>		
	<ul style="list-style-type: none"> <li>demonstrates a commitment to and involvement with the subject;</li> </ul>		
	<ul style="list-style-type: none"> <li>uses creative writing strategies as appropriate to the purpose of the paper;</li> </ul>		
	<ul style="list-style-type: none"> <li>demonstrates a mature command of language with precision of expression;</li> </ul>		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
<ul style="list-style-type: none"> <li>• has varied sentence structure; and</li> </ul>		
<ul style="list-style-type: none"> <li>• has few, if any, convention errors in mechanics, usage, punctuation, and spelling.</li> </ul>		
04.07 Produce final documents that have been edited for		
<ul style="list-style-type: none"> <li>• correct spelling;</li> </ul>		
<ul style="list-style-type: none"> <li>• correct punctuation, including commas, colons, and common use of semicolons;</li> </ul>		
<ul style="list-style-type: none"> <li>• correct capitalization;</li> </ul>		
<ul style="list-style-type: none"> <li>• correct sentence formation;</li> </ul>		
<ul style="list-style-type: none"> <li>• correct instances of possessives, subject/verb agreement, instances of noun/pronoun agreement, and the intentional use of fragments for effect; and</li> </ul>		
<ul style="list-style-type: none"> <li>• correct formatting that appeals to readers, including appropriate use of a variety of graphics, tables, charts, and illustrations in both standard and innovative forms.</li> </ul> <p style="text-align: right;">LA.B.1.4.3</p>		
04.08 Write fluently for a variety of occasions, audiences, and purposes, making appropriate choices regarding style, tone, level of detail, and organization. <p style="text-align: right;">LA.B.2.4.3</p>		
04.09 Make appropriate adjustments in language use for social, academic, and life situations, demonstrating sensitivity to gender and cultural bias. <p style="text-align: right;">LA.D.1.4.2</p>		
05.0 Demonstrate fundamental use of production skills (e.g., layout design, ad design, storyboarding) for varied mass communication documents or electronic media.		
05.01 Organize information using appropriate systems. <p style="text-align: right;">LA.B.2.4.2</p>		
05.02 Recognize production elements that contribute to the effectiveness of a specific medium. <p style="text-align: right;">LA.D.2.4.3</p>		
06.0 Demonstrate awareness of the history and evolution of journalism and the responsible and ethical use of information (e.g., First Amendment, copyright, intellectual freedom).		
06.01 Understand that laws control the delivery and use of media to protect the rights of authors and the rights of media owners. <p style="text-align: right;">LA.D.2.4.6</p>		
07.0 Demonstrate awareness of ethical issues (e.g., manipulation, misrepresentation, fraud) when addressing social, cultural, and political issues through print and non-print		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
photojournalism.		
07.01 Determine main concept and supporting details in order to analyze and evaluate non-print media messages. LA.C.2.4.1		
07.02 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		
07.03 Understand the use of images and sounds to elicit the reader's emotions in both fiction and nonfiction. LA.E.2.4.4		
08.0 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).		
08.01 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		
08.02 Analyze the managerial skills necessary for decision making in different work-related situations. AT.2.1.4.2		
08.03 Demonstrate the ability to cooperatively work in various settings across diverse populations. AT.9.1.4.2		
08.04 Select and use appropriate listening strategies according to the intended purpose, such as solving problems, interpreting and evaluating the techniques and intent of presentation, and taking action in career-related situations. LA.C.1.4.1		
08.05 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		
08.06 Apply oral communication skills to interviews, group presentations, formal presentations, and impromptu situations. LA.C.3.4.4		
09.0 Demonstrate fundamental use of technology for research, production, and dissemination of		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
journalistic media.		
09.01 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		
10.0 Analyze varied journalistic documents or electronic media.		
10.01 Identify devices of persuasion and methods of appeal and their effectiveness. LA.A.2.4.5		
10.02 Identify bias, prejudice, or propaganda in <i>oral</i> messages. LA.C.1.4.4		
10.03 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		
10.04 Understand the subtleties of literary devices and techniques in the comprehension and creation of communication. LA.D.2.4.2		
10.05 Critically analyze specific elements of mass media with regard to the extent to which they enhance or manipulate information. LA.D.2.4.5		
11.0 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.

Florida Standards		Correlation to CTE Program Standard #
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Journalism.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.910.RST.2.6	
01.03	Integration of Knowledge and Ideas	
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04	Range of Reading and Level of Text Complexity	
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Journalism.	
02.01	Text Types and Purposes	
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02	Production and Distribution of Writing	
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update	

Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Journalism.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
03.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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 Produce writing appropriate to journalistic media--The student will be able to:		
12.01 Write headlines and captions for a variety of journalistic activities.	LAFS.910.W.1.2 LAFS.910.W.2.4	
12.02 Identify the "who, what, when, where, and how" components of a news story.	LAFS.910.W.1.2 LAFS.910.W.2.4	
12.03 Write a news story in acceptable journalistic style.	LAFS.910.W.1.2 LAFS.910.W.2.4	
12.04 Write a sports article using news style and appropriate jargon.	LAFS.910.W.1.2 LAFS.910.W.2.4	
12.05 Write an editorial of commendation, condemnation, or both, offering observations and/or criticisms.	LAFS.910.W.1.2 LAFS.910.W.2.4	
12.06 Write a feature story that adheres to acceptable column style.	LAFS.910.W.1.2 LAFS.910.W.2.4	
12.07 Describe how copyright law pertains to professional and educational use of other writers' materials.	LAFS.910.W.3.7 LAFS.910.W.3.8	
12.08 Write copy for a variety of journalistic media (television, radio, magazines, etc.)	LAFS.910.W.1.2 LAFS.910.W.2.4	
13.0 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:		
13.01 Identify the principles of layout design.		
13.02 Identify the basic elements necessary to produce a good photograph.		SC.912.N.1.1
13.03 Describe how the use of photograph or photograph idea extends the written word.		
13.04 Identify equipment appropriate for production of a variety of journalistic media.		SC.912.N.1.1
13.05 Identify principles of advertising.		
13.06 Identify proofreading symbols.		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
14.0	Plan a set for television production--The student will be able to:		
14.01	Prepare television set for a planned production.		
14.02	Draw and design a set plan to scale.		
14.03	Select and arrange state props.		
14.04	Utilize hand tools to construct scene components.		
14.05	Inspect and repair scenery as needed.		
15.0	Perform lighting activities for a planned production--The student will be able to:		
15.01	Describe types of lighting fixtures.	LAFS.910.L.3.6	
15.02	Identify parts of lighting fixtures.	LAFS.910.L.3.6	
15.03	Perform special effects lighting.		
15.04	Set-up appropriate lighting for a production.		SC.912.N.1.1
15.05	Describe functions of master lighting panel and dimmer board.	LAFS.910.L.3.6	
15.06	Operate master lighting panel to dimmer board.		
15.07	Analyze lighting needs for production.		
16.0	Demonstrate correct use of basic equipment used in television production--The student will be able to:		
16.01	Load, record and play a videotape.		
16.02	Demonstrate the steps necessary to set up, turn on, and operate a video camera.		
16.03	Demonstrate picture composition.		
16.04	Identify, select and demonstrate use of an appropriate microphone.		SC.912.N.1.1
16.05	Identify the qualities of a good audio track.		
16.06	Demonstrate basic television lighting.		
16.07	Explain the care, storage and use of television hardware and software.		SC.912.N.1.1
17.0	Demonstrate ability to identify different types of script copy--The student will be able to:		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
17.01	Identify scripts by format.	LAFS.910.L.3.6 LAFS.910.W.1.1,2,3	
17.02	Define terminology used in broadcast script writing.	LAFS.910.L.3.6	
18.0	Demonstrate ability to write script in broadcast style--The student will be able to:		
18.01	Plan and produce a storyboard.		
18.02	Specify steps leading to broadcast scripts.		
18.03	Write broadcast scripts.		
19.0	Perform electronic/desktop publishing operations--The student will be able to:		
19.01	Identify machine specifications and functions.		
19.02	Prepare computer printer and scanner for operations.		
20.0	Demonstrate knowledge of electronic/desktop publishing concepts--The student will be able to:		
20.01	Identify the skills needed by an electronic desktop publisher.		
20.02	Identify significant developments in the electronic/desktop publishing industry.		
20.03	Define commonly used terms in graphic communications.	LAFS.910.L.3.6	
20.04	Identify characteristics of paper.		
20.05	Identify software used in electronic/desktop publishing.		
21.0	Perform mechanical creative support operations--The student will be able to:		
21.01	Identify characteristics of type, type families, type series, and type styles.		
21.02	Identify elements of design.		
21.03	Copy, fit, and markup (specify type sizes and styles).		
21.04	Paste up mechanical elements electronically.		
21.05	Check and compare completed mechanical to comprehensive layout for final proofing.		
21.06	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.

Florida Standards		Correlation to CTE Program Standard #
22.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Journalism.	
22.01	Key Ideas and Details	
22.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
22.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
22.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
22.02	Craft and Structure	
22.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
22.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
22.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. LAFS.1112.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
22.03	Integration of Knowledge and Ideas	
22.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
22.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
22.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
22.04	Range of Reading and Level of Text Complexity	
22.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
22.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
23.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Journalism.	
23.01	Text Types and Purposes	
23.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
23.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
23.02	Production and Distribution of Writing	
23.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
23.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
23.02.3	Use technology, including the Internet, to produce, publish, and update	



Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
<b>23.03 Research to Build and Present Knowledge</b>		
23.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
23.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
23.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
<b>23.04 Range of Writing</b>		
23.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
<b>24.0</b>	<b>Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Journalism.</b>	
24.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
24.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
24.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
24.04	Model with mathematics. MAFS.K12.MP.4.1	
24.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
24.06	Attend to precision. MAFS.K12.MP.6.1	
24.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #	
	MAFS.K12.MP.7.1	
24.08 Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1	

**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 Demonstrate proficiency in computer skills--The student will be able to:		
25.01 Identify basic computer parts (e.g., RAM, ROM).	LAFS.1112.L.3.6	
25.02 Demonstrate an understanding of all functions of a computer.	LAFS.1112.L.3.6	
25.03 Utilize appropriate font management techniques (e.g., true type, postscript, install and remove fonts).		
25.04 Perform storage management (e.g., hard drive, DVD, CD).		
25.05 Perform basic maintenance of computers and peripherals.		
26.0 Demonstrate knowledge of digital publishing concepts--The student will be able to:		
26.01 Identify the skills needed by a digital designer.		
26.02 Define commonly used terms in graphic communications.	LAFS.1112.L.3.6	
26.03 Identify characteristics of paper.	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	
26.04 Identify different kinds of color (e.g., spot, process).	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
26.05 Identify software used in digital publishing.		
26.06 Demonstrate knowledge of copyright laws.	LAFS.1112.L.3.6 MAFS.912.A-REI.1.1	
27.0 Perform decision-making activities--The student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
27.01 Determine work priorities.	MAFS.912.N-Q.1.1,2,3	
27.02 Evaluate information to be used and choose relevant material.	LAFS.1112.W.2.5 LAFS.1112.W.3.8 MAFS.912.N-Q.1.1,2,3	SC.912.N.1.1
27.03 Determine the audience.	LAFS.1112.W.2.4,5	
27.04 Demonstrate an understanding of various advertising mediums.		
27.05 Recognize and maintain ethical standards.		
28.0 Perform layout, design, and measurement activities--The student will be able to:		
28.01 Identify characteristics of type, type families, type series, and type styles.	MAFS.912.N-Q.1.1,2,3	
28.02 Assemble mechanical elements electronically.		
28.03 Prepare rough layout designs.		
28.04 Identify elements of design.		
29.0 Demonstrate proficiency in digital publishing operations--The student will be able to:		
29.01 Key with speed and accuracy to meet industry standards.		
29.02 Demonstrate core publishing skills, including creating tables, text boxes, manipulating graphics and inserting images.	LAFS.1112.W.2.6	
29.03 Insert and format references and captions.	LAFS.1112.W.2.6	
29.04 Complete projects using a variety of fonts, sizes, leading, and alignments.	LAFS.1112.W.2.6	
29.05 Output projects using a variety of devices (e.g., printers, image setters).	LAFS.1112.W.2.6	
29.06 Design with type using kerning, tracking, horizontal/vertical scale, baseline shift, etc.	LAFS.1112.W.2.6	
29.07 Produce projects using tables, layouts and templates.	LAFS.1112.W.2.6 MAFS.912.F-IF.2.4,5	
29.08 Produce projects using white space.		
29.09 Assemble multipage documents.		
29.10 Create documents that use master pages.		
29.11 Use a variety of styles to produce effective layouts		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
29.12	Produce a document using printer and reader spreads.	LAFS.1112.W.2.6	
29.13	Use publishing software to create a pre-press profile.	LAFS.1112.W.2.6	
29.14	Produce a variety of designs using layout/paste up software.		
29.15	Create various print and digital publications, including: business cards, letterheads, brochures, newsletters, and calendars.		
29.16	Create electronic forms.		
29.17	Assign passwords and create restrictions with portable document formats.		
29.18	Design an electronic portfolio.	LAFS.1112.W.2.6	
30.0	Demonstrate proficiency in digital imaging--The student will be able to:		
30.01	Demonstrate proper use of a scanner/input devices/ digital camera.		
30.02	Proofread electronically and manually.	LAFS.1112.W.2.5	
31.0	Demonstrate proficiency in creating a simple website--The student will be able to:		
31.01	Create a webpage.	MAFS.912.S-IC.2.3	
31.02	Create a simple website and use hyperlinks.		
31.03	Convert publications for viewing on the Internet.		
31.04	Save files in multiple formats.		
31.05	Create, send and manage a survey and survey results.		

**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.

Florida Standards		Correlation to CTE Program Standard #
22.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Journalism.	
22.01	Key Ideas and Details	
22.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
22.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
22.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
22.02	Craft and Structure	
22.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
22.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
22.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.1112.RST.2.6	
22.03	Integration of Knowledge and Ideas	
22.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
22.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
22.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
22.04	Range of Reading and Level of Text Complexity	
22.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
22.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
23.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Journalism.	
23.01	Text Types and Purposes	
23.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
23.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
23.02	Production and Distribution of Writing	
23.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
23.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	

Florida Standards		Correlation to CTE Program Standard #
23.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
<b>23.03 Research to Build and Present Knowledge</b>		
23.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
23.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
23.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
<b>23.04 Range of Writing</b>		
23.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
<b>24.0</b>	<b>Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Journalism.</b>	
24.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
24.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
24.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
24.04	Model with mathematics. MAFS.K12.MP.4.1	
24.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
24.06	Attend to precision. MAFS.K12.MP.6.1	

Florida Standards	Correlation to CTE Program Standard #
24.07 Look for and make use of structure.	MAFS.K12.MP.7.1
24.08 Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1

**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
32.0 Participate in work-based learning experiences--The student will be able to:		
32.02 Participate in work-based learning experiences in a web design services environment.		
32.03 Discuss the use of technology in a web design services environment.		
32.04 Compare and contrast the software applications used in a web design services environment.		
33.0 Perform decision making activities--The student will be able to:		
33.02 Determine work priorities.		
33.03 Evaluate and select appropriate software packages to complete assigned tasks.		
33.04 Evaluate information to be used and choose relevant material.		
33.05 Determine the audience.		
33.06 Compare and select appropriate multimedia tools.		
34.0 Perform e-mail activities--The student will be able to:		
34.01 Describe e-mail capabilities and functions.		
34.02 Create and send e-mail messages with attachments.		
34.03 Reply to and forward e-mail messages.		
34.04 Organize and manage e-mail messages.		
34.05 Utilize all applicable e-mail options and functions.		



<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
34.06	Use the internet to perform e-mail activities.		
34.07	Define the standards used by internet/intranet e-mail (e.g., POP3, MIME).		
34.08	Describe the issues involved in sending and receiving documents as e-mail attachments.		
34.09	Identify privacy issues in the employee/employer relationship (e.g., avoid libel, spam, and personal usage).		
35.0	Demonstrate proficiency using operating systems--The student will be able to:		
35.01	Demonstrate proficiency with file management and structure (e.g., folder creation, file creation, backup, copy, delete, open, save).		
35.02	Describe the difference between relative and absolute path commands.		
35.03	Demonstrate a working knowledge of standard file formats.		
35.04	Demonstrate proficiency with help references.		
36.0	Demonstrate proficiency navigating the internet, intranet, and the WWW--The student will be able to:		
36.01	Identify and describe web terminology.		
36.02	Describe the history of the internet and intranet.		
36.03	Describe the difference between a client and a server.		
36.04	Describe the difference between the internet, intranet, and www.		
36.05	Describe the different methods by which information may be accessed on the internet/intranet (e.g., browser, FTP, gopher, telnet, veronica).		
36.06	List the available resources and services on the internet (e.g., electronic commerce, personal, government, business, etiquette, education, distance learning).		
36.07	Locate information on the internet/intranet using a web browser.		
36.08	Copy information from the internet/intranet, save, and print using a web browser.		
36.09	Demonstrate proficiency in using the basic features of GUI browsers (e.g., setting bookmarks, basic configurations, e-mail configurations, address book).		
36.10	Define universal resource locators (URL's associated protocols (e.g., .COM, .ORG, .EDU, .GOV, .NET, .MIL).		
36.11	Identify and use search engines to locate information.		
36.12	Describe the various ways of communicating on the internet/intranet (e.g., e-mail,		

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
forums, IRC, chat, listserv, USENET, moos, etc.).		
36.13 Describe and observe internet/intranet ethics and copyright laws.		
36.14 Identify methods to protect personal copyright.		
<b>37.0 Demonstrate proficiency using HTML commands--The student will be able to:</b>		
37.01 Identify elements of a web page.		
37.02 Describe individual web page layouts and content (e.g., writing for the web, web structure).		
37.03 Define basic HTML terminology.		
37.04 Analyze html source code developed by others.		
37.05 Create a web page using basic html tags (e.g., links, lists, character styles, text alignment, tables).		
37.06 Use storyboarding techniques for subsequent web pages (e.g., linear, hierarchical).		
37.07 Add graphics to web pages.		
37.08 Edit and test html documents for accuracy and validity.		
37.09 Use basic functions of HTML editors and converters.		
37.10 Use basic functions of WYSIWYG editors.		
<b>38.0 Demonstrate proficiency in page design applicable to the WWW--The student will be able to:</b>		
38.01 Develop an awareness of acceptable web page design, including index pages in relation to the rest of the web site.		
38.02 Describe and apply color theory as it applies to web page design (e.g., background and text color).		
38.03 Identify and convert graphic formats.		
38.04 Access and digitize graphics through various resources (e.g., scanner, digital cameras, on-line graphics, clipart, CD ROMS).		
38.05 Use image design software to create and edit images.		
<b>39.0 Develop an awareness of internet/intranet tools--The student will be able to:</b>		
39.01 Describe the various hardware components used on the internet/intranet.		

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
39.02 Demonstrate the use of compression programs.		
39.03 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-M*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
40.0 Demonstrate proficiency in website planning and the design process. – The student will be able to:		
40.01 Define information architecture.		
40.02 Discuss the importance of information architecture to web design and development.		
40.03 Conduct a client interview to determine the business purpose and needs.		
40.04 Conduct a competitive analysis.		
40.05 Identify stages in the web design process and describe the activities comprising each stage.		
40.06 Define the site structure by creating a content map, storyboard, and associated wireframes.	MAFS.912.G-MG.1.3	
40.07 Create a global site map.		
40.08 Discuss the legal and ethical issues related to web design.		SC.912.L.16.10
40.09 Describe accessibility and its implications on web design.		
40.10 Create a web site mock-up for client approval.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
41.0 Develop markup language structures. – The student will be able to:		
41.01 Define common markup languages and their usage.		
41.02 Examine emerging and new markup languages.		
41.03 Determine browser support and appropriate usage of markup languages (existing and emerging).		
41.04 Identify common DOCTYPEs (e.g., Strict, Transitional and Frameset) and describe their appropriate use.		
42.0 Create basic webpages. – The student will be able to:		
42.01 Create basic webpage structures using common markup elements and attributes.		
42.02 Incorporate list structures in a webpage (i.e., ordered, unordered, definition, nested).		
42.03 Incorporate link structures in a webpage (i.e., external, internal, email).		
42.04 Research and incorporate web color usage principles in a webpage.		
43.0 Incorporate images and graphical formatting on a webpage. – The student will be able to:		
43.01 Describe usage guidelines (e.g., format types, size, relevance) for integrating images and graphics onto a webpage.		
43.02 Compare and contrast standard image formats used in webpage design.	MAFS.912.S-CP.1.1	
43.03 Incorporate graphics into a webpage design.		
43.04 Create and incorporate image maps in a webpage.		
43.05 Optimize images and graphics for use in a webpage.		
44.0 Create a basic table structure. – The student will be able to:		
44.01 Describe how tables are used in web design.		SC.912.N.1.1
44.02 Discuss the advantages and disadvantages of incorporating tables in a webpage design.		SC.912.N.1.1
44.03 Define and modify table structures for the presentation of tabular information.	MAFS.912.G-MG.1.3	SC.912.N.1.1
44.04 Create accessible tables using standard table elements and attributes.		SC.912.N.1.1
45.0 Incorporate form structures in a webpage. – The student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
45.01 Create an accessible form using common elements, including form, field set, legend, text area, select, option, button, and input (radio, checkbox, submit, reset, image, password, hidden).		
45.02 Describe and diagram the relationship between XHTML forms and server-side technologies.		
45.03 Compare and contrast the GET and POST methods for forms handling.		
45.04 Define form validation and describe how it is accomplished.		
45.05 List popular server-side technologies often used to process content sent from XHTML forms.		
45.06 Use labels with form elements.		
45.07 Connect a XHTML form to a server-side script for processing.		
46.0 Describe frame structures and their usage. – The student will be able to:		
46.01 Explore frame and iframe structures and support issues.		
46.02 Describe appropriate uses of iframes.		
46.03 Incorporate frame structure in a webpage.		
47.0 Use Cascading Style Sheets (CSS). – The student will be able to:		
47.01 Define CSS and describe its importance in web design.		
47.02 Compare and contrast existing and emerging CSS versions.		
47.03 Determine browser support and appropriate usage of CSS (existing and emerging versions).		
47.04 Explain "document flow" and describe its implications on web design.		
47.05 Recognize and use element selectors, ID selectors, class selectors, pseudo-class selectors, and descendant selectors.		
47.06 Explain how inheritance and specificity affect CSS rule conflicts.		
47.07 Use inline styles, embedded style sheets, and external style sheets.		
47.08 Use the link and import methods to connect to an external style sheet.		
47.09 Use CSS shorthand techniques to create efficient and concise style sheets.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
47.10 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).		
47.11 Use CSS to style tables (e.g., borders, width, spacing, alignment, background).	MAFS.912.G-MG.1.3	
47.12 Use CSS to enhance the appearance and usability of an XHTML form.		
48.0 Examine web design technologies and techniques. – The student will be able to:		
48.01 Compare and contrast common authoring tools.		
48.02 Compare and contrast client-side and server-side technologies.		
48.03 Define e-commerce types and usage.		
48.04 Describe database connectivity relative to websites.		
48.05 Identify technologies to enhance user experience.		
49.0 Describe the process for publishing a website. – The student will be able to:		
49.01 Explore domain name selection principles.		
49.02 Identify process to registering a domain name.		
49.03 Compare and contrast hosting providers, features, and selection criteria.	MAFS.912.S-CP.1.1	
49.04 Describe the various means for uploading website files (e.g., FTP, web-based tools).		
50.0 Describe how website performance is monitored and analyzed. – The student will be able to:		
50.01 Identify issues related to website maintenance.		
50.02 Use webpage validation tools.		SC.912.N.1.1
50.03 Describe website performance metrics (e.g., visits, time-on-page, time-on-site) and discuss their design implications.		
50.04 Demonstrate knowledge of accessibility problems and solutions.		
50.05 Examine indexing, page ranking, basic Search Engine Optimization techniques.		
50.06 Explore common website analytic tools.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
51.0 Create an informational website. – The student will be able to:		
51.01 Use GUI (Graphical User Interface) web authoring software to create a multi-page informational website.		
51.02 Use image-editing software to enhance website designs with simple graphics.		
51.03 Use animation software to enhance website designs.		
51.04 Enhance the website using client-side technologies (rollovers, check plug-ins, pop-up windows).		
51.05 Demonstrate efficient, consistent web site development practice (use of templates, snippets).		
52.0 Demonstrate language arts knowledge and skills. – The student will be able to:		
52.01 Locate, comprehend and evaluate key elements of oral and written information.		
52.02 Draft, revise, and edit written documents using correct grammar, punctuation and vocabulary.		
52.03 Present information formally and informally for specific purposes and audiences.		
53.0 Demonstrate mathematics knowledge and skills. – The student will be able to:		
53.01 Demonstrate knowledge of arithmetic operations.		
53.02 Analyze and apply data and measurements to solve problems and interpret documents.	MAFS.912.A-REI.1.1	SC.912.N.1.1
53.03 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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>

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, 30, 31
Standard Length	11 credits
Teacher Certification	PHOTOG @7 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4021 – Photographers 51-9151 – Photographic Process Workers and Processing Machine Operators
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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.

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A	8772010	Commercial Photography Technology 1	1 credit	51-9151	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		2	PA
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, VO= Career and Technical Education)*

### **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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Commercial Photography Technology.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Commercial Photography Technology.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Commercial Photography Technology.
- 04.0 Perform laboratory skills.
- 05.0 Manage a photographic business.
- 06.0 Control exposures (35mm camera).
- 07.0 Take basic photographs (35mm camera).
- 08.0 Finish photographs.
- 09.0 Apply lighting techniques.
- 10.0 Reproduce photographic media.
- 11.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Commercial Photography Technology.
- 12.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Commercial Photography Technology.
- 13.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Commercial Photography Technology.
- 14.0 Demonstrate appropriate communication skills.
- 15.0 Reproduce transparencies and internegatives.
- 16.0 Operate various format cameras.
- 17.0 Process color images.
- 18.0 Procure color photographs.
- 19.0 Take studio photographs.
- 20.0 Produce media presentations.
- 21.0 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.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Commercial Photography Technology.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a	

Florida Standards		Correlation to CTE Program Standard #
	procedure, or discussing an experiment in a text, defining the question the author seeks to address. LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Commercial Photography Technology.	
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.	



Florida Standards		Correlation to CTE Program Standard #
		LAFS.910.WHST.2.5
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.	
		LAFS.910.WHST.2.6
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	
		LAFS.910.WHST.3.7
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.	
		LAFS.910.WHST.3.8
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research.	
		LAFS.910.WHST.3.9
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	
		LAFS.910.WHST.4.10
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Commercial Photography Technology.	
03.01	Make sense of problems and persevere in solving them.	
		MAFS.K12.MP.1.1
03.02	Reason abstractly and quantitatively.	
		MAFS.K12.MP.2.1
03.03	Construct viable arguments and critique the reasoning of others.	
		MAFS.K12.MP.3.1
03.04	Model with mathematics.	
		MAFS.K12.MP.4.1
03.05	Use appropriate tools strategically.	
		MAFS.K12.MP.5.1
03.06	Attend to precision.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.6.1
03.07 Look for and make use of structure.	MAFS.K12.MP.7.1
03.08 Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1

**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 Perform laboratory skills--The student will be able to:		
04.01 Mix developers and other chemicals.		
04.02 Hand-process black and white film.		
04.03 Print black and white photographs.		
04.04 Process black and white paper.		
05.0 Manage the photographic business--The student will be able to:		
05.01 Apply communication skills.		
05.02 Apply human relation skills.		
05.03 Set rates for photographic work.		
05.04 Maintain shop records and files.		
05.05 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.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Commercial Photography Technology.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a	

Florida Standards		Correlation to CTE Program Standard #
	procedure, or discussing an experiment in a text, defining the question the author seeks to address. LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Commercial Photography Technology.	
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.	

Florida Standards		Correlation to CTE Program Standard #
		LAFS.910.WHST.2.5
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.	
		LAFS.910.WHST.2.6
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	
		LAFS.910.WHST.3.7
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.	
		LAFS.910.WHST.3.8
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research.	
		LAFS.910.WHST.3.9
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	
		LAFS.910.WHST.4.10
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Commercial Photography Technology.	
03.01	Make sense of problems and persevere in solving them.	
		MAFS.K12.MP.1.1
03.02	Reason abstractly and quantitatively.	
		MAFS.K12.MP.2.1
03.03	Construct viable arguments and critique the reasoning of others.	
		MAFS.K12.MP.3.1
03.04	Model with mathematics.	
		MAFS.K12.MP.4.1
03.05	Use appropriate tools strategically.	
		MAFS.K12.MP.5.1
03.06	Attend to precision.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.6.1
03.07 Look for and make use of structure.	MAFS.K12.MP.7.1
03.08 Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1

**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 Control exposures (35mm camera)--The student will be able to:		
06.01 Set appropriate f-stop and shutter speeds.		
06.02 Select appropriate film type.		
07.0 Take basic photographs (35mm camera)--The student will be able to:		
07.01 Apply camera care and maintenance principles.		
07.02 Compose photographs.		
07.03 Take still photographs.		
07.04 Take action photographs.		
08.0 Finish photographs--The student will be able to:		
08.01 Mount photographs.		
08.02 Mat/frame photographs.		
09.0 Apply lighting techniques--The student will be able to:		
09.01 Take photographs with available light.		
09.02 Take photographs with electronic strobe.		
09.03 Take photographs with photo-flood lighting.		

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSS-Sci</b>
10.0 Reproduce photographic media--The student will be able to:		
10.01 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.

Florida Standards		Correlation to CTE Program Standard #
11.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Commercial Photography Technology.	
11.01	Key Ideas and Details	
11.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
11.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
11.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
11.02	Craft and Structure	
11.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
11.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
11.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.	



Florida Standards		Correlation to CTE Program Standard #
	LAFS.1112.RST.2.6	
11.03	Integration of Knowledge and Ideas	
11.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
11.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
11.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
11.04	Range of Reading and Level of Text Complexity	
11.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
11.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
12.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Commercial Photography Technology.	
12.01	Text Types and Purposes	
12.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
12.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
12.02	Production and Distribution of Writing	
12.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
12.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	

Florida Standards		Correlation to CTE Program Standard #
12.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
12.03 Research to Build and Present Knowledge		
12.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
12.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
12.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
12.04 Range of Writing		
12.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
13.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Commercial Photography Technology.	
13.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
13.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
13.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
13.04	Model with mathematics. MAFS.K12.MP.4.1	
13.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
13.06	Attend to precision. MAFS.K12.MP.6.1	

Florida Standards	Correlation to CTE Program Standard #
13.07 Look for and make use of structure. MAFS.K12.MP.7.1	
13.08 Look for and express regularity in repeated reasoning. MAFS.K12.MP.8.1	

**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 Manage the photographic business--The student will be able to:		
05.01 Apply communication skills.		
05.02 Apply human relation skills.		
05.03 Set rates for photographic work.		
05.04 Maintain shop records and files.		
05.05 Maintain presentational portfolio		
09.0 Apply lighting techniques--The student will be able to:		
09.01 Take photographs with available light.		
09.02 Take photographs with electronic strobe.		
09.03 Take photographs with photo-flood lighting.		
10.0 Reproduce photographic media--The student will be able to:		
10.01 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.

Florida Standards		Correlation to CTE Program Standard #
11.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Commercial Photography Technology.	
11.01	Key Ideas and Details	
11.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. <p align="right">LAFS.1112.RST.1.1</p>	
11.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. <p align="right">LAFS.1112.RST.1.2</p>	
11.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. <p align="right">LAFS.1112.RST.1.3</p>	
11.02	Craft and Structure	
11.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. <p align="right">LAFS.1112.RST.2.4</p>	
11.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. <p align="right">LAFS.1112.RST.2.5</p>	
11.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.1112.RST.2.6	
11.03	Integration of Knowledge and Ideas	
11.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
11.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
11.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
11.04	Range of Reading and Level of Text Complexity	
11.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
11.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
12.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Commercial Photography Technology.	
12.01	Text Types and Purposes	
12.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
12.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
12.02	Production and Distribution of Writing	
12.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
12.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	

Florida Standards		Correlation to CTE Program Standard #
12.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
<b>12.03 Research to Build and Present Knowledge</b>		
12.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
12.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
12.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
<b>12.04 Range of Writing</b>		
12.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
<b>13.0</b>	<b>Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Commercial Photography Technology.</b>	
13.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
13.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
13.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
13.04	Model with mathematics. MAFS.K12.MP.4.1	
13.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
13.06	Attend to precision. MAFS.K12.MP.6.1	

Florida Standards		Correlation to CTE Program Standard #
13.07	Look for and make use of structure.	
		MAFS.K12.MP.7.1
13.08	Look for and express regularity in repeated reasoning.	
		MAFS.K12.MP.8.1

**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	Reproduce transparencies and internegatives--The student will be able to:		
15.01	Scan transparencies.		
15.02	Scan internegatives.		
16.0	Operate various format cameras--The student will be able to:		
16.01	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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
17.0	Process color images--The student will be able to:		
17.01	Hand process color negatives and transparencies. (optional)		
17.02	Process color negatives and transparencies. (optional)		
17.03	Down load images to a computer.		
17.04	Save images in a computer to an external storage device.		
18.0	Procure color photographs--The student will be able to:		
18.01	Process color paper. (optional)		
18.02	Print color negatives. (optional)		
18.03	Print color negatives using color analyzer. (optional)		
18.04	Purchase color mediums		
18.05	Calibrate a computer monitor		



<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
18.06 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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
14.0 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.		
16.0 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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
14.0	Demonstrate appropriate communication skills--The student will be able to:		
14.01	Answer and ask questions coherently and concisely.		
14.02	Read critically by recognizing assumptions and implications and by evaluating ideas.		
14.03	Demonstrate appropriate telephone/communication skills.		
19.0	Take studio photographs--The student will be able to:		
19.01	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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
21.0 Use digital imaging--The student will be able to:		
21.01 Use basic photographic computer skills		
21.02 Use a professional imaging program.		
21.03 Use a flatbed and film scanner.		
21.04 Output photographic quality images using a digital printer.		
21.05 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
19.0 Take studio photographs--The student will be able to:		
19.02 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
20.0 Produce media presentations--The student will be able to:		
20.01 Prepare script for slide presentation.		
20.02 Shoot slides for slide presentation.		
20.03 Produce 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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
20.0 Produce media presentations--The student will be able to:		
20.01 Prepare script for video presentation.		
20.02 Shoot video tape.		
20.03 Produce 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.

### **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.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

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

**Secondary – Career Preparatory**

Program Number	8772100
CIP Number	0610020203
Grade Level	9-12, 30, 31
Standard Length	11 credits
Teacher Certification	TEC ELEC ¶ 7 ¶ G TV PRO TEC @ 7 G TEC ED 1 @ 2
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4032 – Film and Video Editors 27-4031 – Camera Operators, Television, Video, and Motion Picture
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

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

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 overall production of television studio activities including: scripts, 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 four occupational completion points.

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A	8772110	Television Production 1	3 credits	27-4031	2	PA
	8772120	Television Production 2			2	PA
	8772130	Television Production 3			3	VO
B	8772140	Television Production 4	3 credits	27-4031	3	VO
	8772150	Television Production 5			3	PA
	8772160	Television Production 6			3	PA
C	8772170	Television Production 7	3 credits	27-4032	3	PA
	8772180	Television Production 8			3	PA
	8772190	Television Production 9			3	PA
D	8772191	Television Production 10	2 credits	27-4032	3	VO
	8772192	Television Production 11			3	VO

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics, VO= Career and Technical Education)

### 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
8772110	2/87 2%	3/80 4%	22/83 27%	3/69 4%	22/67 33%	2/70 3%	2/69 3%	22/82 27%	3/66 5%	22/74 30%	2/72 3%
8772120	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%
8772130	21/87 24%	21/80 26%	2/83 2%	21/69 30%	2/67 3%	19/70 27%	21/69 30%	2/82 2%	16/66 24%	2/74 3%	21/72 29%
8772140	19/87 22%	19/80 24%	#	19/69 28%	#	19/70 27%	19/69 28%	#	14/66 21%	#	19/72 26%
8772150	#	#	#	#	#	#	#	#	#	#	#

8772160	#	#	#	#	#	#	#	#	#	#	#
8772170	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%
8772180	#	#	#	#	#	#	#	#	#	#	#
8772190	#	#	#	#	#	#	#	#	#	#	#
8772191	#	#	#	#	#	#	#	#	#	#	#
8772192	#	#	#	#	#	#	#	#	#	#	#

\*\* 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
8772110	16/67 24%	9/75 12%	16/54 30%	10/46 22%	10/45 22%	#	#
8772120	14/67 21%	8/75 11%	14/54 26%	3/46 7%	3/45 7%	#	#
8772130	4/67 6%	7/75 9%	#	#	#	8/45 18%	8/45 18%
8772140	#	#	#	#	#	3/45 7%	3/45 7%
8772150	#	#	#	#	#	3/45 7%	3/45 7%
8772160	#	#	#	#	#	11/45 24%	11/45 24%
8772170	#	#	#	#	#	1/45 2%	1/45 2%
8772180	#	#	#	#	#	#	#
8772190	#	#	#	#	#	#	#
8772191	#	#	#	#	#	#	#
8772192	#	#	#	#	#	#	#

# 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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Television Production.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Television Production.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Television Production.
- 04.0 Apply knowledge of the television production technology program instructional system, safety procedures and trade terminology.
- 05.0 Identify lighting needs for a planned production.
- 06.0 Use basic television production equipment.
- 07.0 Interpret broadcast style scripts.
- 08.0 Work as part of the television production team.
- 09.0 Perform basic audio and video recording and editing operations.
- 10.0 Conduct online research for television production.
- 11.0 Operate an editing system.
- 12.0 Stage a set as directed for television production.
- 13.0 Perform lighting activities for a planned production.
- 14.0 Use basic equipment in a television production studio.
- 15.0 Identify different types of script copy.
- 16.0 Write a broadcast style script.
- 17.0 Perform character generation (CG).
- 18.0 Operate television studio audio control system.
- 19.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Television Production.
- 20.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Television Production.
- 21.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Television Production.
- 22.0 Perform special effects lighting for a planned production.
- 23.0 Demonstrate correct use of equipment used in television production.
- 24.0 Perform basic digital audio and video recording and editing operations.
- 25.0 Perform television production and programming activities.
- 26.0 Demonstrate industry accepted skills for studio production.
- 27.0 Utilize the internet to gather data for a planned production.
- 28.0 Perform basic maintenance for lighting instruments.
- 29.0 Function as a member of a production team.
- 30.0 Create a television program.
- 31.0 Perform advanced audio and video recording and editing operations.

- 32.0 Research and select one or more areas of television production for specialization.
- 33.0 Demonstrate an independent level of proficiency in the selected area of specialization.
- 34.0 Demonstrate advanced scriptwriting techniques.
- 35.0 Apply production skills by producing a program.
- 36.0 Perform advanced digital audio and video recording and editing operations.
- 37.0 Create a variety of television programming.
- 38.0 Perform Electronic News Gathering (ENG) and Electronic Field Production (EFP) equipment functions.
- 39.0 Translate written script into a full television production.
- 40.0 Create and maintain a website with embedded production media.
- 41.0 Function at an independent level with proficiency in one area of television production.
- 42.0 Research a specific career in television.
- 43.0 Design a capstone project in television production using skills learned throughout the program.



**Florida Department of Education  
Student Performance Standards**

**Course Title:** Television Production 1  
**Course Number:** 8772110  
**Course Credit:** 1

**Course Description:**

This course covers competencies in safety, lighting, basic television production equipment, broadcast script interpretation, teamwork, research and audio and video editing.

Florida Standards		Correlation to CTE Program Standard #
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Television Production.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question	

Florida Standards		Correlation to CTE Program Standard #
	the author seeks to address. LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Television Production.	
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	

Florida Standards		Correlation to CTE Program Standard #
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Television Production.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	

Florida Standards		Correlation to CTE Program Standard #
03.07	Look for and make use of structure.	MAFS.K12.MP.7.1
03.08	Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1

**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	Apply knowledge of the television production technology program instructional system, safety procedures and trade terminology--The student will be able to:		
04.01	Follow classroom procedures.		SC.912.N.1.1
04.02	State and apply general safety rules for operation of equipment and learning activities in the lab.		
04.03	Utilize trade terminology in the television production lab.		
04.04	Utilize trade abbreviations and acronyms as appropriate.		
04.05	Transport equipment safely and securely.		
04.06	Store equipment in appropriate locations.		
05.0	Identify lighting needs for a planned production--The student will be able to:		
05.01	Describe types of lighting fixtures.	LAFS.910.L.3.6	
05.02	Identify parts of lighting fixtures and accessories.	LAFS.910.L.3.6	
05.03	Set-up appropriate lighting for a production.	MAFS.912.G-MG.1.1 MAFS.912.G-GPE.2.7	
05.04	Analyze lighting needs for production.		
06.0	Use basic television production equipment--The student will be able to:		
06.01	Load, cue, transfer, record and play video and audio from tapes, DVDs, CDs, SD Cards, and HD Drives.		
06.02	Set up, turn on and operate a video camera.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
06.03 Set up, turn on, and operate audio production equipment.		
06.04 Demonstrate picture composition principles.	MAFS.912.N-Q.1.2,3	
06.05 Identify types of video connectors.	LAFS.910.L.3.6	
06.06 Identify types of audio connectors.	LAFS.910.L.3.6	
06.07 Identify, select and demonstrate use of an appropriate microphone.	LAFS.910.L.3.6	SC.912.N.1.1
06.08 Identify the qualities of a good audio track.	LAFS.910.L.3.6	
06.09 Demonstrate basic television lighting.		SC.912.N.1.1
06.10 Explain the care, storage and use of television hardware and software.		
06.11 Select appropriate equipment.		SC.912.N.1.1
06.12 Identify and select microphones for production.	LAFS.910.L.3.6	
06.13 Place microphones for maximum effect.		
06.14 Describe video and audio input and output devices.	LAFS.910.L.3.6	
06.15 Set up video and audio input and output devices for production.		
06.16 Operate video and audio input and output devices during recording and playback.		
06.17 Describe function of video and audio monitors.	LAFS.910.L.3.6	
07.0 Interpret broadcast style scripts--The student will be able to:		
07.01 Write a script in documentary format.	LAFS.910.W.1.2,3	
07.02 Write a treatment.	LAFS.910.W.1.2 LAFS.910.W.2.4 LAFS.910.L.1.1,2	
07.03 Write a broadcast script including location information, camera moves and dialogue.	LAFS.910.W.2.4	
08.0 Work as part of the television production team--The student will be able to:		
08.01 List the job functions of the television production team.	LAFS.910.L.3.6	
08.02 Describe the steps of the production process.	LAFS.910.L.3.6	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.03 Give and follow directions.	LAFS.910.SL.1.1.B	
08.04 Function as a member of the production team.	LAFS.910.SL.1.1	
08.05 Set and adhere to production deadlines.		
09.0 Perform basic audio and video recording and editing operations--The student will be able to:		
09.01 Describe operational parts of a video recording device.	LAFS.910.L.3.6	
09.02 Operate video recording devices to record and playback.		
09.03 Perform editing procedures for both audio and video production needs.		
10.0 Conduct online research for television production --The student will be able to:		
10.01 Complete an internet search for viable information used in scripting a project.	LAFS.910.W.3.7,8,9	SC.912.N.1.4
10.02 Identify valid websites for information retrieval.	LAFS.910.W.3.7,8,9	
10.03 Clearly state the differences between .com, .gov, .edu, and .org sites.	LAFS.910.W.3.7,8,9	
11.0 Operate an editing system--The student will be able to:		
11.01 Transfer and log video.		
11.02 Prepare graphics for production.		
11.03 Combine elements into a program.		
11.04 Select best source material, such as voice over (VO), sound on tape (SOT), and B-roll, to achieve program goals.		
11.05 Control audio mix and effects.		
11.06 Edit a shot sequence or story for continuity.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Television Production 2  
**Course Number:** 8772120  
**Course Credit:** 1

**Course Description:**

This course covers competencies in staging, lighting, equipment use, and scripts.

Florida Standards		Correlation to CTE Program Standard #
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Television Production.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.910.RST.2.6	
01.03	Integration of Knowledge and Ideas	
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04	Range of Reading and Level of Text Complexity	
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Television Production.	
02.01	Text Types and Purposes	
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02	Production and Distribution of Writing	
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update	



Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Television Production.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
03.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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 Stage a set as directed for television production--The student will be able to:		
12.01 Dress a set for a television production.		
12.02 Inspect for and correct safety concerns.		SC.912.N.1.1
12.03 Sketch a set plan.		
13.0 Perform lighting activities for a planned production--The student will be able to:		
13.01 Describe functions of master lighting panel and dimmer board.	LAFS.910.L.3.6	
13.02 Operate master lighting panel and dimmer board.		
14.0 Use basic equipment in a television production studio--The student will be able to:		
14.01 Select appropriate audio and video cables for use.		SC.912.N.1.1
14.02 Troubleshoot a bad cable connection.		SC.912.N.1.1
14.03 Set up video and audio monitors for production.		
14.04 Describe function of a Camera Control Unit (CCU).	LAFS.910.L.3.6	
14.05 Operate a CCU to correct video signals from studio cameras.		
14.06 Describe parts of an audio mixing console.	LAFS.910.L.3.6	
14.07 Operate audio mixing console.		
14.08 Operate master switcher.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
14.09 Direct participants in production of a program.		
14.10 Perform on-camera.		
15.0 Identify different types of script copy--The student will be able to:		
15.01 Identify scripts by format, function and utilization.	LAFS.910.L.3.6	
15.02 Define terminology used in broadcast scriptwriting.	LAFS.910.L.3.6	
16.0 Write a broadcast style script--The student will be able to:		
16.01 Plan and produce a storyboard.		
16.02 Specify steps leading to broadcast scripts.	LAFS.910.W.2.4,5	
17.0 Perform character generation (CG) --The student will be able to:		
17.01 Operate a Teleprompter.		
17.02 Create television graphics using industry standard equipment.		
17.03 Understand television graphic safe zone and color design.		
17.04 Create CGs adhering to the rule of thirds.		
18.0 Operate television studio audio control system--The student will be able to:		
18.01 Identify and select microphones for production.	LAFS.910.L.3.6	SC.912.N.1.1
18.02 Place microphones for maximum effect.		SC.912.N.1.1
18.03 Describe parts of sound recording and playback devices.	LAFS.910.L.3.6	
18.04 Operate sound recording and playback devices.		
18.05 Describe parts of an audio mixing console.	LAFS.910.L.3.6	
18.06 Operate audio mixing console.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Television Production 3  
**Course Number:** 8772130  
**Course Credit:** 1

**Course Description:**

This course covers competencies in special effects lighting, use of equipment, digital audio and video recording and editing operations, television production and programming, and online research.

Florida Standards		Correlation to CTE Program Standard #
19.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Television Production.	
19.01	Key Ideas and Details	
19.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
19.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
19.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
19.02	Craft and Structure	
19.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
19.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
19.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.1112.RST.2.6	
19.03	Integration of Knowledge and Ideas	
19.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
19.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
19.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
19.04	Range of Reading and Level of Text Complexity	
19.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
19.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
20.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Television Production.	
20.01	Text Types and Purposes	
20.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
20.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
20.02	Production and Distribution of Writing	
20.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
20.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	

Florida Standards		Correlation to CTE Program Standard #
20.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
<b>20.03 Research to Build and Present Knowledge</b>		
20.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
20.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
20.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
<b>20.04 Range of Writing</b>		
20.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
<b>21.0</b>	<b>Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Television Production.</b>	
21.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
21.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
21.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
21.04	Model with mathematics. MAFS.K12.MP.4.1	
21.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
21.06	Attend to precision. MAFS.K12.MP.6.1	

Florida Standards		Correlation to CTE Program Standard #
21.07	Look for and make use of structure.	MAFS.K12.MP.7.1
21.08	Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1

**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
22.0	Select special effects lighting for a planned production--The student will be able to:		
22.01	Use lighting instruments to create the mood for a production		
22.02	Use appropriate lighting accessories (gels, reflectors, etc.) to enhance a production.		
23.0	Demonstrate correct use of equipment used in television production--The student will be able to:		
23.01	Demonstrate facility and equipment inventory.	MAFS.912.S-ID.2.5	
23.02	Demonstrate basic equipment maintenance and management.		
24.0	Perform basic digital audio and video recording and editing operations--The student will be able to:		
24.01	Identify and describe different video recording devices.	LAFS.1112.L.3.6	
25.0	Perform television production and programming activities--The student will be able to:		
25.01	Perform Society of Motion Picture and Television Engineers (SMPTE) time code calculations.	MAFS.912.N-Q.1.2,3	
25.02	Develop a script for a narrated program.	LAFS.1112.SL.2.4,5, 6 LAFS.1112.W.1.3	
25.03	Draw storyboard for a planned non-profit commercial production.	LAFS.1112.SL.2.4,5	
26.0	Demonstrate industry accepted skills for studio production--The student will be able to:		
26.01	Demonstrate skills in selecting production topics.		
26.02	Determine quality of production topics.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
26.03 Operate television studio equipment.		
26.04 Adhere to production deadlines.		
27.0 Utilize the internet to gather data for a planned production--The student will be able to:		
27.01 Use the internet to research specific information on a production topic as assigned.	LAFS.1112.W.3.7,8,9	
27.02 Derive on-line information for use in graphs and charts in a production.		



**Florida Department of Education  
Student Performance Standards**

**Course Title:** Television Production 4  
**Course Number:** 8772140  
**Course Credit:** 1

**Course Description:**

This course covers competencies in lighting instrument maintenance, Electronic News Gathering and Electronic Field Production, and teamwork.

Florida Standards		Correlation to CTE Program Standard #
19.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Television Production.	
19.01	Key Ideas and Details	
19.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
19.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
19.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
19.02	Craft and Structure	
19.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
19.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
19.02.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. LAFS.1112.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
19.03	Integration of Knowledge and Ideas	
19.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
19.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
19.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
19.04	Range of Reading and Level of Text Complexity	
19.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
19.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
20.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Television Production.	
20.01	Text Types and Purposes	
20.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
20.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
20.02	Production and Distribution of Writing	
20.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
20.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
20.02.3	Use technology, including the Internet, to produce, publish, and update	

Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
20.03 Research to Build and Present Knowledge		
20.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
20.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
20.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
20.04 Range of Writing		
20.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
21.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Television Production.	
21.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
21.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
21.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
21.04	Model with mathematics. MAFS.K12.MP.4.1	
21.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
21.06	Attend to precision. MAFS.K12.MP.6.1	
21.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
21.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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 Perform basic maintenance for lighting instruments --The student will be able to:		
28.01 Identify the correct bulb for a light fixture.	LAFS.1112.L.3.6	
28.02 Replace a bulb in a fixture.		
28.03 Use the appropriate gear and/or techniques to ensure that the bulbs are not exposed to human contact (avoid oils on light surfaces).		
29.0 Function as a member of a production team--The student will be able to:		
29.01 List the job functions of the television production team.	LAFS.1112.L.3.6	
29.02 Describe the steps of the production process.	LAFS.1112.L.3.6	
29.03 Give and follow directions.	LAFS.1112.SL.1.1	
29.04 Set and adhere to production deadlines.		
29.05 Receive and respond to client comments and feedback.	LAFS.1112.SL.1.1,3	

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Television Production 5  
**Course Number:** 8772150  
**Course Credit:** 1

**Course Description:**

This course covers competencies in creating a television program, performing advanced audio and video recording and editing operations, and specialized areas of television 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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
30.0	Create a television program--The student will be able to:		
30.01	Plan a television program.	LAFS.1112.W.2.4,5	
30.02	Write a television program.	LAFS.1112.W.2.5	
30.03	Direct a television program.		
30.04	Edit a television program.		
30.05	Record a television program.		
31.0	Perform advanced audio and video recording and editing operations--The student will be able to:		
31.01	Set up digital audio and/or digital video editing equipment and or software.		
31.02	Set up digital audio and/or digital video recording and playback devices.		
32.0	Research and select one or more areas of television production for specialization -- The student will be able to:		
32.01	Survey and select area(s) for specialization in television production.		

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
32.02 Perform research on position availability, training requirements and post-secondary institutes with programs of study or emphasis in your specialization.	LAFS.1112.W.3.7	
33.0 Demonstrate an independent level of proficiency in the selected area of specialization --The student will be able to:		
33.01 Perform at an independent level of proficiency in their chosen area(s) of specialization.		

Florida Department of Education  
Student Performance Standards

**Course Title:** Television Production 6  
**Course Number:** 8772160  
**Course Credit:** 1

**Course Description:**

This course covers competencies 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
34.0	Demonstrate advanced scriptwriting techniques--The student will be able to:		
34.01	Write a broadcast script for a program with a minimum 10 minute program length.	LAFS.1112.W.1.1,2,3	
34.02	Use the correct script format for the program selected (documentary, drama, infomercial, etc.)	LAFS.1112.W.1.1	
35.0	Apply production skills by producing a program -- The student will be able to:		
35.01	Plan a television program with a minimum 10 minute program length.		
35.02	Write a television program with a minimum 10 minute program length.	LAFS.1112.L.1.1,2	
35.03	Direct a television program with a minimum 10 minute program length.		
35.04	Edit a television program with a minimum 10 minute program length.		
35.05	Record a television program with a minimum 10 minute program length.		
36.0	Perform advanced digital audio and video recording and editing operations--The student will be able to:		
36.01	Set-up video-cassette editor.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
36.02 Set-up video input and output devices.		
36.03 Perform insert edits in linear and non-linear format.		
37.0 Create a variety of television programming--The student will be able to:		
37.01 Write, produce, direct and edit news programs.	LAFS.1112.W.2.4,5,6 LAFS.1112.SL.2.4,5,6	
37.02 Write, produce, direct and edit editorials.	LAFS.1112.W.2.4,5,6 LAFS.1112.SL.2.4,5,6	
37.03 Write, produce, direct and edit feature programs.	LAFS.1112.W.2.4,5,6 LAFS.1112.SL.2.4,5,6	
37.04 Write, produce, direct and edit interview programs.	LAFS.1112.W.2.4,5,6 LAFS.1112.SL.2.4,5,6	
37.05 Write, produce, direct and edit commercials.	LAFS.1112.W.2.4,5,6 LAFS.1112.SL.2.4,5,6	



**Florida Department of Education  
Student Performance Standards**

**Course Title:** Television Production 7  
**Course Number:** 8772170  
**Course Credit:** 1

**Course Description:**

This course provides competencies in Electronic News Gathering (ENG) and Electronic Field Production (EFP) equipment functions.

**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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
38.0 Perform Electronic News Gathering (ENG) and Electronic Field Production (EFP) equipment functions--The student will be able to:		
38.01 List and describe ENG and EFP equipment components.	LAFS.1112.L.3.6	SC.912.N.1.1
38.02 Set up equipment for field production.		
38.03 Operate equipment during field production segments.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Television Production 8  
**Course Number:** 8772180  
**Course Credit:** 1

**Course Description:**

This course covers content in translating a written script and creating and maintaining a website.

**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
39.0 Translate written script into a full television production--The student will be able to:		
39.01 Produce a television program from a written script.		
40.0 Create and maintain a website with embedded production media--The student will be able to:		
40.01 Set up and operate an online portfolio of work.		
40.02 Stream video for use on the internet.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Television Production 9  
**Course Number:** 8772190  
**Course Credit:** 1

**Course Description:**

Through this course, students will develop an independent level of proficiency within an area of television 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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
41.0 Function at an independent level with proficiency in one area of television production--The student will be able to:		
41.01 Survey and select an area of specialization in television production.		
41.02 Perform at an independent level of proficiency in area(s) of specialization.		
41.03 Create useable end products in this area of specialization.		
41.04 Create training materials in their area of specialization.		
41.05 Demonstrate the correct application and use of their chosen area of specialization.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Television Production 10  
**Course Number:** 8772191  
**Course Credit:** 1

**Course Description:**

Through this course, students will prepare for a career in the television production industry.

**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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
42.0 Research a specific career in television--The student will be able to:		
42.01 Perform career research on a specific area of television production.		
42.02 Write a report on the specific career including salary, job prospects, and education requirements.		
42.03 Prepare a resume for employment in the specific career selected.		
42.04 Demonstrate a high level of proficiency in the specific career area selected.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Television Production 11  
**Course Number:** 8772192  
**Course Credit:** 1

**Course Description:**

Through this course, students will design a capstone project using skills learned throughout the 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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
43.0 Design a capstone project in television production using skills learned throughout the program- -The student will be able to:		
43.01 Write a television script.		
43.02 Stage a television set.		
43.03 Select special effects lighting.		
43.04 Select and use audio and video recording equipment.		
43.05 Perform digital audio and video editing operations.		

## **Additional Information**

### **Laboratory Activities**

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

### **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.

### **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.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Film Production Equipment Operations  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts, A/V Technology and Communication

**Secondary – Career Preparatory**

Program Number	8772200
CIP Number	0650060212
Grade Level	9-12; 30, 31
Standard Length	11 credits
Teacher Certification	TV PRO TEC @7 7G TEC ELEC @7 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4031 – Camera Operators, Television, Video, and Motion Picture 27-4032 – Film and Video Editors 27-4011 – Audio and Video Equipment Technicians 27-4014 – Sound Engineering Technicians 27-1027 – Set and Exhibit Designers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for initial employment in film production equipment operation occupations, as camera assistants, sound equipment operators, editing equipment operators, set builders, grips and lighting equipment operators

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 program offers a broad foundation of knowledge and skills to prepare students for employment in network support services positions.

**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.

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A	8772210	Film Production Equipment Operations 1	1 credit	27-1027	2	PA
	8772220	Film Production Equipment Operations 2	1 credit		2	VO
B	8772230	Film Production Equipment Operations 3	1 credit	27-4014	2	VO
	8772240	Film Production Equipment Operations 4	1 credit		2	VO
C	8772250	Film Production Equipment Operations 5	1 credit	27-4011	2	VO
	8772260	Film Production Equipment Operations 6	1 credit		2	VO
D	8772270	Film Production Equipment Operations 7	1 credit	27-4032	2	VO
	8772280	Film Production Equipment Operations 8	1 credit		2	VO
	8772290	Film Production Equipment Operations 9	1 credit		2	VO
E	8772291	Film Production Equipment Operations 10	1 credit	27-4031	2	VO
	8772292	Film Production Equipment Operations 11	1 credit		2	VO

*(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics, VO= Career and Technical Education)*

## **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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Film Production Equipment Operations.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Film Production Equipment Operations.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Film Production Equipment Operations.
- 04.0 Construct and install theatrical scenery to the specifications required in a scene design for a film production.
- 05.0 Function as part of a technical support team in planning, implementing and running the technical aspects of film production.
- 06.0 Be knowledgeable of the interrelationship which exists between the various creative and craft skills required for film production.
- 07.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Film Production Equipment Operations.
- 08.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Film Production Equipment Operations.
- 09.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Film Production Equipment Operations.
- 10.0 Operate audio equipment for film productions.
- 11.0 Execute the audio requirements for film production.
- 12.0 Execute pre-production, production and post-production tasks for the area of gripping.
- 13.0 Execute pre-production, production and post-production tasks for the area of film lighting.
- 14.0 Execute pre-production, production and post-production tasks for the area of film editing equipment operation.
- 15.0 Execute pre-production, production and post-production tasks for the area of camera assisting.

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Film Production Equipment Operations 1  
**Course Number:** 8772210  
**Course Credit:** 1

**Course Description:**

This course provides competencies in the construction and installation of theater scenery, team planning, and coordination between creative and craft disciplines.

Florida Standards		Correlation to CTE Program Standard #
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Film Production Equipment Operations.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question	

Florida Standards		Correlation to CTE Program Standard #
	the author seeks to address. LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Film Production Equipment Operations.	
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	

Florida Standards		Correlation to CTE Program Standard #
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.  LAFS.910.WHST.2.6	
02.03 Research to Build and Present Knowledge		
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.  LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.  LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research.  LAFS.910.WHST.3.9	
02.04 Range of Writing		
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.  LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Film Production Equipment Operations.	
03.01	Make sense of problems and persevere in solving them.  MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively.  MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others.  MAFS.K12.MP.3.1	
03.04	Model with mathematics.  MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically.  MAFS.K12.MP.5.1	
03.06	Attend to precision.  MAFS.K12.MP.6.1	

Florida Standards	Correlation to CTE Program Standard #
03.07 Look for and make use of structure.	MAFS.K12.MP.7.1
03.08 Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1

**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 Construct and install theatrical scenery to the specifications required in a scene design for a film production--The student will be able to:		
04.01 Purchase appropriate materials and hardware for scenic construction.		
04.02 Construct common flat scenery.		
04.03 Construct three-dimensional scenery.		
04.04 Execute application techniques used in painting scenery.		
05.0 Function as part of a technical support team in planning, implementing and running the technical aspects of film production--The student will be able to:		
05.01 Perform as a member of a technical support team within the framework of an organized film production.		
05.02 Execute job assignments in order to meet production deadlines.		
05.03 Execute technical needs to apply accepted principles of film technology to production situation(s).		
06.0 Be knowledgeable of the interrelationship which exists between the various creative and craft skills required for film production--The student will be able to:		
06.01 Differentiate the working relationships, which exist between the various participants involved in the film making process.		
06.02 Demonstrate the proper use of standard film making forms.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Film Production Equipment Operations 2  
**Course Number:** 8772220  
**Course Credit:** 1

**Course Description:**

This course provides competencies in the construction of special effects scenery, technical camera processes, and film crew strategies.

<b>Florida Standards</b>		<b>Correlation to CTE Program Standard #</b>
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Film Production Equipment Operations.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	



Florida Standards		Correlation to CTE Program Standard #
	LAFS.910.RST.2.6	
01.03	Integration of Knowledge and Ideas	
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04	Range of Reading and Level of Text Complexity	
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Film Production Equipment Operations.	
02.01	Text Types and Purposes	
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02	Production and Distribution of Writing	
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update	

Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Film Production Equipment Operations.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #	
	MAFS.K12.MP.7.1	
03.08 Look for and express regularity in repeated reasoning.		
	MAFS.K12.MP.8.1	

**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 Construct and install theatrical scenery to the specifications required in a scene design for a film production--The student will be able to:		
04.05 Construct special effects scenery.		
04.06 Schedule and organize transportation of scenery to remote locations.		
04.07 Supervise scene shop activities.		
06.0 Be knowledgeable of the interrelationship which exists between the various creative and craft skills required for film production--The student will be able to:		
06.03 Define the specific technical processes used by the camera, grip, lighting, sound, art, costume, special effects, makeup and editing.		
06.04 Execute strategies for meeting the technical requirements of a film production crew.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Film Production Equipment Operations 3  
**Course Number:** 8772230  
**Course Credit:** 1

**Course Description:**

This course provides competencies in operating and executing the requirements for audio equipment for film productions.

Florida Standards		Correlation to CTE Program Standard #
07.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Film Production Equipment Operations.	
07.01	Key Ideas and Details	
07.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.  LAFS.1112.RST.1.1	
07.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.1112.RST.1.2	
07.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.1112.RST.1.3	
07.02	Craft and Structure	
07.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.  LAFS.1112.RST.2.4	
07.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.  LAFS.1112.RST.2.5	
07.02.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.  LAFS.1112.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
07.03	Integration of Knowledge and Ideas	
07.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
07.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
07.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
07.04	Range of Reading and Level of Text Complexity	
07.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
07.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
08.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Film Production Equipment Operations.	
08.01	Text Types and Purposes	
08.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
08.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
08.02	Production and Distribution of Writing	
08.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
08.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
08.02.3	Use technology, including the Internet, to produce, publish, and update	

Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
08.03 Research to Build and Present Knowledge		
08.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
08.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
08.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
08.04 Range of Writing		
08.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
09.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Film Production Equipment Operations.	
09.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
09.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
09.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
09.04	Model with mathematics. MAFS.K12.MP.4.1	
09.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
09.06	Attend to precision. MAFS.K12.MP.6.1	
09.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
09.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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
10.0 Operate audio equipment for film productions--The student will be able to:		
10.01 Operate various audio equipment to achieve proper sound mix on an audio mixer.		
10.02 Execute the design for proper microphone and speaker placement.		
11.0 Execute the audio requirements for film production--The student will be able to:		
11.01 Execute strategies for recording production film sound to acceptable industry standards.		
11.02 Record production and post-production sound.		
11.03 Work as a member of a film production team.		
11.04 Develop appropriate industry contacts.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Film Production Equipment Operations 4  
**Course Number:** 8772240  
**Course Credit:** 1

**Course Description:**

This course provides competencies in operating and executing the requirements for audio equipment for film productions with an emphasis on analyzing audio performance needs.

Florida Standards		Correlation to CTE Program Standard #
07.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Film Production Equipment Operations.	
07.01	Key Ideas and Details	
07.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.  LAFS.1112.RST.1.1	
07.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.1112.RST.1.2	
07.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.1112.RST.1.3	
07.02	Craft and Structure	
07.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.  LAFS.1112.RST.2.4	
07.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.  LAFS.1112.RST.2.5	
07.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.	



Florida Standards		Correlation to CTE Program Standard #
	LAFS.1112.RST.2.6	
07.03	Integration of Knowledge and Ideas	
07.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
07.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
07.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
07.04	Range of Reading and Level of Text Complexity	
07.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
07.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
08.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Film Production Equipment Operations.	
08.01	Text Types and Purposes	
08.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
08.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
08.02	Production and Distribution of Writing	
08.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
08.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	

Florida Standards		Correlation to CTE Program Standard #
08.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
08.03 Research to Build and Present Knowledge		
08.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
08.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
08.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
08.04 Range of Writing		
08.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
09.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Film Production Equipment Operations.	
09.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
09.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
09.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
09.04	Model with mathematics. MAFS.K12.MP.4.1	
09.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
09.06	Attend to precision. MAFS.K12.MP.6.1	

Florida Standards		Correlation to CTE Program Standard #
09.07	Look for and make use of structure.	MAFS.K12.MP.7.1
09.08	Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1

**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
10.0	Operate audio equipment for film productions--The student will be able to:		
10.03	Operate sound reinforcement systems to meet performance needs.		
10.04	Perform transactions with audio suppliers.		
11.0	Execute the audio requirements for film production--The student will be able to:		
11.05	Assist in analyzing audio needs for film production to perform transactions with suppliers.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Film Production Equipment Operations 5  
**Course Number:** 8772250  
**Course Credit:** 1

**Course Description:**

This course covers competencies in gripping and film lighting for pre-production, production and post-production tasks.

**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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
12.0	Execute pre-production, production and post-production tasks for the area of gripping--The student will be able to:		
12.01	Execute strategies to properly utilize grip equipment during film production.		
12.02	Accept directions in the placement of dollies, cranes and other camera mounts as required for film production.		
12.03	Execute pre and post-production routines.		
12.04	Work as a member of a film production team.		
12.05	Develop appropriate industry contacts.		
12.06	Demonstrate safe work habits.		
12.07	Assist in determining grip equipment needs.		
12.08	Execute required effects for lighting set-ups.		
13.0	Execute pre-production, production and post-production tasks for the area of film lighting--The student will be able to:		
13.01	Utilize standard film lighting equipment to production specifications.		

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
13.02 Execute power distribution system for film lighting equipment.		
13.03 Execute pre and post-production routines necessary for the lighting department.		
13.04 Work as a member of a film production team.		
13.05 Create a safe working environment.		
13.06 Develop appropriate industry contacts.		
13.07 Execute production requirements to determine lighting equipment and maintenance needs.		
13.08 Execute required lighting effects for film shooting.		
13.09 Hang, connect and focus lights for a production.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Film Production Equipment Operations 6  
**Course Number:** 8772260  
**Course Credit:** 1

**Course Description:**

This course covers competencies in gripping and film lighting for pre-production, production and post-production tasks with an emphasis on lighting set-up and developing relevant industry contacts.

**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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
12.0	Execute pre-production, production and post-production tasks for the area of gripping--The student will be able to:		
	12.09 Execute required effects for lighting set-ups.		
13.0	Execute pre-production, production and post-production tasks for the area of film lighting--The student will be able to:		
	13.10 Develop appropriate industry contacts.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Film Production Equipment Operations 7  
**Course Number:** 8772270  
**Course Credit:** 1

**Course Description:**

This course provides competencies in film editing equipment operation for pre-production, production and 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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
14.0	Execute pre-production, production and post-production tasks for the area of film editing equipment operation--The student will be able to:		
14.01	Operate editing equipment.		
14.02	Execute standard editing room routines.		
14.03	Execute required editing room documentation.		
14.04	Work as a member of a film production team.		
14.05	Execute editing sequences using industry standard equipment.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Film Production Equipment Operations 8  
**Course Number:** 8772280  
**Course Credit:** 1

**Course Description:**

This course provides competencies in film editing equipment operation for pre-production, production and post-production with an emphasis in working with appropriate industry contacts.

**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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
14.0 Execute pre-production, production and post-production tasks for the area of film editing equipment operation--The student will be able to:		
14.06 Develop appropriate industry contacts.		
14.07 Work with suppliers and film laboratories.		



**Florida Department of Education  
Student Performance Standards**

**Course Title:** Film Production Equipment Operations 9  
**Course Number:** 8772290  
**Course Credit:** 1

**Course Description:**

This course covers competencies in camera assisting for pre-production, production and post-production with an emphasis on camera handling and working on a film 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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
15.0 Execute pre-production, production and post-production tasks for the area of camera assisting- -The student will be able to:		
15.01 Execute the proper care and handling of camera and camera assist equipment.		
15.02 Work as a member of a film production team.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Film Production Equipment Operations 10  
**Course Number:** 8772291  
**Course Credit:** 1

**Course Description:**

This course covers competencies in camera assisting for pre-production, production and post-production with an emphasis on shooting.

**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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
15.0 Execute pre-production, production and post-production tasks for the area of camera assisting- -The student will be able to:		
15.03 Assist in the execution of shooting activities using standard industry camera equipment.		
15.04 Assist in shooting activities required for appropriate camera department documentation.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Film Production Equipment Operations 11  
**Course Number:** 8772292  
**Course Credit:** 1

**Course Description:**

This course covers competencies in camera assisting for pre-production, production and post-production with an emphasis on analyzing production requirements to determine camera equipment needs.

**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.*

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
15.0 Execute pre-production, production and post-production tasks for the area of camera assisting- -The student will be able to:		
15.05 Develop appropriate industry contacts.		
15.06 Assist in analyzing production requirements to determine camera equipment needs.		

## **Additional Information**

### **Laboratory Activities**

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

### **Special Notes**

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.

### **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.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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, 30, 31
Standard Length	7 credits
Teacher Certification	TEC ELEC ¶ 7 ¶ G TV PRO TEC @7 7G TEC ED 1 @ 2
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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

The purpose of this program is to prepare students for initial employment with occupational titles as radio and television announcer 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 operation of 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.

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A	8772310	Digital Audio Production 1	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, VO= Career and Technical Education)*

**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%

\*\* 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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.



## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Audio Production.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Audio Production.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Audio Production.
- 04.0 Demonstrate knowledge of school and class procedures.
- 05.0 Demonstrate an ability to operate an audio console.
- 06.0 Demonstrate knowledge of production writing.
- 07.0 Demonstrate news-writing skills.
- 08.0 Demonstrate appropriate voice-over skills.
- 09.0 Demonstrate appropriate on-air skills.
- 10.0 Demonstrate appropriate broadcast speaking manner.
- 11.0 Demonstrate mathematics knowledge and skills.
- 12.0 Demonstrate set-up and configuration of a computer for audio applications.
- 13.0 Understand the operation of basic reproduction, reinforcement and recording audio equipment.
- 14.0 Demonstrate understanding of requirements for set-up and operation of a sound reinforcement system.
- 15.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Audio Production.
- 16.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Audio Production.
- 17.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Audio Production.
- 18.0 Demonstrate application of control protocols and their relationship to equipment used in the music industry.
- 19.0 Demonstrate basic operation of a digital audio workstation.
- 20.0 Demonstrate basic digital production skills.
- 21.0 Demonstrate advanced digital production skills.
- 22.0 Perform transaction with music industry suppliers.
- 23.0 Plan, coordinate and manage an audio broadcast or album.
- 24.0 Demonstrate knowledge of legal issues of copyright.

**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.

Florida Standards		Correlation to CTE Program Standard #
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Audio Production.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.910.RST.2.6	
01.03	Integration of Knowledge and Ideas	
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04	Range of Reading and Level of Text Complexity	
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Audio Production.	
02.01	Text Types and Purposes	
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02	Production and Distribution of Writing	
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update	

Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
02.03	Research to Build and Present Knowledge	
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
02.04	Range of Writing	
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Audio Production.	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
03.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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
04.0 Demonstrate knowledge of school and class 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
04.01 Verbalize the rules and operation of school and class.		
04.02 State the nature of the instruction.		
04.03 Identify what will be learned in relation to stated goals and job opportunities that exist.		
05.0 Demonstrate an ability to operate an audio console--The student will be able to:		SC.912.P.10.21
05.01 Demonstrate an ability to control the audio console during the recording of a show or program. Combine all the sound elements on to tape, compact disc or broadcast.		
05.02 Route outside organizations through the audio console or computer.		
05.03 Demonstrate application of appropriate recording mix while adjusting audio levels.		
05.04 Demonstrate the ability to keep program on time according to the production plan.		
05.05 Perform to high standards in the role of audio console operator in varied format situations.		
05.06 Demonstrate knowledge of the audio console signal flow.		
06.0 Demonstrate a knowledge of production writing--The student will be able to:		
06.01 Explain the job of a copywriter and outline the elements of good copy and copy writing.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
06.02 Demonstrate ability to write commercial copy in its various forms.		
06.03 Demonstrate ability to write a production plan for a show.		
06.04 Demonstrate ability to write lyrics for a song or jingle.		
06.05 Demonstrate ability to write show intros, outros and bumpers.		
07.0 Demonstrate news-writing skills--The student will be able to:		
07.01 Differentiate between news, commentary, and editorials.		
07.02 Demonstrate ability to mark, edit, and present news in an acceptable manner.		
07.03 Explain the various sources of news and how they are used.		
07.04 List the elements that constitute news materials and evaluate them.		
07.05 Demonstrate ability to write news stories in broadcast style.		
08.0 Demonstrate appropriate voice-over skills--The student will be able to:		
08.01 Demonstrate the ability to read aloud in a professional broadcast manner.		
08.02 Modify their reading speed as required to properly complete their assignment in the available time.		
08.03 Demonstrate the ability to receive and properly act upon direction given by the commercial producer.		
08.04 Understand the concept of voice acting and playing a role while speaking.		
08.05 Perform the various assignments in a professional manner according to industry standards.		
09.0 Demonstrate appropriate on-air skills--The student will be able to:		
09.01 State the characteristics of various microphones and demonstrate the ability to use them.		
09.02 Handle outside organizations through the console.		
09.03 Demonstrate how to handle changes in show format during a recording or live broadcast.		
09.04 Perform the various assignments in a professional manner according to industry standards.		
09.05 List the elements and procedures of log keeping.		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
10.0	Demonstrate appropriate broadcast speaking manner--The student will be able to:		
10.01	Identify and correct verbal deficiencies in themselves and others.		
10.02	Demonstrate ability to breathe properly, control their voice relating to projection, loudness, and resonance, and vary tone, pitch and pacing.		
10.03	Articulate and pronounce words according to accepted standards.		
10.04	Read aloud in a professional broadcast manner.		
10.05	Outline the qualifications and requirements of an announcer.		
10.06	Demonstrate development of the skills of announcing, the various techniques of delivery and procedures according to accepted standards.		
11.0	Demonstrate mathematics knowledge and skills--The students will be able to:	MAFS.912.S-IC.2	
11.01	Demonstrate knowledge of arithmetic operations.		
11.02	Analyze and apply data and measurements to solve problems and interpret documents.		
11.03	Construct charts/tables/graphs using functions and data.		



**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 set-up and configuration of a computer for audio applications and operation of audio equipment.

Florida Standards		Correlation to CTE Program Standard #
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Audio Production.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	

Florida Standards		Correlation to CTE Program Standard #
	LAFS.910.RST.2.6	
01.03	Integration of Knowledge and Ideas	
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04	Range of Reading and Level of Text Complexity	
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Audio Production.	
02.01	Text Types and Purposes	
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02	Production and Distribution of Writing	
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	
02.02.3	Use technology, including the Internet, to produce, publish, and update	

Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically. LAFS.910.WHST.2.6	
<b>02.03 Research to Build and Present Knowledge</b>		
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation. LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.910.WHST.3.9	
<b>02.04 Range of Writing</b>		
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.910.WHST.4.10	
<b>03.0</b>	<b>Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Audio Production.</b>	
03.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
03.04	Model with mathematics. MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
03.06	Attend to precision. MAFS.K12.MP.6.1	
03.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
03.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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
12.0 Demonstrate 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
12.01 Install basic peripheral devices related to audio programs.		
12.02 Install and configure software related to audio programs.		
12.03 Demonstrate basic knowledge of computer system requirements.		
12.04 Demonstrate basic knowledge of installing plug-ins or additional audio source material such as beats and or samples.		
12.05 Understand the signal flow of a digital audio workstation.		
13.0 Understand the operation of basic reproduction, reinforcement and recording audio equipment--The student will be able to:		SC.912.N.1.1
13.01 Assess the audio technology needs of a music production (pre-production).		
13.02 Evaluate available audio resources.		
13.03 Select and configure appropriate hardware and software.		
14.0 Demonstrate understanding of 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
14.01 Demonstrate basic understanding of audio electronics (head room, biasing, distortion, equalization, frequency response, etc.).		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
14.02 Demonstrate basic understanding of acoustics.		
14.03 Demonstrate knowledge of principles of operation of analog/digital devices (block diagram).		
14.04 Demonstrate basic understanding of audio signal flow in an analog or digital chain.		
14.05 Formulate strategies for audio reinforcement of music productions.		
14.06 Evaluate performance needs.		
14.07 Evaluate technical needs as appropriate to given spaces.		
14.08 Configure a sound reinforcement system to meet performance needs.		
14.09 Analyze various audio qualities to achieve proper sound mix.		
14.10 Perform transactions with audio suppliers.		
14.11 Design a plot for proper microphone and speaker selection and placement.		
14.12 Evaluate the quality of multi-track recording.		
14.13 Interpret audio needs for end user.		
14.14 Supervise equipment operator.		
14.15 Evaluate 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.

Florida Standards		Correlation to CTE Program Standard #
15.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Audio Production.	
15.01	Key Ideas and Details	
15.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
15.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
15.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
15.02	Craft and Structure	
15.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
15.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
15.02.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. LAFS.1112.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
15.03	Integration of Knowledge and Ideas	
15.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
15.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
15.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
15.04	Range of Reading and Level of Text Complexity	
15.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
15.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
16.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Audio Production.	
16.01	Text Types and Purposes	
16.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
16.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
16.02	Production and Distribution of Writing	
16.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
16.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
16.02.3	Use technology, including the Internet, to produce, publish, and update	

Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
16.03 Research to Build and Present Knowledge		
16.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
16.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
16.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
16.04 Range of Writing		
16.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
17.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Audio Production.	
17.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
17.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
17.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
17.04	Model with mathematics. MAFS.K12.MP.4.1	
17.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
17.06	Attend to precision. MAFS.K12.MP.6.1	
17.07	Look for and make use of structure.	



Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
17.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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
18.0 Demonstrate 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
18.01 Demonstrate an understanding of MIDI.		
18.02 Utilize a computer and multiple MIDI instruments.		
18.03 Record a single sound track; add multiple sound tracks, and change MIDI voices using the software.		
19.0 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
19.01 Demonstrate knowledge of the digital audio workstation interface.		
19.02 Create and arrange a multi-track project.		
19.03 Create interest and effect using editing techniques		
19.04 Design and edit audio using a waveform editor.		
19.05 Record audio directly to the digital audio workstation.		
19.06 Demonstrate knowledge of mixing audio.		
19.07 Demonstrate skill in using audio effects and plug-ins.		
19.08 Prepare an audio project for finishing and final mix down.		
19.09 Transfer audio files between various audio software applications.		
19.10 Record finished audio to tape or compact disc and or publish to a webpage.		
20.0 Demonstrate basic digital production skills--The student will be able to:		SC.912.N.1.1

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
20.01 Demonstrate understanding of digital audio storage concepts and digital storage media.		
20.02 Demonstrate knowledge of and the ability to operate digital recording decks, and other digital storage devices.		
20.03 Demonstrate a working familiarity and understanding of the function and operation of digital audio workstations.		
20.04 Demonstrate 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.

Florida Standards		Correlation to CTE Program Standard #
15.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Audio Production.	
15.01	Key Ideas and Details	
15.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
15.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
15.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
15.02	Craft and Structure	
15.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
15.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
15.02.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. LAFS.1112.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
15.03	Integration of Knowledge and Ideas	
15.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
15.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
15.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
15.04	Range of Reading and Level of Text Complexity	
15.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
15.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
16.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Audio Production.	
16.01	Text Types and Purposes	
16.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
16.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
16.02	Production and Distribution of Writing	
16.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
16.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
16.02.3	Use technology, including the Internet, to produce, publish, and update	

Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
16.03	Research to Build and Present Knowledge	
16.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
16.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
16.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
16.04	Range of Writing	
16.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
17.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Audio Production.	
17.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
17.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
17.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
17.04	Model with mathematics. MAFS.K12.MP.4.1	
17.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
17.06	Attend to precision. MAFS.K12.MP.6.1	
17.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #	
	MAFS.K12.MP.7.1	
17.08 Look for and express regularity in repeated reasoning.		
	MAFS.K12.MP.8.1	

**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
13.0 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
13.04 Formulate strategies for producing multi-track recording.		
13.05 Evaluate production needs for microphone applications.		
13.06 Demonstrate proficiency with multi-track, multi-channeled mixing consoles.		
13.07 Formulate strategies for electronic editing.		
13.08 Configure audio recording systems for optimal and appropriate use of signal processing equipment.		
13.09 Engineer a recording session and prepare appropriate documentation.		
13.10 Mix multi-track recording.		
13.11 Configure audio equipment for optimal musical mix.		
13.12 Create a mixing plan.		
13.13 Evaluate the quality of multi-track recording.		
13.14 Interpret audio needs for end user.		
13.15 Supervise equipment operator.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Digital Audio Production 5  
**Course Number:** 8772350  
**Course Credit:** 1

**Course Description:**

This course provides 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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
18.0	Demonstrate 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
18.04	Demonstrate proficiency in using MIDI instruments to record sounds using a digital sampler.		
18.05	Demonstrate an understanding of MIDI and other control protocol in the recording studio.		
18.06	Configure MIDI and other show control devices in the studio or live environment.		
18.07	Troubleshoot MIDI and control communication problems.		
21.0	Demonstrate advanced digital production skills--The student will be able to:		SC.912.N.1.1
21.01	Demonstrate knowledge of and the ability to perform digital transfers of audio information between digital and analog production environments.		
21.02	Demonstrate a working familiarity and understanding of the function and operation of multi-track digital audio workstations.		
21.03	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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
21.0	Demonstrate advanced digital production skills--The student will be able to:		SC.912.N.1.1
21.04	Demonstrate knowledge and ability to connect the hardware for a digital audio workstation, an audio console, various recording equipment together using proper signal flow techniques, cables and connectors.		
21.05	Demonstrate knowledge and ability to record, edit and encode a surround sound digital mix for use on DVD or SACD.		
21.06	Demonstrate knowledge and ability to encode audio for use on the web, digital distribution, use in video and animation.		
21.07	Demonstrate knowledge and ability to create album cover art for CD and web distribution.		
21.08	Demonstrate knowledge and ability to create a blog page to post Internet broadcast.		
21.09	Demonstrate understanding of RSS feeds to be used to distribute digital content to Internet subscribers and to build and audience.		
21.10	Formulate a marketing strategy for internet broadcast, independent CD release, or internet distribution.		
22.0	Perform transactions with music industry suppliers--The student will be able to:		
22.01	Research sources for needed equipment, supplies and educational materials.		



<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
22.02 Differentiate the levels of quality in the hierarchy of manufacturers, distributors and suppliers.		
22.03 Evaluate purchasing agreements including bids, warranties, and maintenance contracts.		
22.04 Evaluate the technical specifications of audio related products.		
22.05 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
23.0 Plan, coordinate and manage an audio broadcast or album--The student will be able to:		SC.912.N.1.1
23.01 Define the program format and market demographics.		
23.02 Present a project proposal with script or lyrics.		
23.03 Develop a production schedule.		
23.04 Create a plan to acquire all needed production resources and talent.		
23.05 Manage crew and staff during pre-production and production.		
23.06 Determine post-production requirements.		
23.07 Determine post-production activities.		
23.08 Conduct client approval reviews of project.		
23.09 Archive and manage finished assets and originals.		
23.10 Oversee broadcast/internet distribution or physical distribution to market.		
23.11 Explain various techniques for program or segments promotion.		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
24.0	Demonstrate knowledge of legal issues of copyright--The student will be able to:		SC.912.N.1.1
24.01	Define all Federal Communications Commission regulations pertaining to the broadcasting industry.		
24.02	Define the laws and regulations pertaining to the ownership and control of media assets, license allocation, measurement and records, political broadcasts and lottery laws.		
24.03	Define the laws and practices underlying rights, releases and permits.		
24.04	Define the laws and practices underlying slander, libel, free speech and "truth in advertising" issues.		
24.05	Define the laws and practices underlying indecent programming, obscenity and censorship issues.		
24.06	Define the laws and practices underlying contract, labor issues, copyright and insurance/liability issues.		

## **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.

### **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.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

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

**Secondary – Career Preparatory**

Program Number	8772400
CIP Number	0610010522
Grade Level	9-12, 30, 31
Standard Length	10 credits
Teacher Certification	TEC ELEC ¶ 7 ¶ G TV PRO TEC @7 7G TEC ED 1 @ 2
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 27-1014 – Multimedia Artists and Animators 27-4012 – Broadcast Technicians
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**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, multi-media 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 overall production of digital video activities including: scripts, lighting, camera operation, electronic news gathering, field/studio production, and 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 six occupational completion points.

The following table illustrates the secondary program structure:

OCP	Course Number	Course Title	Length	SOC Code	Level	Graduation Requirement
A	8772410	Digital Video Production 1	1 credit	27-4011	3	PA
B	8772420	Digital Video Production 2	1 credit	27-4011	3	PA
	8772430	Digital Video Production 3	1 credit		3	PA
C	8772440	Digital Video Production 4	1 credit	27-4031	3	PA
	8772450	Digital Video Production 5	1 credit		3	PA
D	8772460	Digital Video Production 6	1 credit	27-4032	3	PA
	8772470	Digital Video Production 7	1 credit		2	PA
E	8772480	Digital Video Production 8	1 credit	27-1014	2	PA
	8772490	Digital Video Production 9	1 credit		2	PA
F	8772491	Digital Video Production 10	1 credit	27-4012	2	PA

*(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics, VO= Career and Technical Education)*

**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
8772410	2/87 2%	4/80 5%	22/83 27%	4/69 6%	21/67 31%	4/70 6%	3/69 4%	22/82 27%	3/66 5%	23/74 31%	3/72 4%

8772420	2/87 2%	4/80 5%	21/83 25%	3/69 4%	23/67 34%	3/70 4%	1/69 1%	22/82 27%	4/66 6%	22/74 30%	3/72 4%
8772430	23/87 26%	22/80 28%	1/83 1%	23/69 33%	2/67 3%	21/70 30%	20/69 29%	3/82 4%	16/66 24%	4/74 5%	23/72 32%
8772440	21/87 24%	22/80 28%	2/83 2%	21/69 30%	2/67 3%	21/70 30%	20/69 29%	2/82 2%	16/66 24%	2/74 3%	21/72 29%
8772450	2/87 2%	#	#	#	#	#	#	#	#	#	#
8772460	#	1/80 1%	1/83 1%	1/69 1%	1/67 1%	1/70 1%	#	1/82 1%	1/66 1%	1/74 1%	#
8772470	#	1/80 1%	1/83 1%	1/69 1%	1/67 1%	1/70 1%	#	1/82 1%	1/66 1%	1/74 1%	#
8772480	1/87 1%	3/80 4%	1/83 1%	1/69 1%	2/67 3%	1/70 1%	1/69 1%	2/82 2%	1/66 2%	3/74 4%	4/72 6%
8772490	#	1/80 1%	1/83 1%	1/69 1%	1/67 1%	1/70 1%	#	1/82 1%	1/66 1%	1/74 1%	#
8772491	#	#	#	#	#	#	#	#	#	#	#

\*\* 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
8772410	**	**	**	**	**	**	**
8772420	**	**	**	**	**	**	**
8772430	**	**	**	**	**	**	**
8772440	**	**	**	**	**	**	**
8772450	**	**	**	**	**	**	**
8772460	**	**	**	**	**	**	**
8772470	**	**	**	**	**	**	**
8772480	**	**	**	**	**	**	**
8772490	**	**	**	**	**	**	**
8772491	**	**	**	**	**	**	**

\*\* 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. It is important to note that the 6-12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them.*

This curriculum framework incorporates the grades 9-10 reading and writing literacy standards in the first two courses of this CTE program and grade 11-12 reading and writing literacy standards in the third and fourth courses of this CTE program. The standards for Mathematical Practices 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. This curriculum framework incorporates the appropriate mathematical practices in the first four courses of this CTE program.

## **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 Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Video Production.
- 02.0 Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Video Production.
- 03.0 Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Video Production.
- 04.0 Demonstrate safe and efficient work practices.
- 05.0 Plan a production set.
- 06.0 Create appropriate lighting for location and/or set productions.
- 07.0 Operate a video camera.
- 08.0 Record, mix and edit audio resources.
- 09.0 Operate control room equipment.
- 10.0 Organize and edit video resources.
- 11.0 Generate a production schedule.
- 12.0 Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Video Production.
- 13.0 Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Video Production.
- 14.0 Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Video Production.
- 15.0 Develop a project proposal and script.
- 16.0 Shoot studio and/or location footage.
- 17.0 Design and generate graphic elements.
- 18.0 Plan, coordinate and manage a video or webcast production.

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Digital Video Production 1  
**Course Number:** 8772410  
**Course Credit:** 1

**Course Description:**

This course covers competencies in safe work practices, planning a production set, lighting planning, camera operation, and audio/ video recording, mixing, and editing.

Florida Standards		Correlation to CTE Program Standard #
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Video Production.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question	

Florida Standards		Correlation to CTE Program Standard #
	the author seeks to address. LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Video Production.	
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	

Florida Standards		Correlation to CTE Program Standard #
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.  LAFS.910.WHST.2.6	
02.03 Research to Build and Present Knowledge		
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.  LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.  LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research.  LAFS.910.WHST.3.9	
02.04 Range of Writing		
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.  LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Video Production.	
03.01	Make sense of problems and persevere in solving them.  MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively.  MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others.  MAFS.K12.MP.3.1	
03.04	Model with mathematics.  MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically.  MAFS.K12.MP.5.1	
03.06	Attend to precision.  MAFS.K12.MP.6.1	

Florida Standards	Correlation to CTE Program Standard #
03.07 Look for and make use of structure.	MAFS.K12.MP.7.1
03.08 Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1

**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
04.0 Demonstrate safe and efficient work practices--The student will be able to:		SC.912.N.1.1
04.01 Follow industry safety rules, regulations and policies.		
04.02 Demonstrate proper handling of hazardous materials.		
04.03 Demonstrate awareness of appropriate ergonomics.		
04.04 Demonstrate proper care of equipment.		
04.05 Demonstrate appropriate use of equipment in an efficient manner.		
05.0 Plan a production set--The student will be able to:		SC.912.N.1.1; SC.912.N.1.4; SC.912.N.2.2
05.01 Define set requirements for program type.		
05.02 Define needed prop, costume and other resources.		
05.03 Acquire appropriate locations for segment type.		
06.0 Create appropriate lighting for location and/or set productions--The student will be able to:		
06.01 Determine appropriate lighting needs for production settings.		
06.02 Identify locations and studio lighting types, method of use and application.		
06.03 Use lighting equipment according to industry safety standards.		
06.04 Define light quality in terms of intensity, color, direction and characteristics.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
07.0 Operate a video camera--The student will be able to:		
07.01 Use current industry standard production video equipment.		
07.02 Operate camera in studio and location (field) production environments.		
08.0 Record, mix and edit audio resources--The student will be able to:		
08.01 Identify and select microphones for production needs.		
08.02 Determine optimal microphone placement.		
08.03 Establish appropriate recording conditions.		
09.0 Operate control room equipment--The student will be able to:		SC.912.N.1.2
09.01 Define control room functions in a production.		
10.0 Organize and edit video resources--The student will be able to:		SC.912.N.1.4
10.01 Log and organize video resources.		
10.02 Input video resources into post-production equipment and workflow.		



**Florida Department of Education  
Student Performance Standards**

**Course Title:** Digital Video Production 2  
**Course Number:** 8772420  
**Course Credit:** 1

**Course Description:**

This course covers competencies in safe work practices, planning a production set, lighting planning, camera operation, and audio/ video recording, mixing, and editing.

Florida Standards		Correlation to CTE Program Standard #
01.0	Methods and strategies for using Florida Standards for grades 09-10 reading in Technical Subjects for student success in Digital Video Production.	
01.01	Key Ideas and Details	
01.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.  LAFS.910.RST.1.1	
01.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.  LAFS.910.RST.1.2	
01.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.  LAFS.910.RST.1.3	
01.02	Craft and Structure	
01.02.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  LAFS.910.RST.2.4	
01.02.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).  LAFS.910.RST.2.5	
01.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question	

Florida Standards		Correlation to CTE Program Standard #
	the author seeks to address. LAFS.910.RST.2.6	
01.03 Integration of Knowledge and Ideas		
01.03.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. LAFS.910.RST.3.7	
01.03.2	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. LAFS.910.RST.3.8	
01.03.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. LAFS.910.RST.3.9	
01.04 Range of Reading and Level of Text Complexity		
01.04.1	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
01.04.2	By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9–10 text complexity band independently and proficiently. LAFS.910.RST.4.10	
02.0	Methods and strategies for using Florida Standards for grades 09-10 writing in Technical Subjects for student success in Digital Video Production.	
02.01 Text Types and Purposes		
02.01.1	Write arguments focused on discipline-specific content. LAFS.910.WHST.1.1	
02.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.910.WHST.1.2	
02.02 Production and Distribution of Writing		
02.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.910.WHST.2.4	
02.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.910.WHST.2.5	

Florida Standards		Correlation to CTE Program Standard #
02.02.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.  LAFS.910.WHST.2.6	
02.03 Research to Build and Present Knowledge		
02.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.  LAFS.910.WHST.3.7	
02.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.  LAFS.910.WHST.3.8	
02.03.3	Draw evidence from informational texts to support analysis, reflection, and research.  LAFS.910.WHST.3.9	
02.04 Range of Writing		
02.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.  LAFS.910.WHST.4.10	
03.0	Methods and strategies for using Florida Standards for grades 09-10 Mathematical Practices in Technical Subjects for student success in Digital Video Production.	
03.01	Make sense of problems and persevere in solving them.  MAFS.K12.MP.1.1	
03.02	Reason abstractly and quantitatively.  MAFS.K12.MP.2.1	
03.03	Construct viable arguments and critique the reasoning of others.  MAFS.K12.MP.3.1	
03.04	Model with mathematics.  MAFS.K12.MP.4.1	
03.05	Use appropriate tools strategically.  MAFS.K12.MP.5.1	
03.06	Attend to precision.  MAFS.K12.MP.6.1	

Florida Standards	Correlation to CTE Program Standard #
03.07 Look for and make use of structure.	MAFS.K12.MP.7.1
03.08 Look for and express regularity in repeated reasoning.	MAFS.K12.MP.8.1

**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
04.0 Demonstrate safe and efficient work practices--The student will be able to:		SC.912.N.1.1
04.01 Follow industry safety rules, regulations and policies.		
04.02 Demonstrate proper handling of hazardous materials.		
04.03 Demonstrate awareness of appropriate ergonomics.		
04.04 Demonstrate proper care of equipment.		
04.05 Demonstrate appropriate use of equipment in an efficient manner.		
06.0 Create appropriate lighting for location and/or set productions--The student will be able to:		SC.912.N.1.1
06.01 Determine appropriate lighting needs for production settings.		
06.02 Identify locations and studio lighting types, method of use and application.		
06.03 Use lighting equipment according to industry safety standards.		
06.04 Light a location set with ambient/available and supplemental lighting.		
07.0 Operate a video camera--The student will be able to:		SC.912.N.1.1
07.01 Use current industry standard production video equipment.		
07.02 Operate camera in studio and location (field) production environments.		
08.0 Record, mix and edit audio resources--The student will be able to:		SC.912.N.1.1; SC.912.P.10.20; SC.912.L.14.50

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
08.01 Identify and select microphones for production needs.		
08.02 Determine optimal microphone placement.		
08.03 Establish appropriate recording conditions.		
08.04 Set up audio recording equipment.		
08.05 Perform appropriate pre-production check of production equipment.		
08.06 Record location sound.		
08.07 Record studio live sound.		
09.0 Operate control room equipment--The student will be able to:		SC.912.N.1.1; SC.912.N.1.5; SC.912.P.10.20; SC.912.L.14.50
09.01 Define control room functions in a production.		
09.02 Use the audio console (mixer) in a production.		
09.03 Operate camera switching and traffic control equipment.		
10.0 Organize and edit video resources--The student will be able to:		SC.912.N.1.1; SC.912.N.1.4
10.01 Log and organize video resources.		
10.02 Input video resources into post-production equipment and workflow.		
10.03 Operate editing hardware and software.		
10.04 Perform assemble edits for appropriate effect.		
10.05 Perform insert edits for appropriate effect.		
11.0 Generate a production schedule--The student will be able to:		SC.912.N.1.1
11.01 Define the segment or program type.		
11.02 Identify production resources needed.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Digital Video Production 3  
**Course Number:** 8772430  
**Course Credit:** 1

**Course Description:**

This course covers competencies in safe work practices and lighting.

Florida Standards		Correlation to CTE Program Standard #
12.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Video Production.	
12.01	Key Ideas and Details	
12.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
12.01.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
12.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
12.02	Craft and Structure	
12.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
12.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
12.02.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. LAFS.1112.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
12.03	Integration of Knowledge and Ideas	
12.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
12.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
12.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
12.04	Range of Reading and Level of Text Complexity	
12.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
12.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
13.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Video Production.	
13.01	Text Types and Purposes	
13.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
13.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
13.02	Production and Distribution of Writing	
13.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
13.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
13.02.3	Use technology, including the Internet, to produce, publish, and update	

Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
13.03	Research to Build and Present Knowledge	
13.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
13.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
13.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
13.04	Range of Writing	
13.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
14.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Video Production.	
14.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
14.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
14.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
14.04	Model with mathematics. MAFS.K12.MP.4.1	
14.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
14.06	Attend to precision. MAFS.K12.MP.6.1	
14.07	Look for and make use of structure.	



Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
14.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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
04.0 Demonstrate safe and efficient work practices--The student will be able to:		SC.912.N.1.1; SC.912.P.10.1; SC.912.L.14.13; SC.912.L.14.14
04.01 Follow industry safety rules, regulations and policies.		
04.02 Demonstrate proper handling of hazardous materials.		
04.03 Demonstrate awareness of appropriate ergonomics.		
04.04 Demonstrate proper care of equipment.		
04.05 Demonstrate appropriate use of equipment in an efficient manner.		
06.0 Create appropriate lighting for location and/or set productions--The student will be able to:		SC.912.N.1.1; SC.912.N.1.7; SC.912.P.10.1; SC.912.P.10.18; SC.912.L.14.50
06.01 Determine appropriate lighting needs for production settings.		
06.02 Identify locations and studio lighting types, method of use and application.		
06.03 Use lighting equipment according to industry safety standards.		
06.04 Use lighting for effect to control mood and impact in production settings.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Digital Video Production 4  
**Course Number:** 8772440  
**Course Credit:** 1

**Course Description:**

This course covers competencies in safe work practices; audio/ video recording, mixing, and editing; and shooting footage.

Florida Standards		Correlation to CTE Program Standard #
12.0	Methods and strategies for using Florida Standards for grades 11-12 reading in Technical Subjects for student success in Digital Video Production.	
12.01	Key Ideas and Details	
12.01.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. LAFS.1112.RST.1.1	
12.01.2	Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. LAFS.1112.RST.1.2	
12.01.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. LAFS.1112.RST.1.3	
12.02	Craft and Structure	
12.02.1	Determine the meaning of symbols key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. LAFS.1112.RST.2.4	
12.02.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. LAFS.1112.RST.2.5	
12.02.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. LAFS.1112.RST.2.6	

Florida Standards		Correlation to CTE Program Standard #
12.03	Integration of Knowledge and Ideas	
12.03.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. quantitative data, video, multimedia) in order to address a question or solve a problem. LAFS.1112.RST.3.7	
12.03.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. LAFS.1112.RST.3.8	
12.03.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. LAFS.1112.RST.3.9	
12.04	Range of Reading and Level of Text Complexity	
12.04.1	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	
12.04.2	By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11–CCR text complexity band independently and proficiently. LAFS.1112.RST.4.10	
13.0	Methods and strategies for using Florida Standards for grades 11-12 writing in Technical Subjects for student success in Digital Video Production.	
13.01	Text Types and Purposes	
13.01.1	Write arguments focused on discipline-specific content. LAFS.1112.WHST.1.1	
13.01.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. LAFS.1112.WHST.1.2	
13.02	Production and Distribution of Writing	
13.02.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. LAFS.1112.WHST.2.4	
13.02.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. LAFS.1112.WHST.2.5	
13.02.3	Use technology, including the Internet, to produce, publish, and update	

Florida Standards		Correlation to CTE Program Standard #
	individual or shared writing products in response to ongoing feedback, including new arguments or information. LAFS.1112.WHST.2.6	
13.03	Research to Build and Present Knowledge	
13.03.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. LAFS.1112.WHST.3.7	
13.03.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. LAFS.1112.WHST.3.8	
13.03.3	Draw evidence from informational texts to support analysis, reflection, and research. LAFS.1112.WHST.3.9	
13.04	Range of Writing	
13.04.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. LAFS.1112.WHST.4.10	
14.0	Methods and strategies for using Florida Standards for grades 11-12 Mathematical Practices in Technical Subjects for student success in Digital Video Production.	
14.01	Make sense of problems and persevere in solving them. MAFS.K12.MP.1.1	
14.02	Reason abstractly and quantitatively. MAFS.K12.MP.2.1	
14.03	Construct viable arguments and critique the reasoning of others. MAFS.K12.MP.3.1	
14.04	Model with mathematics. MAFS.K12.MP.4.1	
14.05	Use appropriate tools strategically. MAFS.K12.MP.5.1	
14.06	Attend to precision. MAFS.K12.MP.6.1	
14.07	Look for and make use of structure.	

Florida Standards	Correlation to CTE Program Standard #
	MAFS.K12.MP.7.1
14.08 Look for and express regularity in repeated reasoning.	
	MAFS.K12.MP.8.1

**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
07.0 Operate a video camera--The student will be able to:		SC.912.N.1.1
07.06 Use current industry standard production video equipment.		
07.07 Operate camera in studio and location (field) production environments.		
07.08 Align camera for studio production.		
07.09 Demonstrate appropriate framing for both SDTV and HDTV.		
08.0 Record, mix and edit audio resources--The student will be able to:		
08.05 Perform appropriate pre-production checks of equipment function.		
08.06 Record location sound.		
08.07 Record studio live sound.		
08.08 Perform basic routine, preventative and repair maintenance on video equipment.		
08.09 Define the various recording formats and media.		
08.10 Define appropriate digital compression and signal (file) types.		
10.0 Organize and edit video resources--The student will be able to:		SC.912.N.1.4
10.01 Log and organize video resources.		
10.02 Input video resources into post-production equipment and workflow.		
16.0 Shoot studio and/or location footage--The student will be able to:		SC.912.P.10.22; SC.912.L.14.50
16.06 Plan a shot to obtain required action/footage.		

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
16.07 Demonstrate appropriate shot sequences, transitions and post production (edit) effects.		
16.08 Control camera movement to obtain required effects.		
16.09 Control lens, focal length, aperture and exposure to obtain required effects.		
16.10 Set up camera and recording equipment sequence.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Digital Video Production 5  
**Course Number:** 8772450  
**Course Credit:** 1

**Course Description:**

This course covers competencies in safe work practices, and production scheduling.

**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
04.0 Demonstrate safe and efficient work practices--The student will be able to:		SC.912.L.14.13; SC.912.L.14.14
04.01 Follow industry safety rules, regulations and policies.		
04.02 Demonstrate proper handling of hazardous materials.		
04.03 Demonstrate awareness of appropriate ergonomics.		
04.04 Demonstrate proper care of equipment.		
04.05 Demonstrate appropriate use of equipment in an efficient manner.		
11.0 Generate a production schedule--The student will be able to:		
11.01 Define the segment or program type.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Digital Video Production 6  
**Course Number:** 8772460  
**Course Credit:** 1

**Course Description:**

This course covers competencies in lighting planning; audio recording, mixing, and editing; and organizing resources.

**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
06.0 Create appropriate lighting for location and/or set productions--The student will be able to:		
06.03 Use lighting equipment according to industry safety standards.		
08.0 Record, mix and edit audio resources--The student will be able to:		
08.11 Perform sound edits and enhancements.		
10.0 Organize and edit video resources--The student will be able to:		SC.912.N.1.4
10.01 Log and organize video resources.		
10.02 Input video resources into post-production equipment and workflow.		
10.03 Operate editing hardware and software.		
10.04 Perform assemble edits for appropriate effect.		
10.05 Perform insert edits for appropriate effect.		
10.06 Maintain continuity and production values.		
10.07 Mix audio and video resources for final cut.		



<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSS-Sci</b>
10.08 Apply color correction to video footage.		
10.09 Demonstrate ability to edit in both SDTV and HDTV.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Digital Video Production 7  
**Course Number:** 8772470  
**Course Credit:** 1

**Course Description:**

This course covers competencies in safe work practices, organizing and editing video resources, and generating a production schedule.

**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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
04.0	Demonstrate safe and efficient work practices--The student will be able to:		
04.01	Follow industry safety rules, regulations and policies.		
04.02	Demonstrate proper handling of hazardous materials.		
04.03	Demonstrate awareness of appropriate ergonomics.		
04.04	Demonstrate proper care of equipment.		
04.05	Demonstrate appropriate use of equipment in an efficient manner.		
10.0	Organize and edit video resources--The student will be able to:		SC.912.N.1.4
10.01	Log and organize video resources.		
10.02	Input video resources into post-production equipment and workflow.		
10.03	Operate editing hardware and software.		
10.04	Perform assemble edits for appropriate effect.		
10.05	Perform insert edits for appropriate effect.		

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
10.06 Maintain continuity and production values.		
10.07 Mix audio and video resources for final cut.		
10.08 Apply color correction to video footage.		
10.10 Transfer finished edit to other media for distribution or archiving.		
11.0 Generate a production schedule--The student will be able to:		
11.01 Define the segment or program type.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Digital Video Production 8  
**Course Number:** 8772480  
**Course Credit:** 1

**Course Description:**

This course covers competencies in designing and generating graphic elements.

**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
17.0 Design and generate graphic elements--The student will be able to:		SC.912.N.1.1; SC.912.P.12.2; SC.912.P.12.3; SC.912.P.12.5
17.01 Determine the graphic requirements for a production.		
17.02 Operate graphic production software.		
17.03 Produce broadcast graphic elements for titling, credits and graphic transitions.		
17.04 Determine the special effects need for a production.		
17.05 Set up and operate character generator equipment and software.		
17.06 Generate appropriate special effects and animated elements for a production.		
17.07 Demonstrate an understanding of graphic image types, file formats, and technical requirements for a production.		
17.08 Use image editing (bit mapped) software.		
17.09 Edit graphics into the program or segment.		
17.10 Demonstrate an ability to use type, color, composition and graphic elements for a specific production effect.		

<b>CTE Standards and Benchmarks</b>	<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
17.11 Demonstrate an ability to use different aspect ratios as needed for SDTV and HDTV.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Digital Video Production 9  
**Course Number:** 8772490  
**Course Credit:** 1

**Course Description:**

This course covers competencies in safe work practices, lighting planning, camera operation, control room equipment, generating a production schedule, organizing resources, and developing project proposals and scripts.

**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
04.0 Demonstrate safe and efficient work practices--The student will be able to:		
04.01 Follow industry safety rules, regulations and policies.		
04.02 Demonstrate proper handling of hazardous materials.		
04.03 Demonstrate awareness of appropriate ergonomics.		
04.04 Demonstrate proper care of equipment.		
04.05 Demonstrate appropriate use of equipment in an efficient manner.		
15.01 Develop a story-board from a script.		
06.0 Create appropriate lighting for location and/or set productions--The student will be able to:		
06.07 Use studio lighting master control equipment.		
07.0 Operate a video camera--The student will be able to:		
07.05 Operate (CCU) Camera Control Unit.		

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
09.0	Operate control room equipment--The student will be able to:		
09.04	Use vision control equipment.		
09.05	Operate routing switcher for production and tape dubs.		
10.0	Generate a production schedule--The student will be able to:		
10.04	Define the segment or program type.		
10.05	Identify production resources needed.		
10.06	Establish viable production time frame targets.		
11.0	Organize and edit video resources--The student will be able to:		SC.912.N.1.4
11.01	Log and organize video resources.		
11.02	Input video resources into post-production equipment and workflow.		
15.0	Develop a project proposal and script--The student will be able to:		
15.01	Identify a project goal.		
15.02	Write a production script.		

**Florida Department of Education  
Student Performance Standards**

**Course Title:** Digital Video Production 10  
**Course Number:** 8772491  
**Course Credit:** 1

**Course Description:**

This course covers competencies in planning, coordinating and managing 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.*

<b>CTE Standards and Benchmarks</b>		<b>FS-M/LA</b>	<b>NGSSS-Sci</b>
18.0	Plan, coordinate and manage a video or webcast production--The student will be able to:		
18.01	Define the program/segment format and market.		
18.02	Present a project proposal and script for approval.		
18.03	Develop a production schedule.		
18.04	Manage crew and staff during pre-planning and production.		
18.05	Determine post-production requirements.		
18.06	Coordinate post-production activities.		
18.07	Direct final production values.		
18.08	Archive and manage finished assets and originals.		
18.09	Oversee broadcast/distribution to market.		
18.10	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.

### **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.

### **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.

### **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.

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

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

**PSAV**

Program Number	B070600
CIP Number	0510030306
Grade Level	30, 31
Standard Length	1200 hours
Teacher Certification	BUS ED 1 @2 VOE @7 BUS DP @7 %G ELECT DP @7 %G CLERICAL @7 7G SECRETAR 7 G STENOGR @4 @7 TEC ELEC \$7 G COMP SCI 6 @2 COMM ART @7 7G PRINTING @7 7G TEC ED 1 @2 TC COOP ED @7
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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

## Purpose

The purpose of this program is to prepare students for employment in digital publishing positions, such as Information Technology Assistants, Production Assistants, Digital Assistant Designers, Graphic Designers, and Multi-Media Designers.

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 enhanced practical experiences in computer generated art and text, graphic design, graphic production, electronic design skills, preparation of electronic layouts and illustrations, and electronic scanning; and development of specialized skills in 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.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	OTA0040	Information Technology Assistant*	150 hours	15-1151
B	GRA0024	Production Assistant	150 hours	43-9031
C	GRA0025	Digital Assistant Designer	300 hours	43-9031
D	GRA0026	Graphic Designer	300 hours	27-1024
E	GRA0027	Media Designer	300 hours	27-1014

\* Note: OTA0040 is a core program.

## **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, skill, and application of information systems to accomplish job objectives and enhance workplace performance.
- 02.0 Demonstrate comprehension and communication skills
- 03.0 Use technology to enhance the effectiveness of communication skills.
- 04.0 Demonstrate proficiency using computer networks, internet and online databases to facilitate collaborative or individual learning and communication.
- 05.0 Use database and spreadsheet applications.
- 06.0 Incorporate appropriate leadership and supervision techniques, customer service strategies, and standards of personal ethics to accomplish job objectives and enhance workplace performance.
- 07.0 Investigate management functions and organizational structures as they relate to today's workplace and employer/employee roles.
- 08.0 Apply mathematical operations and processes as well as financial planning strategies to commonly occurring situations in the workplace to accomplish job objectives and enhance workplace performance.
- 09.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals.
- 10.0 Demonstrate personal and interpersonal skills appropriate for the workplace.
- 11.0 Perform e-mail activities.
- 12.0 Demonstrate proficiency using slide presentation software.
- 13.0 Demonstrate proficiency using HTML commands.
- 14.0 Demonstrate proficiency in page design applicable to the WWW.
- 15.0 Investigate emerging technologies.
- 16.0 Demonstrate proficiency using common software applications.
- 17.0 Demonstrate knowledge of different operating systems.
- 18.0 Demonstrate proficiency in computer skills.
- 19.0 Demonstrate knowledge of digital publishing concepts.
- 20.0 Perform decision-making activities.
- 21.0 Perform layout, design, and measurement activities.
- 22.0 Demonstrate proficiency in digital publishing operations.
- 23.0 Demonstrate proficiency in digital imaging.
- 24.0 Demonstrate proficiency in creating a simple website.
- 25.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals.
- 26.0 Demonstrate proficiency in computer skills.
- 27.0 Perform decision-making activities.
- 28.0 Demonstrate proficiency in digital publishing operations.
- 29.0 Demonstrate proficiency in digital imaging.
- 30.0 Demonstrate proficiency in multimedia presentation.
- 31.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals.

- 32.0 Demonstrate proficiency in digital publishing operations.
- 33.0 Demonstrate proficiency in digital imaging.
- 34.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals.
- 35.0 Demonstrate proficiency in computer skills.
- 36.0 Perform decision-making activities.
- 37.0 Demonstrate proficiency in digital publishing operations.
- 38.0 Demonstrate proficiency in multimedia presentation.

Florida Department of Education  
Student Performance Standards

Program Title: Digital Design  
PSAV Number: B070600

<b>Course Number: OTA0040</b>	
<b>Occupational Completion Point: A</b>	
<b>Information Technology Assistant – 150 Hours – SOC Code 15-1151</b>	
01.0	Demonstrate knowledge, skill, and application of information systems to accomplish job objectives and enhance workplace performance – The student will be able to:
01.01	Develop keyboarding skills to enter and manipulate text and data.
01.02	Describe and use current computer technology and software to perform personal and business related tasks in the workplace by establishing digital calendars, meetings, appointments, and create and manipulate e-mail contacts.
01.03	Identify and describe types of file systems and classify common file extensions based on software application programs used in the workplace environment.
01.04	Use reference materials such as on-line help, tutorials, and manuals available for application software.
01.05	Demonstrate basic computer file management skills and file naming conventions to accurately organize files into hierarchies by labeling file folders for easy accessibility.
01.06	Discuss the process of troubleshooting problems with computer hardware peripherals, including input and output devices in the workplace environment.
01.07	Describe ethical issues and problems associated with computers and information systems, including federal laws against anti-piracy with computers and PC software security protection.
01.08	Apply ergonomic principles and view devices applicable to computer workstation and the workplace environment.
02.0	Demonstrate comprehension and communication skills – The student will be able to:
02.01	Read and comprehend technical and non-technical reading assignments related to course content, including, books, magazines and electronic sources.
02.02	Write clear and well-organized research papers using MLA or APA documentation formats, integrating software applications for documentation setup. Demonstrate knowledge of ethical behavior regarding plagiarism and copyright violations.
02.03	Prepare and deliver a report using appropriate presentation software.
02.04	Select a team leader to facilitate large group discussions with team members.
02.05	Take notes, organize, summarize, and paraphrase main ideas and details using various note taking systems and reading strategies.
02.06	Apply the writing process to the creation of appropriate documents following designated business formats.



02.07	Interpret data on line graphs, pie charts, diagrams, and tables commonly used in spreadsheet software applications that incorporate industry data.
02.08	Demonstrate an awareness of project management concepts and tools (e.g., timelines, deadlines, resource allocation, time management, delegation of tasks, collaboration, etc.).
03.0	Use technology to enhance the effectiveness of communication skills – The student will be able to:
03.01	Select and use word processing software and accompanying features to enhance written business communications.
03.02	Share and maintain documents by applying different views and protection to a document and manage document versions. Share and save a document and apply a template.
03.03	Format content to a document by applying font, paragraph attributes, indent and tab settings to text and paragraphs. Apply spacing settings to text and paragraphs. Navigate and search through a document, create and manipulate tables.
03.04	Apply page layout and reusable content by editing and manipulating page setup settings and applying themes. Construct content by using the building blocks tools. Create and manipulate page backgrounds, headers and footers.
03.05	Use image design theory and software to create illustrations, shapes, and graphics and include a selection in a document. Insert and format pictures, shapes, and clipart. Apply and manipulate text boxes.
03.06	Proofread documents by validating content through the use of spell and grammar check. Configure autocorrect settings, insert and modify comments in a document.
03.07	Apply references and hyperlinks, create end and footnotes, and create a table of contents in a document.
03.08	Perform various mail merge options.
04.0	Demonstrate proficiency using computer networks, internet and online databases to facilitate collaborative or individual learning and communication – The student will be able to:
04.01	Demonstrate how to connect to the Internet and use appropriate Internet protocol. Identify and describe web terminology, addresses and how browsers work.
04.02	Demonstrate proficiency using basic features of GUI browsers, including: bookmarks, basic configurations, e-mail configurations, and address books. Describe appropriate browser security configurations.
04.03	Describe information technology terminology, including Internet, intranet, ethics, copyright laws, and regulatory control.
04.04	Demonstrate proficiency using search engines and search tools.
04.05	Use various web tools, including: downloading files, transfer of files, telnet, PDF, plug-ins, and data compression. Identify Boolean search strategies.
04.06	Use computer networks, including on-line databases and resources to facilitate collaborative or individual learning and communication.
04.07	Describe how business transactions and academic applications are supported by interactive web applications, including sharing photos and video clips, messaging, chatting and collaborating.
04.08	Describe appropriate use of social networking sites and applications, blogs and collaborative tools for file sharing and using list servers.
05.0	Use database and spreadsheet applications – The student will be able to:

05.01	Manage the worksheet environment by navigating through and printing a worksheet. Personalize the environment by manipulating the ribbon tabs, group settings, importing data, manipulating properties, files and folders.
05.02	Create cell data, apply auto fill and hyperlinks.
05.03	Format cells and worksheets by applying cell formats, merging and splitting cells, create row and column titles, hide and unhide column titles, rows and columns. Manipulate page set up options. Create and apply cell styles.
05.04	Manage worksheets and workbooks by creating and formatting worksheets and manipulating views.
05.05	Apply formulas and functions by creating formulas, enforcing precedence and cell formula references. Apply conditional formula logic, name and cell ranges.
05.06	Demonstrate data visually by creating and modifying charts and images.
05.07	Share worksheet data through email, changing file type and different versions. Manage comments.
05.08	Analyze and organize data through filters, sorting and applying conditional formatting.
06.0	Incorporate appropriate leadership and supervision techniques, customer service strategies, and standards of personal ethics to accomplish job objectives and enhance workplace performance – The student will be able to:
06.01	Demonstrate awareness of the following workplace essentials: Quality customer service; business ethics; confidentiality of information; copyright violations; accepted workplace rules, regulations, policies, procedures, processes, and workplace safety, and appropriate attire and grooming.
07.0	Investigate management functions and organizational structures as they relate to today's workplace and employer/ employee roles – The student will be able to:
07.01	Explore, design, implement, and evaluate organizational structures and cultures for managing project teams.
07.02	Explore and demonstrate an awareness of current trends in business and the employee's role in maintaining productive business environments in today's global workplace.
08.0	Apply mathematical operations and processes as well as financial planning strategies to commonly occurring situations in the workplace to accomplish job objectives and enhance workplace performance – The student will be able to:
08.01	Analyze, interpret, compile, and demonstrate the ability to present and communicate data in understandable and measurable terms using common statistical procedures using charts and graphs.
08.02	Use common standards of measurement including the metric system in solving work-related or business problems (e.g., length, weight, currency, time).
08.03	Select and use the correct mathematical processes and tools to solve complex problem situations that are typical of business settings and use formulas and spreadsheets when appropriate.
09.0	Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals – The student will be able to:
09.01	Analyze personal skills and aptitudes in comparison with various business related job and career options.
09.02	Use career resources to develop an information base that reflects local and global business related occupations and opportunities for continuing education and workplace experience.
09.03	Demonstrate job-seeking skills required for entry-level employment, including resume, cover letter, thank you letter, online/hard copy application, mock interview, and follow-up call.

09.04	Design and initiate a plan to facilitate growth and skill development related to anticipated job requirements and career expectations.
09.05	Refine and implement a plan to facilitate personal growth and skill development related to anticipated job requirements and career expectations.
09.06	Demonstrate an awareness of specific job requirements and career paths (e.g., requirements, characteristics needed) in business environments.
09.07	Demonstrate an awareness of the potential impact of local and global trends on career plans and life goals.
09.08	Describe the importance of building community and mentor relationships in a variety of professional and workplace situations.
10.0	Demonstrate personal and interpersonal skills appropriate for the workplace – The student will be able to:
10.01	Demonstrate ways of accepting constructive criticism on team projects within the workplace.
10.02	Apply appropriate strategies to manage and resolve conflicts in work situations.
10.03	Demonstrate human relations, personal and interpersonal skills appropriate for the workplace, including: responsibility, dependability, punctuality, integrity, positive attitude, initiative, respect for self and others, and professional dress.
11.0	Perform e-mail activities – The student will be able to:
11.01	Describe and perform e-mail capabilities and functions. Create and send messages, manage signature and automated messages. Save, send, schedule, and manage junk mail, e-mail and spam. Configure message sensitivity, security and delivery options.
11.02	Use the Internet to perform e-mail activities, including: attaching external files, saving e-mail attachments, viewing mailbox details, establishing appointments, creating contact groups, and sending a meeting to a contact group to communicate in the workplace.
11.03	Manage tasks and organize information.
12.0	Demonstrate proficiency using slide presentation software – The student will be able to:
12.01	Manage and configure the presentation software environment, including: adjusting views, manipulating window, configuring toolbar and file options.
12.02	Create slide presentations utilizing various project development elements, including: adding and removing slides, slide layouts, format slide design, insert or format placeholders.
12.03	Locate, create and incorporate graphical and multimedia elements, including: shapes, graphics, images, bullets, hyperlinks, video, and audio into a slide presentation appropriate for the project.
12.04	Explore and apply design and color theory to create dynamic and appealing visuals.
12.05	Explore various design tools and applications.
12.06	Create and manipulate graphical and multimedia elements to improve or develop new contacts appropriate for the project, including: creation of images, color selections, tone, hue and contrast.
12.07	Demonstrate various business-related elements that can be created, embedded and manipulated in a slide presentation, including: charts, graphs, tables, spreadsheets, flowcharts, and organizational charts.
12.08	Apply slide transitions and create custom animations to slide presentations appropriate for the target audience.

12.09	Demonstrate different delivery methods for slide presentations, including: packaging for CD delivery, video projection – on mouse click, rehearsed timings, printing options - outlines, handouts, slides and notes.
13.0	Demonstrate proficiency using HTML commands – The student will be able to:
13.01	Identify elements of a Web page.
13.02	Describe individual Web page layouts and content (e.g., writing for the Web, Web structure).
13.03	Define basic HTML terminology.
13.04	Analyze HTML source code developed by others.
13.05	Create Web pages using basic HTML tags (e.g., links, lists, character styles, text alignment, tables).
13.06	Use storyboarding techniques for subsequent Web pages (e.g., linear, hierarchical).
13.07	Edit and test HTML documents for accuracy and validity.
13.08	Use basic functions of WYSIWYG editors.
13.09	Use basic functions of HTML, DHTML, and XML editors and converters.
13.10	Enhance web pages through the addition of images and graphics including animation.
14.0	Demonstrate proficiency in page design applicable to the WWW – The student will be able to:
14.01	Develop an awareness of acceptable Web page design, including index pages in relation to the rest of the Web site.
14.02	Describe and apply color theory as it applies to Web page design (e.g., background and text color).
14.03	Access and digitize graphics through various resources (e.g., scanner, digital cameras, on-line graphics, clipart, CD-ROMs).
14.04	Use image design software to create and edit images.
14.05	Demonstrate proficiency in publishing to the Internet.
14.06	Demonstrate proficiency in adding downloadable forms to web pages.
14.07	Explain the need for web-based applications.
15.0	Develop an awareness of emerging technologies – The student will be able to:
15.01	Compare and contrast various methods of evaluation for emerging technologies.
15.02	Demonstrate knowledge of the process of planning upgrades and changeovers.

15.03	Compare and contrast emerging technologies and describe how they impact business in the global marketplace (e.g., wireless, wireless web, cell phones, portables/handhelds, smart appliances, home networks, peer-to-peer, etc.).
16.0	Demonstrate proficiency using common software applications – The student will be able to:
16.01	Compare and contrast the appropriate use of various software applications (e.g., word processing, desktop publishing, graphics design, web browser, e-mail, presentation, database, scheduling, financial management, Java applet, music, etc.).
16.02	Demonstrate proficiency in the use of various software applications (e.g., word processing, desktop publishing, graphics design, web browser, e-mail, presentation, database, scheduling, financial management, Java applet, music, etc.).
17.0	Demonstrate knowledge of different operating systems – The student will be able to:
17.01	Identify operating system file naming conventions.
17.02	Demonstrate proficiency with file management and structure (e.g., folder creation, file creation, backup, copy, delete, open, save).
17.03	Demonstrate a working knowledge of standard file formats.
17.04	Explain the history and purpose of various operating systems (e.g., DOS, Windows, Mac, and Unix/Linux).

**Course Number: GRA0024**  
**Occupational Completion Point: B**  
**Production Assistant – 150 Hours – SOC Code 43-9031**

18.0	Demonstrate proficiency in computer skills--The student will be able to:
18.01	Identify basic computer parts (e.g., RAM, ROM).
18.02	Demonstrate an understanding of all functions of a computer.
18.03	Utilize appropriate font management techniques (e.g., true type, postscript, install and remove fonts).
18.04	Perform storage management (e.g., hard drive, DVD, CD).
18.05	Perform basic maintenance of computers and peripherals.
19.0	Demonstrate knowledge of digital publishing concepts--The student will be able to:
19.01	Identify the skills needed by a digital designer.
19.02	Define commonly used terms in graphic communications.
19.03	Identify characteristics of paper.
19.04	Identify different kinds of color (e.g., spot, process).
19.05	Identify software used in digital publishing.

19.06	Demonstrate knowledge of copyright laws.
20.0	Perform decision-making activities--The student will be able to:
20.01	Determine work priorities.
20.02	Evaluate information to be used and choose relevant material.
20.03	Determine the audience.
20.04	Demonstrate an understanding of various advertising mediums.
20.05	Recognize and maintain ethical standards.
21.0	Perform layout, design, and measurement activities--The student will be able to:
21.01	Identify characteristics of type, type families, type series, and type styles.
21.02	Assemble mechanical elements electronically
21.03	Prepare rough layout designs.
21.04	Identify elements of design.
22.0	Demonstrate proficiency in digital publishing operations--The student will be able to:
22.01	Key with speed and accuracy to meet industry standards
22.02	Demonstrate core publishing skills, including creating tables, text boxes, manipulating graphics and inserting images.
22.03	Insert and format references and captions
22.04	Complete projects using a variety of fonts, sizes, leading, and alignments.
22.05	Output projects using a variety of devices (e.g., printers, image setters).
22.06	Design with type using kerning, tracking, horizontal/vertical scale, baseline shift, etc.
22.07	Produce projects using tables, layouts and templates.
22.08	Produce projects using white space.
22.09	Assemble multipage documents.
22.10	Create documents that use master pages.

22.11	Use a variety of styles to produce effective layouts
22.12	Produce a document using printer and reader spreads.
22.13	Use publishing software to create a pre-press profile.
22.14	Produce a variety of designs using layout/paste up software.
22.15	Create various print and digital publications, including: business cards, letterheads, brochures, newsletters, and calendars.
22.16	Create electronic forms.
22.17	Assign passwords and create restrictions with portable document formats.
22.18	Design an electronic portfolio.
23.0	Demonstrate proficiency in digital imaging--The student will be able to:
23.01	Demonstrate proper use of a scanner/input devices/digital camera.
23.02	Proofread electronically and manually.
24.0	Demonstrate proficiency in creating a simple website--The student will be able to:
24.01	Create a webpage.
24.02	Create a simple website and use hyperlinks.
24.03	Convert publications for viewing on the Internet.
24.04	Save files in multiple formats.
24.05	Create, send and manage a survey and survey results.

**Course Number: GRA0025**

**Occupational Completion Point: C**

**Digital Assistant Designer – 300 Hours – SOC Code 43-9031**

25.0	Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals--The student will be able to:
25.01	Prepare a portfolio.
25.02	Present a portfolio to an audience.
26.0	Demonstrate proficiency in computer skills--The student will be able to:

26.01	Understand computer management skills (e.g., install and remove software, folder management, shortcuts, etc.).
26.02	Perform storage management activities using a variety of devices (e.g., CD ROM, monitors, modems, zip drives, jazz drives).
26.03	Understand disk utilities and virus protection activities.
26.04	Understand how to update existing software to new versions.
27.0	Perform decision-making activities--The student will be able to:
27.01	Determine project specifications.
28.0	Demonstrate proficiency in digital publishing operations--The student will be able to:
28.01	Produce multiple color designs using different color techniques including process color and spot color.
28.02	Prepare output files using pre-press preparations (e.g., color separation, font management, file management, use of postscript fonts, etc.)
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 elements of design.
28.06	Demonstrate proficiency in the use of a vector and pixel based illustration programs.
29.0	Demonstrate proficiency in digital imaging--The student will be able to:
29.01	Crop and scale photographs electronically.
29.02	Demonstrate proficiency in use of an understanding of formats and modes (e.g., EPS, TIFF, PICT, JPEG, ASCII, binary).
29.03	Demonstrate use of image editing software.
29.04	Complete projects using proper resolution and screen values (e.g., PPI, LPI, DPI).
29.05	Produce electronically retouched photographs.
29.06	Produce projects using a digital camera.
29.07	Scan multiple documents.
29.08	Crop and scale photographs electronically using a scanner.
29.09	Apply the use of proper resolution and screen values (e.g., PPI, LPI, DPI in documents).



29.10	Produce electronically retouched photographs using tones, hues, and values.
29.11	Apply special effects to image files.
30.0	Demonstrate proficiency in multimedia presentation--The student will be able to:
30.01	Create various quality PDF files.

<b>Course Number: GRA0026</b>	
<b>Occupational Completion Point: D</b>	
<b>Graphic Designer – 300 Hours – SOC Code 27-1024</b>	
31.0	Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals--The student will be able to:
31.01	Create an electronic resume.
31.02	Prepare a portfolio
31.03	Create an electronic portfolio.
31.04	Present a portfolio to an audience.
32.0	Demonstrate proficiency in digital publishing operations--The student will be able to:
32.01	Produce designs integrating all elements of design
32.02	Produce electronic vector illustrations using digital software.
32.03	Produce multiple projects using a variety of digital software.
32.04	Prepare output files using pre-press protocols (e.g., color separation, font management, file management, use of postscript fonts, etc.).
32.05	Perform integrated functions using various design software applications.
32.06	Create documents using advanced features in layout software.
33.0	Demonstrate proficiency in digital imaging--The student will be able to:
33.01	Produce projects using vector and pixel art, gray scale, duotone, and four-color process.
33.02	Emphasize, interpret, and establish mood and emotion using illustrations.
33.03	Apply special effects to projects.

**Course Number: GRA0027**  
**Occupational Completion Point: E**  
**Media Designer – 300 Hours – SOC Code 27-1014**

34.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals--The student will be able to:

34.01 Create an electronic resume.

34.02 Create an electronic portfolio.

34.03 Present a portfolio to an audience.

35.0 Demonstrate proficiency in computer skills--The student will be able to:

35.01 Demonstrate basic functions of presentation formats (website, multimedia, digital slide show).

36.0 Perform decision-making activities--The student will be able to:

36.01 Compare and select appropriate multimedia tools.

37.0 Demonstrate proficiency in digital publishing operations--The student will be able to:

37.01 Produce a variety of designs integrating multimedia software.

37.02 Produce multiple color designs using proper color balance for presentation.

37.03 Create electronic presentations

38.0 Demonstrate proficiency in multimedia presentation--The student will be able to:

38.01 Select appropriate fonts for on-screen presentation.

38.02 Generate presentations with fully integrated text and images.

38.03 Create PDF files.

38.04 Create links.

38.05 Optimize images for the Web (e.g., file size, transmission time).

38.06 Build pages for media presentations and standards.

38.07 Link media elements into Web-delivered documents

38.08 Create presentations using color effects.

## **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

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

**PSAV**

Program Number	I100104
CIP Number	0610020203
Grade Level	30, 31
Standard Length	1650 hours
Teacher Certification	TEC ELEC ¶ 7 ¶ G TV PRO TEC @ 7 7G TEC ED 1 @ 2
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4032 – Film and Video Editors 27-4031 – Camera Operators, Television, Video, and Motion Picture
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

**Purpose**

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

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 overall production of television studio activities including: scripts, 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 four occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	RTT0514	Studio Assistant	450 hours	27-4031
B	RTT0516	Studio Technician	450 hours	27-4031
C	RTT0518	Studio Technician/Edit Assistant	450 hours	27-4032
D	RTT0520	Television Production/Edit Technician	300 hours	27-4032

## **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 the television production technology program instructional system, safety procedures and trade terminology.
- 02.0 Identify lighting needs for a planned production.
- 03.0 Use basic television production equipment.
- 04.0 Interpret broadcast style scripts.
- 05.0 Work as part of the television production team.
- 06.0 Perform basic audio and video recording and editing operations.
- 07.0 Conduct online research for television production.
- 08.0 Operate an editing system.
- 09.0 Stage a set as directed for television production.
- 10.0 Perform lighting activities for a planned production.
- 11.0 Use basic equipment in a television production studio.
- 12.0 Identify different types of script copy.
- 13.0 Write a broadcast style script.
- 14.0 Perform character generation (CG).
- 15.0 Operate television studio audio control system.
- 16.0 Perform special effects lighting for a planned production.
- 17.0 Demonstrate correct use of equipment used in television production.
- 18.0 Perform basic digital audio and video recording and editing operations.
- 19.0 Perform television production and programming activities.
- 20.0 Demonstrate industry accepted skills for studio production.
- 21.0 Utilize the internet to gather data for a planned production.
- 22.0 Perform basic maintenance for lighting instruments.
- 23.0 Function as a member of a production team.
- 24.0 Create a television program.
- 25.0 Perform advanced audio and video recording and editing operations.
- 26.0 Research and select one or more areas of television production for specialization.
- 27.0 Demonstrate an independent level of proficiency in the selected area of specialization.
- 28.0 Demonstrate advanced scriptwriting techniques.
- 29.0 Apply production skills by producing a program.
- 30.0 Perform advanced digital audio and video recording and editing operations.
- 31.0 Create a variety of television programming.
- 32.0 Perform Electronic News Gathering (ENG) and Electronic Field Production (EFP) equipment functions.
- 33.0 Translate written script into a full television production.
- 34.0 Create and maintain a website with embedded production media.
- 35.0 Function at an independent level with proficiency in one area of television production.
- 36.0 Research a specific career in television.
- 37.0 Design a capstone project in television production using skills learned throughout the program.



Florida Department of Education  
Student Performance Standards

Program Title:        **Television Production**  
PSAV Number:        **I100104**

<b>Course Number: RTT0514</b>	
<b>Occupational Completion Point: A</b>	
<b>Studio Assistant – 450 Hours – SOC Code 27-4031</b>	
01.0	Apply knowledge of the television production technology program instructional system, safety procedures and trade terminology--The student will be able to:
01.01	Follow classroom procedures.
01.02	State and apply general safety rules for operation of equipment and learning activities in the lab.
01.03	Utilize trade terminology in the television production lab.
01.04	Utilize trade abbreviations and acronyms as appropriate.
01.05	Transport equipment safely and securely.
01.06	Store equipment in appropriate locations.
02.0	Identify lighting needs for a planned production--The student will be able to:
02.01	Describe types of lighting fixtures.
02.02	Identify parts of lighting fixtures and accessories.
02.03	Set-up appropriate lighting for a production.
02.04	Analyze lighting needs for production.
03.0	Use basic television production equipment--The student will be able to:
03.01	Load, cue, transfer, record and play video and audio from tapes, DVDs, CDs, SD Cards, and HD Drives.
03.02	Set up, turn on and operate a video camera.
03.03	Set up, turn on, and operate audio production equipment.
03.04	Demonstrate picture composition principles.

03.05	Identify types of video connectors.
03.06	Identify types of audio connectors.
03.07	Identify, select and demonstrate use of an appropriate microphone.
03.08	Identify the qualities of a good audio track.
03.09	Demonstrate basic television lighting.
03.10	Explain the care, storage and use of television hardware and software.
03.11	Select appropriate equipment.
03.12	Identify and select microphones for production.
03.13	Place microphones for maximum effect.
03.14	Describe video and audio input and output devices.
03.15	Set up video and audio input and output devices for production.
03.16	Operate video and audio input and output devices during recording and playback.
03.17	Describe function of video and audio monitors.
04.0	Interpret broadcast style scripts--The student will be able to:
04.01	Write a script in documentary format.
04.02	Write a treatment.
04.03	Write a broadcast script including location information, camera moves and dialogue.
05.0	Work 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 of the production process.
05.03	Give and follow directions.
05.04	Function as a member of the production team.
05.05	Set and adhere to production deadlines.

06.0	Perform basic audio and video recording and editing operations--The student will be able to:
06.01	Describe operational parts of a video recording device.
06.02	Operate video recording devices to record and playback.
06.03	Perform editing procedures for both audio and video production needs.
07.0	Conduct online research for television production --The student will be able to:
07.01	Complete an internet search for viable information used in scripting a project.
07.02	Identify valid websites for information retrieval.
07.03	Clearly state the differences between .com, .gov, .edu, and .org sites.
08.0	Operate an editing system--The student will be able to:
08.01	Transfer and log video.
08.02	Prepare graphics for production.
08.03	Combine elements into a program.
08.04	Select best source material, such as voice over (VO), sound on tape (SOT), and B-roll, to achieve program goals.
08.05	Control audio mix and effects.
08.06	Edit a shot sequence or story for continuity.
09.0	Stage a set as directed for television production--The student will be able to:
09.01	Dress a set for a television production.
09.02	Inspect for and correct safety concerns.
09.03	Sketch a set plan.
10.0	Perform lighting activities for a planned production--The student will be able to:
10.01	Describe functions of master lighting panel and dimmer board.
10.02	Operate master lighting panel and dimmer board.
11.0	Use basic equipment in a television production studio--The student will be able to:

11.01	Select appropriate audio and video cables for use.
11.02	Troubleshoot a bad cable connection.
11.03	Set up video and audio monitors for production.
11.04	Describe function of a Camera Control Unit (CCU).
11.05	Operate a CCU to correct video signals from studio cameras.
11.06	Describe parts of an audio mixing console.
11.07	Operate audio mixing console.
11.08	Operate master switcher.
11.09	Direct participants in production of a program.
11.10	Perform on-camera.
12.0	Identify different types of script copy--The student will be able to:
12.01	Identify scripts by format, function and utilization.
12.02	Define terminology used in broadcast scriptwriting.
13.0	Write a broadcast style script--The student will be able to:
13.01	Plan and produce a storyboard.
13.02	Specify steps leading to broadcast scripts.
14.0	Perform character generation (CG) --The student will be able to:
14.01	Operate a Teleprompter.
14.02	Create television graphics using industry standard equipment.
14.03	Understand television graphic safe zone and color design.
14.04	Create CGs adhering to the rule of thirds.
15.0	Operate television studio audio control system--The student will be able to:
15.01	Identify and select microphones for production.

15.02	Place microphones for maximum effect.
15.03	Describe parts of sound recording and playback devices.
15.04	Operate sound recording and playback devices.
15.05	Describe parts of an audio mixing console.
15.06	Operate audio mixing console.
16.0	Select special effects lighting for a planned production--The student will be able to:
16.01	Use lighting instruments to create the mood for a production
16.02	Use appropriate lighting accessories (gels, reflectors, etc.) to enhance a production.
17.0	Demonstrate correct use of equipment used in television production--The student will be able to:
17.01	Demonstrate facility and equipment inventory.
17.02	Demonstrate basic equipment maintenance and management.
18.0	Perform basic digital audio and video recording and editing operations--The student will be able to:
18.01	Identify and describe different video recording devices.
19.0	Perform television production and programming activities--The student will be able to:
19.01	Perform Society of Motion Picture and television Engineers (SMPTE) time code calculations.
19.02	Develop a script for a narrated program.
19.03	Draw storyboard for a planned non-profit commercial production.
20.0	Demonstrate industry accepted skills for studio production--The student will be able to:
20.01	Demonstrate skills in selecting production topics.
20.02	Determine quality of production topics.
20.03	Operate television studio equipment.
20.04	Adhere to production deadlines.
21.0	Utilize the internet to gather data for a planned production--The student will be able to:

21.01 Use the internet to research specific information on a production topic as assigned.

21.02 Derive on-line information for use in graphs and charts in a production.

**Course Number: RTT0516**  
**Occupational Completion Point: B**  
**Studio Technician – 450 Hours – SOC Code 27-4031**

22.0 Perform basic maintenance for lighting instruments --The student will be able to:

22.01 Identify the correct bulb for a light fixture.

22.02 Replace a bulb in a fixture.

22.03 Use the appropriate gear and/or techniques to ensure that the bulbs are not exposed to human contact (avoid oils on light surfaces).

23.0 Function as a member of a production team--The student will be able to:

23.01 List the job functions of the television production team.

23.02 Describe the steps of the production process.

23.03 Give and follow directions.

23.04 Set and adhere to production deadlines.

23.05 Receive and respond to client comments and feedback.

24.0 Create a television program--The student will be able to:

24.01 Plan a television program.

24.02 Write a television program.

24.03 Direct a television program.

24.04 Edit a television program.

24.05 Record a television program.

25.0 Perform advanced audio and video recording and editing operations--The student will be able to:

25.01 Set up digital audio and/or digital video editing equipment and or software.

25.02 Set up digital audio and/or digital video recording and playback devices.

26.0	Research and select one or more areas of television production for specialization -- The student will be able to:
26.01	Survey and select area(s) for specialization in television production.
26.02	Perform research on position availability, training requirements and post-secondary institutes with programs of study or emphasis in your specialization.
27.0	Demonstrate an independent level of proficiency in the selected area of specialization --The student will be able to:
27.01	Perform at an independent level of proficiency in their chosen area(s) of specialization.
28.0	Demonstrate advanced scriptwriting techniques--The student will be able to:
28.01	Write a broadcast script for a program with a minimum 10 minute program length.
28.02	Use the correct script format for the program selected (documentary, drama, infomercial, etc.)
29.0	Apply production skills by producing a program -- The student will be able to:
29.01	Plan a television program with a minimum 10 minute program length.
29.02	Write a television program with a minimum 10 minute program length.
29.03	Direct a television program with a minimum 10 minute program length.
29.04	Edit a television program with a minimum 10 minute program length.
29.05	Record a television program with a minimum 10 minute program length.
30.0	Perform advanced digital audio and video recording and editing operations--The student will be able to:
30.01	Set-up video-cassette editor.
30.02	Set-up video input and output devices.
30.03	Perform insert edits in linear and non-linear format.
31.0	Create a variety of television programming--The student will be able to:
31.01	Write, produce, direct and edit news programs.
31.02	Write, produce, direct and edit editorials.
31.03	Write, produce, direct and edit feature programs.
31.04	Write, produce, direct and edit interview programs.

31.05 Write, produce, direct and edit commercials.

**Course Number: RTT0518**

**Occupational Completion Point: C**

**Studio Technician/Edit Assistant – 450 Hours – SOC Code 27-4032**

32.0 Perform Electronic News Gathering (ENG) and Electronic Field Production (EFP) equipment functions--The student will be able to:

32.01 List and describe ENG and EFP equipment components.

32.02 Set up equipment for field production.

32.03 Operate equipment during field production segments.

33.0 Translate written script into a full television production--The student will be able to:

33.01 Produce a television program from a written script.

34.0 Create and maintain a website with embedded production media--The student will be able to:

34.01 Set up and operate an online portfolio of work.

34.02 Stream video for use on the internet.

35.0 Function at an independent level with proficiency in one area of television production--The student will be able to:

35.01 Survey and select an area of specialization in television production.

35.02 Perform at an independent level of proficiency in area(s) of specialization.

35.03 Create useable end products in this area of specialization.

35.04 Create training materials in their area of specialization.

35.05 Demonstrate the correct application and use of their chosen area of specialization.

**Course Number: RTT0520**

**Occupational Completion Point: D**

**Television Production/Edit Technician – 300 Hours – SOC Code 27-4032**

36.0 Research a specific career in television--The student will be able to:

36.01 Perform career research on a specific area of television production.

36.02 Write a report on the specific career including salary, job prospects, and education requirements.



36.03	Prepare a resume for employment in the specific career selected.
36.04	Demonstrate a high level of proficiency in the specific career area selected.
37.0	Design a capstone project in television production using skills learned throughout the program--The student will be able to:
37.01	Write a television script.
37.02	Stage a television set.
37.03	Select special effects lighting.
37.04	Select and use audio and video recording equipment.
37.05	Perform digital audio and video editing operations.

## **Additional Information**

### **Laboratory Activities**

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

### **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Film Production Equipment Operations  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts, A/V Technology and Communication

**PSAV**

Program Number	I100112
CIP Number	0650060212
Grade Level	30, 31
Standard Length	1600 hours
Teacher Certification	TV PRO TEC @7 7G TEC ELEC @7 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4031 – Camera Operators, Television, Video, and Motion Picture 27-4032 – Film and Video Editors 27-4011 – Audio and Video Equipment Technicians 27-4014 – Sound Engineering Technicians 27-1027 – Set and Exhibit Designers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

**Purpose**

The purpose of this program is to prepare students for initial employment in film production equipment operation occupations, as camera assistants, sound equipment operators, editing equipment operators, set builders, grips and lighting equipment operators.

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.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Course Length	SOC Code
A	FIL0080	Set Builder/Prop Maker	300 hours	27-1027
B	FIL0081	Sound Equipment Operator	250 hours	27-4014
C	FIL0082	Grips and Lighting Equipment Operator	330 hours	27-4011
D	FIL0083	Editing Equipment Operator	360 hours	27-4032
E	FIL0084	Camera Assistant	360 hours	27-4031

## **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 Construct and install theatrical scenery to the specifications required in a scene design for a film production.
- 02.0 Function as part of a technical support team in planning, implementing and running the technical aspects of film production.
- 03.0 Be knowledgeable of the interrelationship which exists between the various creative and craft skills required for film production.
- 04.0 Operate audio equipment for film productions.
- 05.0 Execute the audio requirements for film production.
- 06.0 Execute pre-production, production and post-production tasks for the area of gripping.
- 07.0 Execute pre-production, production and post-production tasks for the area of film lighting.
- 08.0 Execute pre-production, production and post-production tasks for the area of film editing equipment operation.
- 09.0 Execute pre-production, production and post-production tasks for the area of camera assisting.

Florida Department of Education  
Student Performance Standards

Program Title: Film Production Equipment Operations  
PSAV Number: I100112

<b>Course Number: FIL0080</b>	
<b>Occupational Completion Point: A</b>	
<b>Set Builder/Prop Maker – 300 Hours – SOC Code 27-1027</b>	
01.0	Construct and install theatrical scenery to the specifications required in a scene design for a film production--The student will be able to:
01.01	Purchase appropriate materials and hardware for scenic construction.
01.02	Construct common flat scenery.
01.03	Construct three-dimensional scenery.
01.04	Execute application techniques used in painting scenery.
01.05	Construct special effects scenery.
01.06	Schedule and organize transportation of scenery to remote locations.
01.07	Supervise scene shop activities
02.0	Function as part of a technical support team in planning, implementing and running the technical aspects of film production--The student will be able to:
02.01	Perform as a member of a technical support team within the framework of an organized film production.
02.02	Execute job assignments in order to meet production deadlines.
02.03	Execute technical needs to apply accepted principles of film technology to production situation(s).
03.0	Be knowledgeable of the interrelationship which exists between the various creative and craft skills required for film production--The student will be able to:
03.01	Differentiate the working relationships, which exist between the various participants involved in the film making process.
03.02	Demonstrate the proper use of standard film making forms.
03.03	Define the specific technical processes used by the camera, grip, lighting, sound, art, costume, special effects, make-up and editing.
03.04	Execute strategies for meeting the technical requirements of a film production crew.



**Course Number: FIL0081**  
**Occupational Completion Point: B**  
**Sound Equipment Operator – 250 Hours – SOC Code 27-4014**

04.0 Operate audio equipment for film productions--The student will be able to:

04.01 Operate sound reinforcement systems to meet performance needs.

04.02 Operate various audio equipment to achieve proper sound mix on an audio mixer

04.03 Perform transactions with audio suppliers.

04.04 Execute the design for proper microphone and speaker placement.

05.0 Execute the audio requirements for film production--The student will be able to:

05.01 Execute strategies for recording production film sound to acceptable industry standards.

05.02 Record production and post-production sound.

05.03 Work as a member of a film production team.

05.04 Develop appropriate industry contacts.

05.05 Assist in analyzing audio needs for film production to perform transactions with suppliers.

**Course Number: FIL0082**  
**Occupational Completion Point: C**  
**Grips and Lighting Equipment Operator – 330 Hours – SOC Code 27-4011**

06.0 Execute pre-production, production and post-production tasks for the area of gripping--The student will be able to:

06.01 Execute strategies to properly utilize grip equipment during film production.

06.02 Accept directions in the placement of dollies, cranes and other camera mounts as required for film production.

06.03 Execute pre and post-production routines.

06.04 Work as a member of a film production team.

06.05 Develop appropriate industry contacts.

06.06 Demonstrate safe work habits.

06.07 Assist in determining grip equipment needs.

06.08	Execute required effects for lighting set-ups.
07.0	Execute pre-production, production and post-production tasks for the area of film lighting--The student will be able to:
07.01	Utilize standard film lighting equipment to production specifications.
07.02	Execute power distribution system for film lighting equipment.
07.03	Execute pre and post-production routines necessary for the lighting department.
07.04	Work as a member of a film production team.
07.05	Create a safe working environment.
07.06	Develop appropriate industry contacts.
07.07	Execute production requirements to determine lighting equipment and maintenance needs.
07.08	Execute required lighting effects for film shooting.
07.09	Hang, connect and focus lights for a production.

**Course Number: FIL0083**  
**Occupational Completion Point: D**  
**Editing Equipment Operator – 360 Hours -- SOC Code 27-4032**

08.0	Execute pre-production, production and post-production tasks for the area of film editing equipment operation--The student will be able to:
08.01	Operate editing equipment.
08.02	Execute standard editing room routines.
08.03	Execute required editing room documentation.
08.04	Work as a member of a film production team.
08.05	Develop appropriate industry contacts.
08.06	Work with suppliers and film laboratories.
08.07	Execute editing sequences using industry standard equipment.

**Course Number: FIL0084**  
**Occupational Completion Point: E**  
**Camera Assistant – 360 Hours -- SOC Code 27-4031**

09.0 Execute pre-production, production and post-production tasks for the area of camera assisting--The student will be able to:

09.01 Assist in the execution of shooting activities using standard industry camera equipment.

09.02 Assist in shooting activities required for appropriate camera department documentation.

09.03 Execute the proper care and handling of camera and camera assist equipment.

09.04 Work as a member of a film production team.

09.05 Develop appropriate industry contacts.

09.06 Assist in analyzing production requirements to determine camera equipment needs.

## **Additional Information**

### **Laboratory Activities**

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

### **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

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

**PSAV**

Program Number	I100230
CIP Number	0650060223
Grade Level	30, 31
Standard Length	1050 hours
Teacher Certification	TEC ELEC ¶ 7 ¶ G TV PRO TEC @7 7G TEC ED 1 @ 2
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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

**Purpose**

The purpose of this program is to prepare students for initial employment with occupational titles as radio and television announcer 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 operation of 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.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	RTT0522	Broadcast Announcer	150 hours	27-3011
B	RTT0523	Audio Equipment Technician	300 hours	27-4011
C	RTT0524	Sound Engineering Technician	300 hours	27-4014
D	RTT0527	Audio Broadcast Technician	300 hours	27-4012

## **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 class procedures.
- 02.0 Demonstrate an 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 appropriate broadcast speaking manner.
- 08.0 Demonstrate 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 requirements for set-up and operation of a sound reinforcement system.
- 11.0 Demonstrate 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 transaction with music industry suppliers.
- 16.0 Plan, coordinate and manage an audio broadcast or album.
- 17.0 Demonstrate knowledge of legal issues of copyright.

Florida Department of Education  
Student Performance Standards

Program Title: Digital Audio Production  
PSAV Number: I100230

<b>Course Number: RTT0522</b>	
<b>Occupational Completion Point: A</b>	
<b>Broadcast Announcer – 150 Hours – SOC Code 27-3011</b>	
01.0	Demonstrate knowledge of school and class procedures--The student will be able to:
01.01	Verbalize the rules and operation of school and class.
01.02	State the nature of the instruction.
01.03	Identify what will be learned in relation to stated goals and job opportunities that exist.
02.0	Demonstrate an ability to operate an audio console--The student will be able to:
02.01	Demonstrate an ability to control the audio console during the recording of a show or program. Combine all the sound elements on to tape, compact disc or broadcast.
02.02	Route outside organizations through the audio console or computer.
02.03	Demonstrate application of appropriate recording mix while adjusting audio levels.
02.04	Demonstrate the ability to keep 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 a 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 ability to write commercial copy in its various forms.
03.03	Demonstrate ability to write a production plan for a show.
03.04	Demonstrate ability to write lyrics for a song or jingle.
03.05	Demonstrate 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 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 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 their reading speed as required to properly complete their assignment in the available 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 the various assignments in a professional manner according to industry standards.
06.0	Demonstrate appropriate on-air skills--The student will be able to:
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 the various assignments in a professional manner according to industry standards.
06.05	List the elements and procedures of log keeping.
07.0	Demonstrate appropriate broadcast speaking manner--The student will be able to:
07.01	Identify and correct verbal deficiencies in themselves and others.
07.02	Demonstrate ability to breathe properly, control their voice relating to projection, loudness, 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 of announcing, the various techniques of delivery and procedures according to accepted standards.

**Course Number: RTT0523**  
**Occupational Completion Point: B**  
**Audio Equipment Technician – 300 Hours – SOC Code 27-4011**

08.0 Demonstrate set-up and configuration of a computer for audio applications--The student will be able to:

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:

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.

10.0 Demonstrate understanding of requirements for set up and operation of a sound reinforcement system--The student will be able to:

10.01 Demonstrate basic understanding of audio electronics (head room, biasing, distortion, equalization, frequency response, etc.).

10.02 Demonstrate basic understanding of acoustics.

10.03 Demonstrate knowledge of 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 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 multi-track recording.
10.13	Interpret audio needs for end user.
10.14	Supervise equipment operator.
10.15	Evaluate quality of the final mix to industry standards.
11.0	Demonstrate application of control protocols and their relationship to equipment used in the music industry--The student will be able to:
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 software.
12.0	Demonstrate basic operation of a digital audio workstation--The student will be able to:
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.
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:

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 and understanding of the function and operation of digital audio workstations.
13.04	Demonstrate ability to edit, cut, erase, and insert sound utilizing various digital production techniques.

**Course Number: RTT0524**  
**Occupational Completion Point: C**  
**Sound Engineering Technician – 300 Hours – SOC Code 27-4014**

09.0	Understand the operation of basic reproduction, reinforcement and recording audio equipment--The student will be able to:
09.01	Formulate strategies for producing multi-track recording.
09.02	Evaluate production needs for microphone applications.
09.03	Demonstrate proficiency with multi-track, multi-channeled mixing consoles.
09.04	Formulate strategies for electronic editing.
09.05	Configure audio recording systems for optimal and appropriate use of signal processing equipment.
09.06	Engineer a recording session and prepare appropriate documentation.
09.07	Mix multi-track recording.
09.08	Configure audio equipment for optimal musical mix.
09.09	Create a mixing plan.
09.10	Evaluate the quality of multi-track recording.
09.11	Interpret audio needs for end user.
09.12	Supervise equipment operator.
09.13	Evaluate quality of the final mix to industry standards.
11.0	Demonstrate application of control protocols and their relationship to equipment used in the music industry--The student will be able to:
11.01	Demonstrate proficiency in using MIDI instruments to record sounds using a digital sampler.
11.02	Demonstrate an understanding of MIDI and other control protocol in the recording studio.

11.03	Configure MIDI and other show control devices in the studio or live environment.
11.04	Troubleshoot MIDI and control communication problems.
14.0	Demonstrate advanced digital production skills--The student will be able to:
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 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.

**Course Number: RTT0527**  
**Occupational Completion Point: D**  
**Audio Broadcast Technician – 300 Hours – SOC Code 27-4012**

14.0	Demonstrate advanced digital production skills--The student will be able to:
14.04	Demonstrate knowledge and ability to connect the hardware for a digital audio workstation, an audio console, various recording equipment together using proper signal flow techniques, cables and connectors.
14.05	Demonstrate knowledge and ability to record, edit and encode a surround sound digital mix for use on DVD or SACD.
14.06	Demonstrate knowledge and ability to encode audio for use on the web, digital distribution, use in video and animation.
14.07	Demonstrate knowledge and ability to create album cover art for CD and web distribution.
14.08	Demonstrate knowledge and ability to create a blog page to post Internet broadcast.
14.09	Demonstrate understanding of RSS feeds to be used to distribute digital content to Internet subscribers and to build and 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 needed equipment, supplies and educational materials.
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.
16.0	Plan, coordinate and manage an audio broadcast or album--The student will be able to:

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 needed 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 project.
16.09	Archive and manage finished assets and originals.
16.10	Oversee broadcast/internet distribution or physical distribution to market.
16.11	Explain various techniques for program or segments promotion.
17.0	Demonstrate knowledge of legal issues of copyright--The student will be able to:
17.01	Define all Federal Communications Commission 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 issues, copyright and insurance/liability issues.



## **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

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

**PSAV**

Program Number	I100240
CIP Number	0610010522
Grade Level	30, 31
Standard Length	1500 hours
Teacher Certification	TEC ELEC ¶ 7 ¶ G TV PRO TEC @7 7G TEC ED 1 @ 2
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 27-1014 – Multimedia Artists and Animators 27-4012 – Broadcast Technicians
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

**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, multi-media 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 overall production of digital video activities including: scripts, lighting, camera operation, electronic news gathering, field/studio production, and 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 six occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	RTT0530	Digital Video Fundamentals	150 hours	27-4011
B	RTT0531	Audio and Video Equipment Technician	150 hours	27-4011
C	RTT0532	Camera Operator	300 hours	27-4031
D	RTT0533	Video Editor	300 hours	27-4032
E	RTT0534	Multi-media Artist and Animator	300 hours	27-1014
F	RTT0525	Broadcast Technician	300 hours	27-4012

## **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 Develop a project proposal and script.
- 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 a video camera.
- 07.0 Shoot studio and/or location footage.
- 08.0 Record, mix and edit audio resources.
- 09.0 Operate control room equipment.
- 10.0 Organize and edit video resources.
- 11.0 Design and generate graphic elements.
- 12.0 Plan, coordinate and manage a video or webcast production.

Florida Department of Education  
Student Performance Standards

Program Title: Digital Video Production  
PSAV Number: I100240

<b>Course Number: RTT0530</b>	
<b>Occupational Completion Point: A</b>	
<b>Digital Video Fundamentals – 150 Hours – SOC Code 27-4011</b>	
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 proper handling of hazardous materials.
01.03	Demonstrate awareness of appropriate ergonomics.
01.04	Demonstrate proper care of equipment.
01.05	Demonstrate appropriate use of equipment in an efficient manner.
04.0	Plan a production set--The student will be able to:
04.01	Define set requirements for program type.
04.02	Define needed prop, costume and other resources.
04.03	Acquire appropriate locations for segment 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, method 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.
06.0	Operate a video camera--The student will be able to:
06.01	Use current industry standard production video equipment.

06.02	Operate camera in studio and location (field) production environments.
08.0	Record, mix and edit audio resources--The student will be able to:
08.01	Identify and select microphones for production needs.
08.02	Determine optimal microphone placement.
08.03	Establish appropriate recording conditions.
09.0	Operate control room equipment--The student will be able to:
09.01	Define control room functions in a production.
10.0	Organize and edit video resources--The student will be able to:
10.01	Log and organize video resources.
10.02	Input video resources into post-production equipment and workflow.

**Course Number: RTT0531**  
**Occupational Completion Point: B**  
**Audio and Video Equipment Technician – 150 Hours – SOC 27-4011**

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 proper handling of hazardous materials.
01.03	Demonstrate awareness of appropriate ergonomics.
01.04	Demonstrate proper care of equipment.
01.05	Demonstrate appropriate use of equipment in an efficient manner.
03.0	Generate a production schedule--The student will be able to:
03.01	Define the segment or program type.
03.02	Identify production resources needed.
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, method of use and application.
05.03	Use lighting equipment according to industry safety standards.
05.05	Light a location set with ambient/available and supplemental lighting.
06.0	Operate a video camera--The student will be able to:
06.01	Use current industry standard production video equipment.
06.02	Operate camera in studio and location (field) production environments.
08.0	Record, mix and edit audio resources--The student will be able to:
08.01	Identify and select microphones for production needs.
08.02	Determine optimal microphone placement.
08.03	Establish appropriate recording conditions.
08.04	Set up audio recording equipment.
08.05	Perform appropriate pre-production check of production equipment.
08.06	Record location sound.
08.07	Record studio live sound.
09.0	Operate control room equipment--The student will be able to:
09.01	Define control room functions in a production.
09.02	Use the audio console (mixer) in a production.
09.03	Operate camera switching and traffic control equipment.
10.0	Organize and edit video resources--The student will be able to:
10.01	Log and organize video resources.
10.02	Input video resources into post-production equipment and workflow.
10.03	Operate editing hardware and software.
10.04	Perform assemble edits for appropriate effect.

10.05 Perform insert edits for appropriate effect.

**Course Number: RTT0532**  
**Occupational Completion Point: C**  
**Camera Operator – 300 Hours -- SOC 27-4031**

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 proper handling of hazardous materials.

01.03 Demonstrate awareness of appropriate ergonomics.

01.04 Demonstrate proper care of equipment.

01.05 Demonstrate appropriate use of equipment in an efficient manner.

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, method of use and application.

05.03 Use lighting equipment according to industry safety standards.

05.04 Use lighting for effect to control mood and impact in production settings.

06.0 Operate a video camera--The student will be able to:

06.01 Use current industry standard production video equipment.

06.02 Operate camera in studio and location (field) production environments.

06.03 Align camera for studio production.

06.04 Demonstrate appropriate framing for both SDTV and HDTV.

07.0 Shoot studio and/or location footage--The student will be able to:

07.01 Plan a shot to obtain required action/footage.

07.02 Demonstrate appropriate shot sequences, transitions and post production (edit) effects.

07.03 Control camera movement to obtain required effects.

07.04	Control lens, focal length, aperture and exposure to obtain required effects.
07.05	Set up camera and recording equipment sequence.
08.0	Record, mix and edit audio resources--The student will be able to:
08.05	Perform appropriate pre-production checks of equipment function.
08.06	Record location sound.
08.07	Record studio live sound.
08.08	Perform basic routine, preventative and repair maintenance on video equipment.
08.09	Define the various recording formats and media.
08.10	Define appropriate digital compression and signal (file) types.
10.0	Organize and edit video resources--The student will be able to:
10.01	Log and organize video resources.
10.02	Input video resources into post-production equipment and workflow.

**Course Number: RTT0533**  
**Occupational Completion Point: D**  
**Video Editor – 300 Hours – SOC 27-4032**

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 proper handling of hazardous materials.
01.03	Demonstrate awareness of appropriate ergonomics.
01.04	Demonstrate proper care of equipment.
01.05	Demonstrate appropriate use of equipment in an efficient manner.
03.0	Generate a production schedule--The student will be able to:
03.01	Define the segment or program type.
05.0	Create appropriate lighting for location and/or set productions--The student will be able to:

05.03	Use lighting equipment according to industry safety standards.
08.0	Record, mix and edit audio resources--The student will be able to:
08.11	Perform sound edits and enhancements.
10.0	Organize and edit video resources--The student will be able to:
10.01	Log and organize video resources.
10.02	Input video resources into post-production equipment and workflow.
10.03	Operate editing hardware and software.
10.04	Perform assemble edits for appropriate effect.
10.05	Perform insert edits for appropriate effect.
10.06	Maintain continuity and production values.
10.07	Mix audio and video resources for final cut.
10.08	Apply color correction to video footage.
10.09	Demonstrate ability to edit in both SDTV and HDTV.

**Course Number: RTT0534**  
**Occupational Completion Point: E**  
**Multi-Media Artist and Animator – 300 Hours – SOC 27-1014**

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 proper handling of hazardous materials.
01.03	Demonstrate awareness of appropriate ergonomics.
01.04	Demonstrate proper care of equipment.
01.05	Demonstrate appropriate use of equipment in an efficient manner.
03.0	Generate a production schedule--The student will be able to:
03.01	Define the segment or program type.

10.0	Organize and edit video resources--The student will be able to:
10.01	Log and organize video resources.
10.02	Input video resources into post-production equipment and workflow.
10.03	Operate editing hardware and software.
10.04	Perform assemble edits for appropriate effect.
10.05	Perform insert edits for appropriate effect.
10.06	Maintain continuity and production values.
10.07	Mix audio and video resources for final cut.
10.08	Apply color correction to video footage.
10.10	Transfer finished edit to other media for distribution or archiving.
11.0	Design and generate graphic elements--The student will be able to:
11.01	Determine the graphic requirements for a production.
11.02	Operate graphic production software.
11.03	Produce broadcast graphic elements for titling, credits and graphic transitions.
11.04	Determine the special effects need for a production.
11.05	Set up and operate character generator equipment and software.
11.06	Generate appropriate special effects and animated elements for a production.
11.07	Demonstrate an understanding of graphic image types, file formats, and technical requirements for a production.
11.08	Use image editing (bit mapped) software.
11.09	Edit graphics into the program or segment.
11.10	Demonstrate an ability to use type, color, composition and graphic elements for a specific production effect.
11.11	Demonstrate an ability to use different aspect ratios as needed for SDTV and HDTV.

**Course Number: RTT0525**  
**Occupational Completion Point: F**  
**Broadcast Technician – 300 Hours – SOC 27-4012**

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 proper handling of hazardous materials.

01.03 Demonstrate awareness of appropriate ergonomics.

01.04 Demonstrate proper care of equipment.

01.05 Demonstrate appropriate use of equipment in an efficient manner.

02.0 Develop a project proposal and script--The student will be able to:

02.01 Identify a project goal.

02.02 Write a production script.

02.03 Develop a story-board from a script.

03.0 Generate a production schedule--The student will be able to:

03.01 Define the segment or program type.

03.02 Identify production resources needed.

03.03 Establish viable production time frame targets.

05.0 Create appropriate lighting for location and/or set productions--The student will be able to:

05.07 Use studio lighting master control equipment.

06.0 Operate a video camera--The student will be able to:

06.05 Operate (CCU) Camera Control Unit.

09.0 Operate control room equipment--The student will be able to:

09.04 Use vision control equipment.

09.05 Operate routing switcher for production and tape dubs.

10.0 Organize and edit video resources--The student will be able to:

10.01	Log and organize video resources.
10.02	Input video resources into post-production equipment and workflow.
12.0	Plan, coordinate and manage a video or web cast production--The student will be able to:
12.01	Define the program/segment format and market.
12.02	Present a project proposal and script for approval.
12.03	Develop a production schedule.
12.04	Manage crew and staff during pre-planning and production.
12.05	Determine post-production requirements.
12.06	Coordinate post-production activities.
12.07	Direct final production values.
12.08	Archive and manage finished assets and originals.
12.09	Oversee broadcast/distribution to market.
12.10	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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan



with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Telecommunications Technology  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts, A/V Technology and Communication

**PSAV**

Program Number	I470301
CIP Number	0647010301
Grade Level	30, 31
Standard Length	600 hours
Teacher Certification	ELECTRONIC @7 7G COMP SVC 7G ELECTRICAL @7 7G TELCOM 7G BUS MACH 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	49-2022 – Telecommunications Equipment Installers and Repairers, Except Line Installers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

**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 courses content includes, but is not limited to, installation, maintenance and servicing of telecommunication systems; and 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.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	EER0051	Telecommunications Installer	150 hours	49-2022
B	EER0052	Telecommunications Installation and Repair Specialist	150 hours	49-2022
C	EER0055	Telecommunications Technician	300 hours	49-2022

## **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 telecommunication system wiring.
- 14.0 Demonstrate proficiency in customer relations.
- 15.0 Demonstrate proficiency in basic DC circuits.
- 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 circuits.
- 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 validate network and telecommunication cabling systems.
- 25.0 Demonstrate a basic understanding of computer systems 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

Program Title: Telecommunications Technology  
PSAV Number: I470301

**Course Number: EER0051**  
**Occupational Completion Point: A**  
**Telecommunications Installer – 150 Hours – SOC Code 49-2022**

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.
03.02	Explain the hazards associated with 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 his/her Industry code of conduct.
06.03	Explain how the code of conduct protects both customers and workers.
06.04	Explain the relationship between 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 outside safety procedures.
08.0	Demonstrate pole climbing--The student will be able to:
08.01	Conduct 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 telecommunication work.
08.06	Demonstrate ladder rigging for aerial installation.
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 telecommunication lines and equipment.
10.02	Test and analyze various 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 repair--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 (PCB's). (Optional)
12.09	Demonstrate rework and repair techniques. (Optional)
13.0	Troubleshoot and repair telecommunication system wiring--The student will be able to:
13.01	Test telecommunication systems and evaluate based on established criteria.
13.02	Identify range of fault conditions for telecommunication systems.
13.03	Demonstrate telecommunication fault identification skills.
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 circuits--The student will be able to:
15.01	Solve problems in electronics 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 Meter (VOM) and Digital Volt-Com Meter (DVM) and oscilloscopes.
15.07	Compute conductance and compute 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.
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 perimeter measurements for rectangles, square and cylinders.
16.02	Measure tolerance(s) on horizontal and vertical surfaces using millimeters, centimeters, and 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 the NEC codes.
17.07	Demonstrate proficiency in usage of the color codes and configuration.
17.08	Interpret cable substitution hierarchy.

**Course Number: EER0052**  
**Occupational Completion Point: B**  
**Telecommunication Installation and Repair Specialist – 150 Hours – SOC Code 49-2022**

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 the 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 circuits--The student will be able to:
19.01	Identify properties of an AC signal.
19.02	Identify AC sources.

19.03	Analyze and measure AC signals utilizing VOM, 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, 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 RJ11, RJ12, RJ45, BNC, and 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.

**Course Number: EER0055**  
**Occupational Completion Point: C**  
**Telecommunication Technician – 300 Hours – SOC Code 49-2022**

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 validate network and telecommunication cabling systems--The student will be able to:
24.01	Validate telephone lines using standard industry procedures.
24.02	Validate high-speed digital lines using industry standard procedures.
24.03	Validate advanced signal lines. (Fiber optics).
25.0	Demonstrate a basic understanding of computer systems 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. (i.e. 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 fundamentals of an Internet system.
27.06	Demonstrate knowledge of telecommunications services and standards.

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 telecommunication 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 configuration.
29.02	Determine changes in resistance due to temperature changes.
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 and evaluate and plan for site electrical considerations.
30.03	Draw cable runs (cutsheet).
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.

### **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary

education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Wireless Telecommunications  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts, A/V Technology and Communication

**PSAV**

Program Number	I470305
CIP Number	0615030502
Grade Level	30, 31
Standard Length	1500 hours
Teacher Certification	TELCOM 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	15-1142 – Network and Computer Systems Administrators
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 10 Language: 10 Reading: 10

**Purpose**

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the 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 Computer and Wireless Technicians.

The course content includes, but is not limited to the following: operation and maintenance of Personal computers, computing networks, printers, communications equipment and wireless systems.

The course content should also include training in communication, leadership, human relations, employability skills, and safe, efficient work practices.



This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Computer and Wireless industry; planning, management, finance, technical and product 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 six occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	CTS0004	Computer Support Technician	150 hours	15-1142
B	EEV0505	Computer Support Specialist	300 hours	15-1142
C	CTS0006	Network Support Technician	150 hours	15-1142
D	CTS0007	Network Specialist	300 hours	15-1142
E	CTS0008	Network Administrator	300 hours	15-1142
F	CTS0009	Wireless Telecommunications Administrator	300 hours	15-1142

## **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 computer and software fundamentals.
- 02.0 Demonstrate proficiency in customer relations.
- 03.0 Demonstrate proficiency in installation, configuration and upgrading.
- 04.0 Demonstrate proficiency in diagnosing and troubleshooting.
- 05.0 Demonstrate proficiency in preventative maintenance.
- 06.0 Demonstrate an understanding of Motherboards.
- 07.0 Demonstrate an understanding of processors and memory.
- 08.0 Demonstrate proficiency in the understanding of printers.
- 09.0 Demonstrate proficiency in basic networking.
- 10.0 Demonstrate proficiency in operating systems and protocols.
- 11.0 Demonstrate proficiency in fault tolerance.
- 12.0 Demonstrate proficiency in the OSI layer model.
- 13.0 Demonstrate proficiency in networking media and topologies.
- 14.0 Demonstrate proficiency in network elements
- 15.0 Demonstrate proficiency in installation, configuration, and troubleshooting scenarios.
- 16.0 Demonstrate proficiency in network components.
- 17.0 Demonstrate proficiency in the OSI model data link layer.
- 18.0 Demonstrate proficiency in the OSI model network layer.
- 19.0 Demonstrate proficiency in the OSI model transport layer.
- 20.0 Demonstrate proficiency in TCP/IP fundamentals
- 21.0 Demonstrate proficiency in understanding of TCP/IP addressing.
- 22.0 Demonstrate proficiency in understanding of TCP/IP configuration.
- 23.0 Demonstrate proficiency in understanding of TCP/IP utilities.
- 24.0 Demonstrate proficiency in understanding of remote connectivity.
- 25.0 Demonstrate proficiency in understanding of dial-up networking.
- 26.0 Demonstrate proficiency in understanding of network security.
- 27.0 Demonstrate proficiency in understanding of network implementation.
- 28.0 Demonstrate proficiency in understanding of environmental factors.
- 29.0 Demonstrate proficiency in understanding of peripherals.
- 30.0 Demonstrate proficiency in understanding of cabling and compatibility issues.
- 31.0 Demonstrate proficiency in understanding of network maintenance.
- 32.0 Demonstrate proficiency in understanding of troubleshooting fundamentals – Investigation.
- 33.0 Demonstrate proficiency in understanding of troubleshooting fundamentals – Users.
- 34.0 Demonstrate proficiency in understanding of troubleshooting fundamentals – Operators.
- 35.0 Demonstrate proficiency in understanding of troubleshooting fundamentals – Physical Indicators.
- 36.0 Demonstrate proficiency in understanding of troubleshooting fundamentals – Network.
- 37.0 Demonstrate proficiency in understanding of troubleshooting fundamentals – Network Tools.
- 38.0 Demonstrate proficiency in current software application.

- 39.0 Demonstrate proficiency in a state of the art server.
- 40.0 Demonstrate proficiency in Network Infrastructure Administration.
- 41.0 Demonstrate proficiency in Active Directory Services.
- 42.0 Demonstrate proficiency in secure web access using a Proxy Server.
- 43.0 Demonstrate proficiency and knowledge to become a Certified Network Administrator.
- 44.0 Demonstrate proficiency and knowledge to become a Certified Network Associate.
- 45.0 Demonstrate proficiency in Principles of RF and Wireless Technology
- 46.0 Demonstrate proficiency in understanding RF System Block Diagrams.
- 47.0 Demonstrate proficiency in understanding antennas.
- 48.0 Demonstrate proficiency in understanding filters.
- 49.0 Demonstrate proficiency in Principles of Electricity and Electrical Signals.
- 50.0 Demonstrate proficiency in understanding RF transmission lines.
- 51.0 Demonstrate proficiency in understanding modulation.
- 52.0 Demonstrate proficiency in understanding wireless applications.
- 53.0 Demonstrate proficiency in understanding cellular generations.
- 54.0 Demonstrate proficiency in understanding cellular phone technology.
- 55.0 Demonstrate skills in mathematics for RF.
- 56.0 Demonstrate knowledge of electricity for RF.
- 57.0 Demonstrate proficiency in understanding RF component requirements.
- 58.0 Demonstrate proficiency in understanding phase noise.
- 59.0 Demonstrate proficiency in understanding digital modulation.
- 60.0 Demonstrate proficiency in understanding short range wireless.
- 61.0 Demonstrate proficiency in understanding Bluetooth.
- 62.0 Demonstrate proficiency in planning.
- 63.0 Demonstrate proficiency in wireless network standards.
- 64.0 Demonstrate proficiency in Principles of a Wireless Network.
- 65.0 Demonstrate proficiency in understanding Components of Wireless Networking.
- 66.0 Demonstrate proficiency in Applied Wireless Networking. (optional)
- 67.0 Demonstrate proficiency in Introduction to Voice Over IP (Telephony). (optional)

Florida Department of Education  
Student Performance Standards

Program Title: Wireless Telecommunications  
PSAV Number: I470305

**Course Number: CTS0004**  
**Occupational Completion Point: A**  
**Computer Support Technician –150 Hours – SOC Code 15-1142**

01.0	Demonstrate proficiency in computer and software fundamentals--The student will be able to:
01.01	Develop keyboarding skills to enter and manipulate text and data.
01.02	Describe and use current and emerging computer technology and software to perform personal and business related tasks.
01.03	Identify and describe communications and networking systems used in workplace environments.
01.04	Use reference materials such as on-line help, vendor bulletin boards, tutorials, and manuals available for application software.
01.05	Demonstrate basic file management skills.
01.06	Troubleshoot problems with computer software.
01.07	Describe ethical issues and problems associated with computers and information systems.
01.08	Apply ergonomic principles applicable to the configuration of computer workstations.
02.0	Demonstrate proficiency in customer relations--The student will be able to:
02.01	Describe and demonstrate appropriate personal hygiene and professional attire.
02.02	Describe and demonstrate effective listening techniques.
02.03	Describe and apply techniques for instilling customer confidence and satisfaction.
02.04	Describe and apply techniques for keeping the customer informed.
02.05	Describe and apply effective follow-up techniques.
02.06	Demonstrate discretion in interacting with customers in field and retail environments.
02.07	Demonstrate an understanding of basic conflict resolution.

**Course Number: EEV0505**  
**Occupational Completion Point: B**  
**Computer Support Specialist -- 300 Hours – SOC Code 15-1142**

03.0 Demonstrate proficiency in installation, configuration and upgrading--The student will be able to:

03.01 Identify basic terms, concepts, and functions of system modules.

03.02 Identify procedures for replacing system modules.

03.03 Identify available IRQ's, DMA's, and I/O address.

03.04 Identify common peripherals associated cabling, and their connectors.

03.05 Identify proper procedures for installing IDE/EIDE devices.

03.06 Identify proper procedures for installing SCSI devices.

03.07 Identify proper procedures for installing peripheral devices.

03.08 Identify hardware methods of upgrading system performance.

04.0 Demonstrate proficiency in diagnosing and troubleshooting--The student will be able to:

04.01 Identify common symptoms of computer peripherals, troubleshooting and isolation.

04.02 Identify basic troubleshooting procedures and how to elicit problem symptoms from customers.

05.0 Demonstrate proficiency in preventative maintenance--The student will be able to:

05.01 Identify the purpose of various preventative maintenance products and procedures.

05.02 Identify issues, procedures and devices for protection within the computing environment.

05.03 Identify RAM terminology, their locations, and physical characteristics.

06.0 Demonstrate an understanding of Motherboards--The student will be able to:

06.01 Identify a Motherboard.

06.02 Identify different types of Motherboards.

06.03 Describe Motherboard architecture.

06.04 Identify the purpose of CMOS and define and explain its basic parameters.

07.0 Demonstrate an understanding of processors and memory--The student will be able to:

07.01	Distinguish between different CPU types distinguished by their basic characteristics.
07.02	Describe RAM terminology, their locations, and physical characteristics
08.0	Demonstrate proficiency in the understanding of printers--The student will be able to:
08.01	Identify basic concepts, printer operations and components.
08.02	Identify care and service techniques and troubleshoot common problems.
09.0	Demonstrate proficiency in basic networking--The student will be able to:
09.01	Describe basic networking concepts.
10.0	Demonstrate proficiency in operating systems and protocols--The student will be able to:
10.01	Identify current major network operating systems.
10.02	Identify operating systems that best serve the clients specific network and their resources.
10.03	Identify directory services of the major network operating systems
10.04	Describe current network protocols.
11.0	Demonstrate proficiency in fault tolerance--The student will be able to:
11.01	Describe Mirroring
11.02	Describe Duplexing
11.03	Describe Striping
11.04	Describe Volumes
11.05	Describe the need for tape backup
12.0	Demonstrate proficiency in the OSI layer model--The student will be able to:
12.01	Define the 7 layers of the OSI model.
12.02	Identify the protocols for each OSI layer.
12.03	Identify the services for each OSI layer.
12.04	Identify and functions that pertain to each layer.
13.0	Demonstrate proficiency in networking media and topologies--The student will be able to:

13.01	Describe the advantages of using different types of cabling.
13.02	Describe the disadvantages of using different types of cabling.
13.03	Determine the appropriate cabling to use in different network environments.
13.04	Identify the maximum lengths and speed of various network cables.
13.05	Visually identify various cable connectors.
13.06	Identify network topologies.
14.0	Demonstrate proficiency in network elements--The student will be able to:
14.01	Identify the basic attributes, purpose, and function of Full-and half-duplexing
14.02	Identify the basic attributes, purpose, and function of WAN and LAN topologies.
14.03	Identify the basic attributes, purpose, and function of a server, workstation, and host.
14.04	Identify the basic attributes, purpose, and function of server-based networking and peer-to-peer networking.
14.05	Identify the basic attributes, purpose, and function NIC, and routers.
14.06	Identify the basic attributes, purpose, and function of broadband and base band technology.
14.07	Describe a Gateway as both a default IP router and as a method to connect dissimilar systems or protocols.
15.0	Demonstrate proficiency in installation, configuration, and troubleshooting scenario's--The student will be able to:
15.01	Identify the correct course of action given a variety of network troubleshooting scenarios.
15.02	Explain why a given action is warranted.
15.03	Knowledge of how the network card is configured.
15.04	Demonstrate the use of network card diagnostics, including the loop back test and vendor-supplied diagnostics.
15.05	The ability to resolve hardware resource conflicts, including IRQ, DMA, and I/O Base Address.



**Course Number: CTS0006**  
**Occupational Completion Point: C**  
**Network Support Technician – 150 Hours – SOC Code 15-1142**

16.0 Demonstrate proficiency in network components--The student will be able to:

16.01 Visually identify and use Hubs.

16.02 Visually identify and use MAUs.

16.03 Visually identify and use Switching Hubs.

16.04 Visually identify and use Repeaters.

16.05 Visually identify and use Transceivers.

17.0 Demonstrate proficiency in the OSI model data link layer--The student will be able to:

17.01 Identify bridges, what they are and why they are used.

17.02 Describe the 802 standard characteristics and specs.

17.03 Describe the function and characteristics of MAC addresses.

18.0 Demonstrate proficiency in the OSI model network layer--The student will be able to:

18.01 Describe how routing occurs at the network layer.

18.02 Describe the differences between a router and a brouter.

18.03 Describe the differences between routable and non-routable protocols.

18.04 Define and explain the use of default gateways and sub networks.

18.05 Define and explain the need for employing unique network IDs.

18.06 Define and explain the difference between static and dynamic routing.

19.0 Demonstrate proficiency in the OSI model transport layer--The student will be able to:

19.01 Define and explain the distinction between connectionless and connection transport.

19.02 Define and explain the purpose and need of name resolution.

20.0 Demonstrate proficiency in TCP/IP fundamentals--The student will be able to:

20.01 Describe the concept of IP default gateways.

20.02	Define and explain the purpose and use of DHCP, DNS, WINS, and host files.
20.03	Identify the main protocols that make up TCP/IP suite.
20.04	Define and explain the concept that every operating system and millions of hosts worldwide support TCP/IP.
20.05	Describe the purpose and function of Internet domain name server hierarchies (how email arrives in another country).
21.0	Demonstrate proficiency in understanding of TCP/IP addressing--The student will be able to:
21.01	Demonstrate knowledge of the fundamental concepts of TCP/IP addressing.
21.02	Describe the A, B, and C classes of IP addresses and their default subnet mask numbers.
21.03	The use of ports for (HTTP, FTP, SMTP) and port numbers commonly assigned to a given service.
22.0	Demonstrate proficiency in understanding of TCP/LP configuration--The student will be able to:
22.01	Define and explain the concept and use of IP proxy.
22.02	Identify the configuration parameters for a workstation, including IP address, DNS, default gateway, IP proxy configuration, WINS, DHCP, host name, and Internet domain name.
23.0	Demonstrate proficiency in understanding TCP/LP utilities--The student will be able to:
23.01	Define and explain how to use TCP/LP utilities to test, validate, and troubleshoot IP connectivity.
23.02	Demonstrate the ability to use ARP.
23.03	Demonstrate the ability to use Telnet.
23.04	Demonstrate the ability to use NBTSTAT.
23.05	Demonstrate the ability to use TRACERT.
23.06	Demonstrate the ability to use NETSTAT.
23.07	Demonstrate the ability to use IPCONFIG and WINIPCFG.
23.08	Demonstrate the ability to use FTP.
23.09	Demonstrate the ability to use PING.
24.0	Demonstrate proficiency in understanding remote connectivity--The student will be able to:
24.01	Define and explain the distinction between PPP and SLIP
24.02	Define and explain the purpose and function of PPTP.

24.03	Define and explain the attributes, advantages, and disadvantages of ISDN and PSTN (POTS).
25.0	Demonstrate proficiency in understanding of dial-up networking--The student will be able to:
25.01	Describe different elements of dial-up networking.
25.02	Define and explain modem configuration parameters that must be set, including serial port IRQ, I/O address and maximum port speed.
25.03	Describe the requirements for a remote connection.
26.0	Demonstrate proficiency in understanding of network security--The student will be able to:
26.01	Define and explain the selection of a security model (user and share level).
26.02	Define and explain standard password practices and procedures.
26.03	Define and explain the need to employ data encryption to protect network data.
26.04	Define and explain the use of a firewall.
27.0	Demonstrate proficiency in understanding of network implementation--The student will be able to:
27.01	Define and explain what must be obtained prior to network implementation.
27.02	Demonstrate the use of administrative accounts, test accounts, passwords, IP addresses, IP configurations and relevant SOPs.
28.0	Demonstrate proficiency in understanding of environmental factors--The student will be able to:
28.01	Describe the impact of environmental factors on computer networks.
28.02	Given a network installation scenario, identify unexpected or atypical conditions that could either cause problems for the network or signify that a problem condition already exists, including.
28.03	Identify room conditions (e.g., humidity, heat, etc.)
28.04	Identify the placement of building contents and personal effects (e.g., space heaters, TVs, radios, etc.)
28.05	Identify Computer equipment
28.06	Identify error messages
29.0	Demonstrate proficiency in understanding of peripherals--The student will be able to:
29.01	Recognize visually, or by description, common peripheral ports, external SCSI (especially DB-25 connectors), and common network components: <ul style="list-style-type: none"> <li>a. Identify Print servers</li> <li>b. Identify Hubs</li> <li>c. Identify Routers</li> </ul>

	<ul style="list-style-type: none"> <li>d. Identify Routers</li> <li>e. Identify Bridges</li> <li>f. Identify Patch panels</li> <li>g. Identify UPSs</li> <li>h. Identify NICs</li> <li>i. Identify Token ring media filters</li> </ul>
30.0	Demonstrate proficiency in understanding of cabling and compatibility issues--The student will be able to:
30.01	Given an installation scenario, demonstrate awareness of troubleshooting compatibility and cabling issues.
30.02	Define and explain the consequences of trying to install an analog modem in a digital jack.
30.03	Define and explain the uses of RJ-45 connectors may differ greatly depending on the cabling.
30.04	Define and explain how patch cables contribute to the overall length of the cabling segment.
30.05	Identify the kinds of test documentation that are usually available regarding a vendor's patches, fixes, upgrades, etc.
31.0	Demonstrate proficiency in understanding of network maintenance--The student will be able to:
31.01	Describe standard backup procedures and backup media storage practices.
31.02	Describe the need for periodic application of software patches and other fixes to the network
31.03	Describe the need to install anti-virus software on the server and workstations
31.04	Describe the need to frequently update virus signatures.
32.0	Demonstrate proficiency in understanding of troubleshooting fundamentals – Investigation--The student will be able to:
32.01	Define and explain and follow a systematic approach to identifying the extent of a network problem, and, given a problem scenario, select the appropriate next step.
32.02	Determine whether the problem exists across the network
32.03	Determine whether the problem is workstation, workgroup, LAN or WAN
32.04	Determine whether the problem is consistent and replicable
32.05	Use standard troubleshooting methods.
33.0	Demonstrate proficiency in understanding of troubleshooting fundamentals – Users--The student will be able to:
33.01	<ul style="list-style-type: none"> <li>Define and explain and follow a systematic approach to determining whether a problem is attributable to the user or the system, and, given a problem scenario, select the appropriate next step: <ul style="list-style-type: none"> <li>a. Identify the exact issue</li> <li>b. Recreate the problem</li> </ul> </li> </ul>

- c. Isolate the cause of the problem
- d. Formulate a correction to the problem
- e. Implement the correction to the problem
- f. Test
- g. Document the problem and the solution
- h. Provide feedback

34.0 Demonstrate proficiency in understanding of troubleshooting fundamentals -- Operators--The student will be able to:

34.01 Define and explain and follow a systematic approach to determining whether a problem is attributable to the operator or the system, and, given a problem scenario, select the appropriate next step.

34.02 Define and explain the need to have a second operator perform the same task on an equivalent workstation

34.03 Define and explain the need to have a second operator perform the same task on the original operator's workstation

34.04 See whether operators are following standard operating procedure.

35.0 Demonstrate proficiency in understanding of troubleshooting fundamentals -- Physical Indicators--The student will be able to:

35.01 Given a network-troubleshooting scenario; demonstrate awareness of the need to check for physical and logical indicators of trouble.

35.02 Identify link lights.

35.03 Identify Power lights.

35.04 Identify Error displays.

35.05 Identify Error logs and displays.

35.06 Identify Performance monitors.

36.0 Demonstrate proficiency in understanding of troubleshooting fundamentals – Network--The student will be able to:

36.01 Given a network problem scenario, including symptoms, determine the most likely cause or causes of the problem based on the available information.

36.02 Recognize abnormal physical conditions

36.03 Isolate and correct problems in cases where there is a fault in the physical media (patch cable)

36.04 Check the status of servers

36.05 Check for configuration problems with DNS, WINS, and HOST file

36.06 Check for viruses

36.07 Check the validity of the account name and password

36.08	Recheck operator logon procedures
36.09	Select and run appropriate diagnostics
37.0	Demonstrate proficiency in understanding of troubleshooting fundamentals -- Network Tools--The student will be able to:
37.01	Specify the tools that are commonly used to resolve network equipment problems.
37.02	Identify the purpose and function of common network tools.
37.03	Define and explain when to utilize crossover cable.
37.04	Define and explain when to utilize hardware loop back.
37.05	Define and explain when to utilize a tone generator.
37.06	Define and explain when to utilize a tone locator (fox and hound).

**Course Number: CTS0007**  
**Occupational Completion Point: D**  
**Network Specialist – 300 Hours – SOC Code 15-1142**

38.0	Demonstrate proficiency in current software application--The student will be able to:
38.01	Perform an attended installation of software.
38.02	Perform an unattended installation of software.
38.03	Upgrade from a previous version of software.
38.04	Deploy service packs.
38.05	Troubleshoot failed installations.
38.06	Monitor, manage, and trouble shoot access to files and folders.
38.07	Manage and trouble shoot access to shared folders.
38.08	Connect to local and network print devices.
38.09	Configure and manage file systems.
38.10	Implement, manage, and troubleshoot disk devices.
38.11	Implement, manage, and troubleshoot display devices.
38.12	Implement, manage, and troubleshoot mobile computer hardware.

38.13	Implement, manage, and troubleshoot input and output devices.
38.14	Update drivers.
38.15	Monitor and configure multiple processing units.
38.16	Install, configure, and troubleshoot network adapters.
38.17	Manage and troubleshoot driver signing.
38.18	Configure, manage, and troubleshoot task scheduler.
38.19	Manage and troubleshoot the use and synchronization of offline files.
38.20	Optimize and troubleshoot performance of software-desktop.
38.21	Manage hardware profiles.
38.22	Recover systems and user data.
38.23	Configure and manage user profiles.
38.24	Configure support for multiple languages or multiple locations.
38.25	Install applications by using Windows Installer Packages.
38.26	Configure and troubleshoot desktop settings.
38.27	Configure and troubleshoot fax support.
38.28	Configure and troubleshoot accessibility services.
38.29	Configure and troubleshoot the TCP/IP protocol.
38.30	Connect to computers using dial-up networking.
38.31	Connect to shared resources on a shared network.
38.32	Encrypt data on a hard disk by using Encrypting File System.
38.33	Implement, configure, manage, and troubleshoot local group policy.
38.34	Implement, configure, manage, and troubleshoot local user accounts.
38.35	Implement, configure, manage, and troubleshoot local user authentication.
38.36	Implement, configure, manage, and troubleshoot a security configuration.

39.0	Demonstrate proficiency in a state of the art server--The student will be able to:
39.01	Create an unattended answer file by using setup manager to automate the installation of a server.
39.02	Create and configure automated methods for installation of a server.
39.03	Upgrade a server.
39.04	Deploy services packs.
39.05	Troubleshoot failed installations.
39.06	Install and configure network services for interoperability.
39.07	Monitor, configure, troubleshoot and control access to printers.
39.08	Monitor, configure, troubleshoot and control access to files, folders, and shared folders.
39.09	Configure, manage, and troubleshoot a stand-alone Distributed File System (DFS).
39.10	Configure, manage, and troubleshoot a domain-based distributed file system.
39.11	Monitor, configure, troubleshoot, and control access to files and folders via web services.
39.12	Monitor, configure, troubleshoot and control access to web sites
39.13	Configure hardware devices.
39.14	Configure driver-signing options.
39.15	Update device drivers.
39.16	Troubleshoot problems with hardware.
39.17	Monitor and optimize usage of system resources.
39.18	Set priorities, and start and stop process.
39.19	Optimize disk performance.
39.20	Manage and optimize availability of system state data and user data.
39.21	Recover systems and user data by using a Backup.
39.22	Troubleshoot system restoration by using Safe Mode
39.23	Recover system and user data by using Safe Mode.



39.24	Recover systems and user data by using the recovery console
39.25	Configure and manage user profiles.
39.26	Monitor, configure, and troubleshoot disks and volumes.
39.27	Configure data compression.
39.28	Monitor and configure disk quotas.
39.29	Recover from disk failures.
39.30	Install, configure, and troubleshoot shared access.
39.31	Install, configure, and troubleshoot network protocols.
39.32	Install, configure, and troubleshoot a virtual private network.
39.33	Install, configure, and troubleshoot network services.
39.34	Configure, monitor, and troubleshoot remote access.
39.35	Install, configure, monitor and troubleshoot terminal services.
39.36	Configure the properties of a connection.
39.37	Install, configure, and troubleshoot network adapters and drivers.
39.38	Encrypt data on a hard disk by using Encrypting File System (EFS).
39.39	Implement, configure, manage and troubleshoot policies in a software- product environment.
39.40	Implement, configure, manage and troubleshoot auditing.
39.41	Implement, configure, manage and troubleshoot local accounts.
39.42	Account policy.
39.43	Implement, configure, manage and troubleshoot security by using the Security Configuration Tool Set.
40.0	Demonstrate proficiency in Network Infrastructure Administration--The student will be able to:
40.01	Install the DNS server service.
40.02	Configure a root name server.
40.03	Configure zones.

40.04	Configure a caching-only server.
40.05	Configure a DNS Client.
40.06	Configure zones for dynamic updates.
40.07	Test the DNS server services.
40.08	Implement a delegated zone for DNS.
40.09	Manually create DNS resource records.
40.10	Install the DHCP Service.
40.11	Create and manage DHCP scopes, super scopes and multicast services.
40.12	Configure DHCP for DNS integration.
40.13	Authorize a DHCP server in Active Directory.
40.14	Configure inbound connections.
40.15	Create remote access policy.
40.16	Configure a remote access profile.
40.17	Configure a VPN.
40.18	Configure multilink Connections.
40.19	Configure routing and remote access for DHCP integration.
40.20	Manage and monitor remote access.
40.21	Configure authentication protocols.
40.22	Configure encryption protocols.
40.23	Configure remote access policy.
40.24	Install and configure TCP/IP.

**Course Number: CTS0008**  
**Occupational Completion Point: E**  
**Network Administrator – 300 Hours – SOC Code 15-1142**

43.0 Demonstrate proficiency and knowledge to become a Certified Network Administrator--The student will be able to:

43.01	Define and explain NW 5 and the role of NDS.
43.02	Define and explain how to use a workstation.
43.03	Define and explain network access for users.
43.04	Define and explain Novell Distributed Print Services.
43.05	Define and explain network file system.
43.06	Define and explain file system security.
43.07	Define and explain login scripts for NDS objects.
43.08	Define and explain NDS security.
43.09	Define and explain network applications with ZEN works.
43.10	Identify workstations in an NDS environment.
43.11	Define and explain basic network services in a multi context environment.
43.12	Define and explain how to manage and install NW user licenses.
43.13	Have an Introduction to NetWare 5 and NDS.
43.14	Define and explain how to use a Workstation.
43.15	Define and explain how to setup and manage network access for users.
43.16	Define and explain how to setup printing with Novell Distributed Print Services.
43.17	Define and explain how to setup manage the file system.
43.18	Define and explain how to setup and manage file system security.
43.19	Create and manage login scripts.
43.20	Define and explain how to manage NDS security.
43.21	Define and explain how to distribute and manage network applications with ZEN works.
43.22	Define and explain how to manage workstations in an NDS environment with ZEN works.
43.23	Define and explain how to manage resources in a multi context environment.
43.24	Define and explain how to install NetWare 5.

44.0	Demonstrate proficiency and knowledge to become a Certified Network Associate--The student will be able to:
44.01	Identify the major components of the network system.
44.02	Examine the primary types and use of network cabling.
44.03	Compare the functions or usage of a Local Area Network (LAN) versus Wide Area Network (WAN).
44.04	Describe the standard topologies and the advantages and disadvantages of each.
44.05	Discuss the functions of each of the seven layers of the OSI reference model.
44.06	Describe the basic process of communication between the layers of the OSI reference model.
44.07	Define the major network access methods and outline the key features of each.
44.08	Describe the functions and features of devices used at Layers One, Two and Three of the OSI model.
44.09	Explain the significance of each of the following to the following to a network system: IP addresses and classes and reserved address space.
44.10	Identify and described common routed and routing protocols.

<b>Course Number: CTS0009</b>	
<b>Occupational Completion Point: F</b>	
<b>Wireless Telecommunications Administrator – 300 Hours – SOC Code 15-1142</b>	
45.0	Demonstrate proficiency in Principles of RF and Wireless Technology--The student will be able to:
45.01	Define and explain Radio Frequency (RF) Waves.
45.02	Define and explain Frequency/Wavelength.
45.03	Define and explain the Electromagnetic spectrum.
45.04	Define and explain how to use the spectrum.
45.05	Describe the Federal Communications Commission (FCC).
45.06	Define and explain Velocities.
45.07	Define and explain Disparities.
45.08	Define and explain Attenuation, Trapping, Ducting.
45.09	Define and explain Power (DB and DBM).

45.10	Define and explain Reflection and Scattering.
45.11	Define and explain Path loss.
45.12	Define and explain Phase.
45.13	Define and explain Characteristics.
45.14	Define and explain Compensation methods.
45.15	Define and explain Matching.
45.16	Define and explain Phase locked.
45.17	Define and explain Phased Array.
45.18	Define and explain Frequency Reuse.
45.19	Define and explain Channels vs. Bandwidth.
46.0	Demonstrate proficiency in understanding RF System Block Diagrams--The student will be able to:
46.01	Identify RF components (The Block Diagram).
46.02	Identify, define and explain the functionality of Oscillators.
46.03	Identify, define and explain the functionality of Attenuators.
46.04	Identify, define and explain the functionality of Modulators.
46.05	Identify, Define and explain the functionality of Power Amplifiers.
46.06	Define and explain Linearity.
46.07	Identify, define and explain the functionality of Couplers.
46.08	Identify, define and explain the functionality of Detectors.
47.0	Demonstrate proficiency in understanding antennas--The student will be able to:
47.01	Identify the different types of antennas.
47.02	Define and explain TX antennas.
47.03	Define and explain RX antennas.
47.04	Define and explain Gain antennas.

47.05	Define and explain Architecture antennas.
47.06	Define and explain Smart and Complex antennas.
47.07	Define and explain Omni directional antennas.
48.0	Demonstrate proficiency in understanding filters--The student will be able to:
48.01	Define and explain the different types of filters.
48.02	Identify ISI filters.
48.03	Describe Inter Modulation.
48.04	Identify Low Noise Amplifiers.
48.05	Identify Mixers.
48.06	Identify IF Amplifiers.
48.07	Identify Demodulators.
49.0	Demonstrate proficiency in Principles of Electricity and Electrical Signals--The student will be able to:
49.01	Describe Electrical signals in time and Frequency.
49.02	Describe Audio Signals.
49.03	Describe Video Signals.
49.04	Describe Digitizing Analog Signals.
49.05	Describe Pulse Code.
49.06	Describe MPEG-2.
49.07	Describe Data Signals.
49.08	Describe types of data.
49.09	Describe priorities.
49.10	Describe Bit Error Rate.
49.11	Describe Parity.
49.12	Describe CRC.

49.13	Describe TTL.
50.0	Demonstrate proficiency in understanding RF transmission lines--The student will be able to:
50.01	Define and explain a Wave-guide.
50.02	Define and explain Coaxial.
50.03	Define and explain Micro strip.
50.04	Define and explain Impedance.
50.05	Define and explain Reflection.
50.06	Define and explain Matching.
51.0	Demonstrate proficiency in understanding modulation--The student will be able to:
51.01	Define and explain Carrier.
51.02	Define and explain AM.
51.03	Define and explain FM.
51.04	Define and explain Signal to Ratio S/N.
51.05	Define and explain QPSK.
51.06	Define and explain MPSK.
51.07	Define and explain GPSK.
51.08	Define and explain QAM.
51.09	Define and explain Spectral Re-growth/QPSK.
51.10	Define and explain CDMA.
51.11	Define and explain TDMA.
51.12	Define and explain SDMA.
51.13	Define and explain FDMA.
51.14	Define and explain AMPS.
51.15	Define and explain DAMPS.

51.16	Define and explain GSM.
51.17	Define and explain PCS.
52.0	Demonstrate proficiency in understanding wireless applications--The student will be able to:
52.01	Define and explain Wireless Services.
52.02	Define and explain Direct Broadcast Satellite (DBS).
52.03	Define and explain Paging.
52.04	Define and explain Wireless Phones (PCS, Mobile Satellite).
52.05	Define and explain Carriers.
52.06	Define and explain Technologies.
52.07	Define and explain Wireless Application Features.
52.08	Define and explain Wireless Local Loop (WLL).
52.09	Define and explain Wireless Data Terminal.
52.10	Define and explain Mobile Satellite.
52.11	Define and explain PTN.
52.12	Define and explain MTSO.
52.13	Define and explain GPS.
53.0	Demonstrate proficiency in understanding cellular generations--The student will be able to:
53.01	Describe 1st Generation Cellular.
53.02	Describe 2nd Generation Cellular.
53.03	Describe 2 <sup>nd</sup> -½-Generation Cellular.
53.04	Describe 3rd Generation Cellular.
53.05	Define and explain goals.
53.06	Describe technical challenges.
53.07	Define and explain 8psk.



53.08	Define and explain data rates.
53.09	Define and explain MPEG-4.
53.10	Define and explain ARIB.
53.11	Explain business challenges.
53.12	Define and explain costs.
53.13	Explain 2-½-technology migration.
54.0	Demonstrate proficiency in understanding cellular phone technology--The student will be able to:
54.01	Define and explain CDMA.
54.02	Define and explain IMT-2000.
54.03	Define and explain EDGE.
54.04	Define and explain GSM.
54.05	Define and explain WCDMA.
54.06	Define and explain CDMA 2000.
54.07	Define and explain Spread Spectrum.
55.0	Demonstrate skills in mathematics for RF--The student will be able to:
55.01	Define the attributes of DB.
55.02	Identify the characteristics of RF Waves.
56.0	Demonstrate knowledge of electricity for RF--The student will be able to:
56.01	Define and explain Electric Fields.
56.02	Define and explain Magnetic Fields.
56.03	Define and explain Electromagnetic fields for component design.
56.04	Define and explain Frequencies.
56.05	Define and explain Wavelengths.
56.06	Define and explain Impedance.

56.07	Define and explain Power.
56.08	Define and explain Phase.
56.09	Define and explain Polarizations.
56.10	Define and explain Insertion Loss/Gain.
56.11	Define and explain Cascading.
56.12	Define and explain Reflected Power.
56.13	Define and explain Return Loss.
56.14	Define and explain S Parameters.
56.15	Define and explain Matching networks.
57.0	Demonstrate proficiency in understanding RF component requirements--The student will be able to:
57.01	Define and explain Phase Locked Oscillators.
57.02	Define and explain a Modulator.
57.03	Define and explain Power Amplifiers.
57.04	Define and explain Antennas.
57.05	Define and explain LNA.
57.06	Define and explain Mixers and IF amplifiers.
57.07	Define and explain Filters.
58.0	Demonstrate proficiency in understanding phase noise--The student will be able to:
58.01	Define and explain BER Degradation.
58.02	Define and explain Error Vector Magnitudes.
59.0	Demonstrate proficiency in understanding digital modulations--The student will be able to:
59.01	Define and explain QPSK.
59.02	Define and explain Pi/4DQPSK.
59.03	Define and explain 16 QAM.

59.04	Define and explain GMSK.
60.0	Demonstrate proficiency in understanding short-range wireless--The student will be able to:
60.01	Define and explain Propagation.
60.02	Define and explain Path Loss.
60.03	Define and explain Fading.
60.04	Define and explain Multi paths.
60.05	Define and explain Interference.
60.06	Define and explain IR vs. RF.
60.07	Define and explain Frequency Usages.
60.08	Define and explain how to Calculate Range.
61.0	Demonstrate proficiency in understanding Bluetooth--The student will be able to:
61.01	Define and explain IEEE 802.11.
61.02	Define and explain Home RF.
61.03	Define and explain IrDA.
61.04	Define and explain HIPERLAN.
62.0	Demonstrate proficiency in planning--The student will be able to:
62.01	Describe Cellular Topologies.
62.02	Describe Wireless LAN Topologies.
62.03	Describe WLL.
62.04	Describe Ad Hoc Networking.
62.05	Describe Site Planner software.
63.0	Wireless networking standards--The student will be able to:
63.01	Define and explain 802.11a.
63.02	Define and explain 802.11b.

63.03	Define and explain Bluetooth.
64.0	Demonstrate proficiency in Principles of a Wireless Network--The student will be able to:
64.01	Define and explain different types of Wireless.
64.02	Define and explain Handheld Devices.
64.03	Define and explain Mobile Communications.
64.04	Define and explain Satellite Communications.
64.05	Define and explain Wireless Local Loop (WLL).
64.06	Define and explain Building-to-Building networking.
64.07	Define and explain Site Planning.
64.08	Define and explain Wireless Integration.
64.09	Define and explain Wireless Management.
64.10	Describe the need for Quality of Service (QOS).
65.0	Demonstrate proficiency in understanding components of wireless networking--The student will be able to:
65.01	Identify Access Points.
65.02	Identify Repeaters.
65.03	Identify Network Interface Cards.
65.04	Identify Power Over Ethernet.
66.0	Demonstrate proficiency in applied wireless networking (optional)--The student will be able to:
66.01	Utilize an In Building Lab.
66.02	Utilize a Building-to-Building Lab.
66.03	Utilize a Cellular Lab.
66.04	Utilize a Satellite Lab.
67.0	Demonstrate proficiency in introduction to Voice Over IP Telephony (optional)--The student will be able to:
67.01	Define voice over IP (Telephony Standards).

## **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 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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 10, Language 10, and Reading 10. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary

education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>

Florida Department of Education  
Curriculum Framework

**Program Title:** 3-D Animation Technology  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts, A/V Technology and Communication

**PSAV**

Program Number	I480200
CIP Number	0610030400
Grade Level	30, 31
Standard Length	1050 hours
Teacher Certification	BUS ED 1 @ 2 COMPU SCI 6 COMM ART @7 7G TV PRO TEC @7 7G TEC ELEC \$7 G ELECT DP @7 %G
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1014 - Multimedia Artists and Animators
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 10 Language: 10 Reading: 10

**Purpose**

The purpose of this program is to prepare students for employment in 3-D animation.

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 practical experiences in 3-D Animation design and production. Specialized skills including video editing, audio features, and 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.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	DIG0060	3-D Animation Production Assistant	150 hours	27-1014
B	DIG0061	Modeler	300 hours	27-1014
C	DIG0062	Texture Artist/Rigger	300 hours	27-1014
D	DIG0063	Animation/Motion Capture Technician	300 hours	27-1014



## **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 3D Animation.
- 02.0 Understand the production process.
- 03.0 Understand intellectual property rights, copyright laws and plagiarism as it 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 3D 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 it relates to modeling.
- 18.0 Demonstrate knowledge of modeling principles.
- 19.0 Demonstrate knowledge of 3D Animation software.
- 20.0 Demonstrate knowledge of 3D Animation software navigation.
- 21.0 Demonstrate knowledge of NURBS modeling.
- 22.0 Demonstrate knowledge of polygon 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 3D rendering.
- 28.0 Understand the role of texture artist in relation to the production process.
- 29.0 Demonstrate knowledge 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 3D paint.
- 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 Demonstrate knowledge of motion capture production.
- 44.0 Demonstrate knowledge of motion capture post production.
- 45.0 Understand the role of a 3D Animator in relation to the production process.
- 46.0 Demonstrate knowledge of advanced animation.
- 47.0 Demonstrate knowledge of motion graphics.
- 48.0 Demonstrate knowledge animation behaviors and scripting.
- 49.0 Demonstrate knowledge of particle systems.
- 50.0 Demonstrate knowledge of advanced audio production.
- 51.0 Demonstrate knowledge of dynamics (physics).
- 52.0 Demonstrate knowledge of distributed rendering.
- 53.0 Demonstrate knowledge of video compositing software.
- 54.0 Demonstrate knowledge of post-production.
- 55.0 Develop professional portfolio of work.

Florida Department of Education  
Student Performance Standards

Program Title: 3-D Animation Technology  
PSAV Number: I480200

**Course Number: DIG0060**  
**Occupational Completion Point: A**  
**3-D Animation Production Assistant – 150 Hours – SOC Code 27-1014**

01.0 Understand the history of 3D Animation--The student will be able to:

01.01 Understand the history of animation (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 use of 3D animation.

01.05 Identify 3D 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 various tools and equipment used to produce 3D animation.

02.03 Understand speed and efficiency concepts.

02.04 Understand a production pipeline.

02.05 Identify the departments of an animation studio.

02.06 Understand the interrelationships between departments.

02.07 Understand basic communication concepts (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 or prepare for presentations.

03.0 Understand intellectual property rights, copyright laws and plagiarism as it applies to creative assets--The student will be able to:

03.01	Understand the limits and expectations of copyright protection.
03.02	Understand the use 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 difference 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 file formats and storage options.
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 ability to import, paint and export 3D objects.
05.14	Demonstrate the basic use of video in Photoshop.
06.0	Demonstrate a knowledge of production writing as it relates to 3D 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 ability to write a treatment.
06.06	Demonstrate ability to write a professionally formatted script.
06.07	Identify the genre of a story.
06.08	Define characters and setting for a story.
06.09	Demonstrate ability to breakdown a script into production elements (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.
07.03	Determine the geographic location and time period of the story.
07.04	Understand the importance of art direction as it pertains to the message.
07.05	Understand the use of color in art direction.

07.06	Document the technical aspects of the art direction for use in production.
07.07	Perform the various assignments in a professional manner according to industry standards.
08.0	Demonstrate knowledge of character development--The student will be able to:
08.01	Demonstrate and understanding of character profiles.
08.02	Demonstrate the ability to develop character resumes/profiles.
08.03	Develop a look and design of 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 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 action.
09.06	Demonstrate understanding of perspective and depth of field.
09.07	Demonstrate knowledge of lighting and color use.
09.08	Demonstrate ability to sketch a storyboard including characters.
09.09	Demonstrate 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.
10.03	Demonstrate understanding of shot timing.
10.04	Break down a script into the various camera shots and character action.
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 file formats and storage options.
11.02	Identify parts of the software interface. (menus/palettes)
11.03	Demonstrate ability to use each of the basic tool sets.
11.04	Demonstrate 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 process.
11.09	Demonstrate ability to transform video (crop, scale).
11.10	Demonstrate ability to color correct images (brightness, hue, contrast)
11.11	Demonstrate 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 3D 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.
12.02	Demonstrate the ability to read aloud in a professional manner.
12.03	Demonstrate the ability to receive and properly act upon direction.
12.04	Demonstrate an understanding of the use of phonemes and facial morphs for lip-sync animation.
12.05	Understand the concept of voice acting and playing a role while speaking.
12.06	Perform the various assignments in a professional manner according to industry standards.
13.0	Demonstrate basic audio production--The student will be able to:
13.01	Demonstrate to set up a recording environment.
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.
13.06	Demonstrate the ability to record location sounds.
14.0	Demonstrate knowledge of audio editing software--The student will be able to:
14.01	Demonstrate understanding file formats and storage options.
14.02	Identify parts of the software interface. (menus/palettes)
14.03	Demonstrate ability to use each of the basic tool sets.
14.04	Demonstrate ability to import, export and save audio.
14.05	Demonstrate understanding of 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 process.
14.09	Demonstrate 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 ecosystem associated with product distribution.
15.02	Identify the job titles and roles of the distributors.
15.03	Identify potential markets, target audiences, and products.
15.04	Develop the materials needed to effectively convey the message.
15.05	Develop a script of talking points.
15.06	Effectively communicate a message or pitch.

**Course Number: DIG0061**  
**Occupational Completion Point: B**  
**Modeler – 300 Hours – SOC Code 27-1014**

16.0 Understand modeling in relation to the production process--The student will be able to:

16.01	Define modeling as a process.
16.02	Define the role of 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 it relates to modeling--The student will be able to:
17.01	Demonstrate an understanding of the principle - squash and stretch.
17.02	Demonstrate an understanding of the principle - anticipation.
17.03	Demonstrate an understanding of the principle - staging.
17.04	Demonstrate an understanding of the principle - straight ahead action and pose to pose.
17.05	Demonstrate an understanding of the principle - follow through and overlapping action.
17.06	Demonstrate an understanding of the principle - slow in and slow out.
17.07	Demonstrate an understanding of the principle - arcs.
17.08	Demonstrate an understanding of the principle - secondary action.
17.09	Demonstrate an understanding of the principle - timing.
17.10	Demonstrate an understanding of the principle - exaggeration.
17.11	Demonstrate an understanding of the principle - solid drawing.
17.12	Demonstrate an understanding of the principle - appeal.
18.0	Demonstrate knowledge of modeling principles--The student will be able to:
18.01	Understand 3D construction theory.
18.02	Demonstrate understanding of primitives, parametric modeling.
18.03	Demonstrate an understanding of NURBS, splines, and polygonal modeling.
18.04	Demonstrate ability to use reference images and files while modeling.
19.0	Demonstrate knowledge of 3D Animation software--The student will be able to:
19.01	Identify the computer requirements for 3D animation software.

19.02	Compare and contrast available 3D animation software.
19.03	Identify available file formats and protocols.
19.04	Demonstrate an understanding of naming conventions.
19.05	Develop a software and file backup plan.
19.06	Identify common icons within the software.
19.07	Demonstrate use of keyboard shortcuts.
19.08	Understand the use of a three-button mouse.
20.0	Demonstrate knowledge of 3D Animation software navigation--The student will be able to:
20.01	Identify the main windows of a 3D program.
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 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 (lasso, loop).
20.11	View objects in wireframe, gourard shading, lines, boxes modes.
20.12	Demonstrate use of selection sets.
20.13	Undo and redo an action within the program.
20.14	Locate the help menu system.
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 parametric primitives.
21.05	Locate an object's properties, attributes, and coordinates.
21.06	Demonstrate understanding of Non uniform rational b-splines (NURBS).
21.07	Demonstrate understanding of splines and generators (extrude, lathe, sweep).
21.08	Understand the use of hierarchy.
21.09	Demonstrate an understanding of Boolean objects.
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 polygon 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 extrudes.
22.08	Demonstrate an understanding of symmetry.
22.09	Demonstrate an understanding of hyperNURBS.
22.10	Demonstrate an understanding of basic deformers (bend, twist, melt).
23.0	Demonstrate knowledge of basic lighting--The student will be able to:
23.01	Compare and contrast real lighting with 3D lighting.

23.02	Demonstrate an understanding 3 point lighting (key, fill, back).
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 HDRI lighting.
23.12	Demonstrate an understanding of how light settings will effect render times.
24.0	Demonstrate knowledge of basic materials and textures--The student will be able to:
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 3D painting.
24.11	Understand how light affects the look of materials.
24.12	Understand how camera angles can affect the look of materials.

25.0	Demonstrate knowledge of basic animation--The student will be able to:
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 an understanding in the use of controllers.
25.07	Demonstrate an understanding of ease in, ease out.
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:
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 (targets, driver, driven).
26.04	Demonstrate an understanding of skeletal systems.
26.05	Demonstrate an understanding of bones or 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 IK (Inverse Kinetics) splines.
26.09	Demonstrate an understanding of IK (Inverse Kinetics) chains.
26.10	Demonstrate an understanding of skins and weights.
26.11	Demonstrate ability to create a visual selector for the rig.
27.0	Demonstrate knowledge of basic 3D rendering--The student will be able to:
27.01	Demonstrate an understanding of processor, hardware and software rendering techniques.

27.02	Determine the final render format (size, codec, quality).
27.03	Demonstrate an understanding of basic render settings.
27.04	Demonstrate an understanding of title safe, action safe, render safe.
27.05	Select the range of frames to be rendered.
27.06	Demonstrate an understanding of global illumination (radiosity) render settings.
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 sequence into a movie.
27.12	Demonstrate an understanding of benefits, purpose and workflow of multi-pass rendering.
27.13	Demonstrate an understanding of the batch render process.

**Course Number: DIG0062**  
**Occupational Completion Point: C**  
**Texture Artist/Rigger – 300 Hours – SOC Code 27-1014**

28.0	Understand the role of texture artist in relation to the production process--The student will be able to:
28.01	Define texturing as a process.
28.02	Define the role of texture artist.
28.03	Identify job titles associated with texture artist.
28.04	Identify texture creation in the production pipeline.
28.05	Demonstrate knowledge of the difference between textures and shaders.
28.06	Demonstrate an understanding of texture projection methods.
28.07	Demonstrate an understanding of coordinates and their application to texture mapping.
28.08	Demonstrate an understanding of the round-trip integration of Photoshop and a 3D host for texture development.
28.09	Demonstrate an understanding of how to link texture and shade properties to object movement via either visual or scripted

	programming relationships.
29.0	Demonstrate knowledge color theory--The student will be able to:
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 complimentary 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:
30.01	Determine required materials and textures needed for a model based on production design sheets and reference images.
30.02	Determine material and texture properties to be created.
30.03	Determine appropriate style (realistic, hyper-real, simplified).
30.04	Determine appropriate color pallets to be used based on art direction.
30.05	Determine appropriate image resolution and file format for use in 3D application.
30.06	Demonstrate knowledge of material and texture creation techniques and approaches.
30.07	Define 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.
30.10	Demonstrate a true working understanding of the correspondent relationship between UV polys and their related polygons.
31.0	Demonstrate knowledge of cloth and hair--The student will be able to:
31.01	Determine cloth or hair requirements based on production design sheets and reference images.
31.02	Define physical properties associated with cloth and hair.
31.03	Demonstrate knowledge of hair and cloth toolsets.
31.04	Determine appropriate materials to be use with the hair.
31.05	Demonstrate knowledge of hair manipulation and management.



31.06	Demonstrate knowledge of hair and cloth 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:
32.01	Understand the history behind 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 appropriate materials and shaders to be used 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 baking textures.
33.03	Demonstrate texture-baking procedures.
33.04	Export models with baked textures.
33.05	Determine appropriate render settings needed for baked textures.
34.0	Demonstrate knowledge of texture maps--The student will be able to:
34.01	Define the properties of a 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.
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 3D paint--The student will be able to:
35.01	Identify available 3D paint programs

35.02	Demonstrate knowledge of UV mapping tools.
35.03	Demonstrate knowledge of UV unwrapping and organizational techniques.
35.04	Prepare a UV map for export for use with photo editing software.
35.05	Demonstrate knowledge of 3D painting tools within 3D software.
35.06	Apply painted image map to model.
36.0	Demonstrate knowledge of rigging–The student will be able to:
36.01	Define rigging as a process.
36.02	Define the role of rigger.
36.03	Identify job titles associated with a rigger.
36.04	Identify rigging creation in the production pipeline.
36.05	Demonstrate knowledge of forward kinematics vs. 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:
37.01	Define morphing 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 keyframe animation and morph tags.
38.0	Demonstrate knowledge of facial animation–The student will be able to:
38.01	Demonstrate knowledge of facial modeling techniques in respect to animation.

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:
39.01	Determine use for advanced rigging.
39.02	Demonstrate knowledge of advanced rigging tools.
39.03	Prepare rigged model for animation.
39.04	Demonstrate knowledge of advanced scripting as it relates to rigging.
39.05	Create complex rigs for greater precision and control.
39.06	Demonstrate knowledge of deformers (muscle).
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.

**Course Number: DIG0063**  
**Occupational Completion Point: D**  
**Animator/Motion Capture Technician – 300 Hours – SOC Code 27-1014**

40.0	Demonstrate knowledge of motion capture systems--The student will be able to:
40.01	Demonstrate knowledge of the history of motion capture.
40.02	Demonstrate the awareness of emerging technologies in the industry.
40.03	Demonstrate understanding of motion capture for 3D 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:
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 ability to properly position and calibrate capture cameras or sensors.
41.04	Demonstrate ability to safely connect camera/sensor cables to the capture computer station securing cables across walkways.
41.05	Demonstrate understanding of motion capture computer hardware requirements and software security dongles.
41.06	Determine hardware and software requirements for motion capture software, update computer operating system as needed and install or update motion capture software.
41.07	Demonstrate understanding of motion capture specific tools and instruments.
41.08	Demonstrate ability to create individual optical markers and arrays using optical tape and Velcro strapping.
41.09	Connect and verify real-time motion capture performance software video systems.
41.10	Verify capture area to be safe including but not limited to camera/sensor mounts, sand bags, tethers, securing cables, camera power connections and electrical power connections.
41.11	Complete Mocap Facility Log indicating system user, inventory, previous session review, session time in/out, and any problems or damage parts.
42.0	Demonstrate knowledge of motion capture preproduction–The student will be able to:
42.01	Identify the use of motion capture as it relates to a production plan.
42.02	Mark script and shot list for motion capture.
42.03	Understand the role of a motion capture talent/actor.
42.04	Rehearse performance with talent to be captured.
42.05	Identify necessary captured performance props.
42.06	Determine real-time video needs.
43.0	Demonstrate knowledge of motion capture production–The student will be able to:
43.01	Verify marker locations and connections to be used.
43.02	Demonstrate ability to properly fit motion capture suit for talent/actor.
43.03	Demonstrate ability to properly place markers on talent/actor/prop.

43.04	Demonstrate understanding of static system calibration and markers.
43.05	Demonstrate understanding of dynamic calibration or range of motion.
43.06	Open, create, and adjust skeletal rig within motion capture software.
43.07	Label markers for use in motion capture software.
43.08	Demonstrate understanding of real-time live motion capture.
43.09	Demonstrate use of naming conventions and file storage protocol as it relates to the motion capture pipeline.
43.10	Record session, saving after each motion capture.
44.0	Demonstrate knowledge of motion capture post production--The student will be able to:
44.01	Load session for post clean up.
44.02	Identify gaps in data collected
44.03	Determine appropriate cleaning method, correct for physical discrepancies including but not limited to: occlusions, marker fall off, incorrect marker numbers.
44.04	Prepare cleaned motion capture data for export.
44.05	Import motion capture data into 3D animation or motion package.
45.0	Understand the role of an 3D Animator in relation to the production process--The student will be able to:
45.01	Define animation as a process.
45.02	Define the role of an animator.
45.03	Identify job titles associated with an animator.
45.04	Identify animation in the production pipeline.
46.0	Demonstrate knowledge of advanced animation--The student will be able to:
46.01	Demonstrate knowledge of how nondestructive deformers affect animation.
46.02	Demonstrate knowledge of how muscle deformers integrate with a character rig.
46.03	Demonstrate knowledge of transform and animation transfers from one object (or object hierarchy) to another.
47.0	Demonstrate knowledge of motion graphics--The student will be able to:
47.01	Demonstrate knowledge of 3D animated motion graphics.

47.02	Demonstrate knowledge of motion graphics tools and techniques.
47.03	Demonstrate knowledge of integrated dynamics to simulate gravitational and collision effects.
47.04	Demonstrate the integration of standard animation techniques to drive motion graphics elements abased on node-based visual programming.
47.05	Demonstrate the applied working knowledge of motion graphics for broadcast application in TV show opens and commercials.
48.0	Demonstrate knowledge animation behaviors and scripting--The student will be able to:
48.01	Determine appropriate use of behaviors and automated animation.
48.02	Demonstrate ability to apply behavior to an object.
48.03	Demonstrate ability to apply multiple behaviors using node or visual system.
48.04	Demonstrate ability to use object-oriented programming language to create scripts.
48.05	Demonstrate understanding of scripting console and commands.
49.0	Demonstrate knowledge of particle systems--The student will be able to:
49.01	Demonstrate understanding of particle emitters.
49.02	Prepare objects to be emitted.
49.03	Determine direction of emission and coordinate.
49.04	Determine birthrate and lifetime.
49.05	Determine scale, speed, and rotation.
49.06	Demonstrate ability to use animated particles
49.07	Demonstrate ability to create smoke, fire, sparks using emitters and materials.
49.08	Apply dynamics to an emitter including wind/gravity.
49.09	Demonstrate use of keyframe animation or triggers.
50.0	Demonstrate knowledge of advanced audio production--The student will be able to:
50.01	Demonstrate ability to record final audio vocal tracks and sound effects.
50.02	Edit and export sound effects for use in video editing software.
50.03	Demonstrate the ability to place audio in 3D space using the 3D animation software.

50.04	Demonstrate the ability to control motion graphics using audio file frequency and amplitude characteristics.
51.0	Demonstrate knowledge of dynamics (physics)–The student will be able to:
51.01	Demonstrate a basic understanding physics principles (mass, velocity and collision)
51.02	Determine when to use physics instead of key frame animation.
51.03	Apply physics tools and commands to models in a simulation.
51.04	Demonstrate an understanding of rigid and soft bodies.
51.05	Demonstrate an understanding of forces (gravity, drag, wind).
51.06	Demonstrate an understanding of collision detection.
52.0	Demonstrate knowledge of distributed rendering–The student will be able to:
52.01	Demonstrate understanding of network-based rendering.
52.02	Demonstrate understanding of computer networks and protocols (DHCP,TCP IP)
52.03	Identify network server and data storage options.
52.04	Identify minimum system requirements for client computer nodes.
52.05	Install render software on server and client computers and verify connection to server using name conventions.
52.06	Prepare 3D project for rendering and submit through web client to the server.
52.07	Download completed render sequence from server.
53.0	Demonstrate knowledge of video compositing software--The student will be able to:
53.01	Demonstrate understanding file formats and storage options.
53.02	Identify parts of the software interface. (menus/palettes)
53.03	Demonstrate ability to use each of the basic tool sets.
53.04	Demonstrate ability to import file and video to be composited.
53.05	Demonstrate understanding of layers and compositing.
53.06	Demonstrate understanding of filters, effects and plug-ins.
53.07	Demonstrate understanding of motion paths.

53.08	Demonstrate understanding of lighting effects.
53.09	Demonstrate understanding of rendering process.
53.10	Demonstrate ability to mask video.
53.11	Demonstrate ability to color correct video (brightness, hue, contrast)
53.12	Demonstrate ability to use vector and color keying tools.
53.13	Demonstrate understanding of particle systems.
53.14	Demonstrate understanding of time correction.
53.15	Demonstrate ability to export final video to be used with video editing software.
53.16	Demonstrate ability to prepare the 3D scene for compositing using alpha channel setting in the 3D host as well as object buffers that will be assigned video sources in the compositing software.
53.17	Demonstrate ability to add camera and lighting positions and rotations for use in the compositing software.
54.0	Demonstrate knowledge of post-production--The student will be able to:
54.01	Import composited video into the timeline.
54.02	Import final audio into the timeline.
54.03	Edit video using the animatic as a reference.
54.04	Export video for use in websites, DVDs and other media formats.
54.05	Encode and assemble DVD for distribution.
55.0	Develop professional portfolio of work--The student will be able to:
55.01	Identify elements of a professional portfolio and resume.
55.02	Examine and determine student work to include in a portfolio and resume.
55.03	Gather illustrations, audio, video, and work history details to include into portfolio and resume.
55.04	Understand the use of Internet websites for portfolio distribution.
55.05	Determine the format for portfolio and resume.
55.06	Produce resume 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.

### **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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 10, Language 10, and Reading 10. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary

education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Printing and Graphic Communications  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts, A/V Technology and Communication

**PSAV**

Program Number	I480201
CIP Number	0610030500
Grade Level	30, 31
Standard Length	1800 hours
Teacher Certification	PRINTING @7 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	51-5113 – Print Binding and Finishing Workers 51-5112 – Printing Press Operators 51-5111 – Prepress Technicians and Workers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

**Purpose**

The purpose of this program is to prepare students for initial employment in the Printing and Graphics 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 the following: Administrative support operations, pre-press/imaging operations, press operations and finishing operations.

**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.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	GRA0012	Copy Center Technician	450 hours	51-5112
B	GRA0013	Process Camera Operator	300 hours	51-5111
C	GRA0014	Layout Designer/Planner	450 hours	51-5111
D	GRA0015	Duplicator Operator	450 hours	51-5112
E	GRA0016	General Bindery Worker	150 hours	51-5113

## **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 an understanding of safety and first aid practices.
- 02.0 Demonstrate an understanding of graphic communications and processes.
- 03.0 Demonstrate proficiency in art and copy preparation.
- 04.0 Demonstrate proficiency in prepress/imaging operations.
- 05.0 Demonstrate proficiency in reproduction photography.
- 06.0 Demonstrate proficiency in image assembly/plate making.
- 07.0 Demonstrate proficiency in performing basic offset press operation.
- 08.0 Demonstrate proficiency in basic finishing/binding operations.
- 09.0 Demonstrate appropriate math skills.
- 10.0 Demonstrate proficiency in performing basic film assembly and plate making competencies.
- 11.0 Demonstrate proficiency in basic electronic imaging competencies.
- 12.0 Demonstrate proficiency in the use of type and typography.
- 13.0 Demonstrate proficiency in using page layout operations.
- 14.0 Demonstrate proficiency in scanning operations.
- 15.0 Demonstrate an understanding of a vector base graphics program.
- 16.0 Demonstrate proficiency in electronic pre-press operations.
- 17.0 Demonstrate proficiency in operation of basic offset press.
- 18.0 Demonstrate proficiency in performing basic finishing and distribution competencies.

Florida Department of Education  
Student Performance Standards

Program Title:        **Printing and Graphic Communications**  
PSAV Number:        **I480201**

**Course Number: GRA0012**  
**Occupational Completion Point: A**  
**Copy Center Technician – 450 Hours – SOC Code 51-5112**

01.0	Demonstrate understanding of safety and first aid practices--The student will be able to:
01.01	Identify location(s) of fire safety equipment.
01.02	Describe 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 location(s) of first aid kit(s) and eye wash station(s).
01.06	Discuss the importance of the Material Safety Data Sheets (MSDS).
01.07	Identify protective safety equipment where needed (gloves, goggles, ear plugs, etc.).
01.08	Practice proper safety procedures when operating equipment.
01.09	Practice approved shop dress code for safe operation including necessary personal safety equipment.
01.10	Pass a general lab safety test.
01.11	Demonstrate acceptable employee health habits.
01.12	Demonstrate knowledge of the “Right-to-Know Law”.
01.13	Pass a safety test in an individual’s specialty area(s).
01.14	Practice approved methods to dispose 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 the enterprise system.
02.02	Identify printing markets and types of printing business.
02.03	List printing's ranking among other industries.
02.04	Identify the major printing process.
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 in order of business flow of printing from initial need to a final product.
02.09	List in order the technical production flow from idea to a finished product.
02.10	Identify major occupations in the graphic arts.
02.11	List the major responsibilities for each occupation.
02.12	Identify basic salary/wage expectation ranges for local area.
03.0	Demonstrate proficiency in art and copy preparation--The student will be able to:
03.01	Identify basic equipment and tools for a paste-up.
03.02	Identify basic materials and hand tools for a paste-up.
03.03	Demonstrate how to prepare thumbnail layouts.
03.04	Demonstrate how to prepare rough layouts.
03.05	Demonstrate how to prepare comprehensive layouts including a finished working dummy.
03.06	Employ the use of printers' measurements to compute inches and fractions, points and picas, decimals, percentages, and proportions.
03.07	Demonstrate how to use copy fitting and mark up procedures to specify type sizes, styles and etc.
03.08	Prepare a paste-up mechanical with elements including key line for photographs, title blocks and rulings.
03.09	Prepare a tissue overlay and specify color break, tint percentages and reverses.
03.10	Check and compare completed mechanical 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 operation.
04.02	Demonstrate how to choose type using the correct size and format.
04.03	Identify fundamentals of type and its uses.
04.04	Identify the various kinds 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 out a page layout program and demonstrate a functional knowledge of computer commands/codes/menu/palette 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.
05.0	Demonstrate proficiency in reproduction photography--The student will be able to:
05.01	Identify the equipment and materials used in reproduction photography and the safety rules pertaining to each.
05.02	Identify the parts of the process camera and explain their use.
05.03	Apply basic principles of light pertaining to copy board illuminations and exposure calculations for all camera functions.
05.04	Apply basic principles of darkroom chemistry.
05.05	Prepare darkroom chemistry.
05.06	Demonstrate how to establish basic line exposure and exposure time at 100% using standard time and temperature development.
05.07	Apply basic principles of Kodak halftone computer and density guide.
05.08	Demonstrate how to establish basic exposure to determine screen range, basic flash, main exposure, and bump exposure at 100% using standard time and temperature development.
05.09	Demonstrate how to produce line negatives to size.
05.10	Demonstrate how to inspect and compare line negatives to original mechanical.
05.11	Demonstrate how to produce a halftone to size.
05.12	Demonstrate how to inspect and compare halftones to original copy.

05.13	Demonstrate how to make line and halftone diffusion transfer prints.
05.14	Demonstrate how to inspect and compare prints to original mechanical.
05.15	Identify the parts of a contact frame and point light source and explain their use.
05.16	Demonstrate how to reduce contacts using orthochromatic and duplicating film, transmission density guide and standard time and temperature development.
06.0	Demonstrate proficiency in image assembly/plate making--The student will be able to:
06.01	Identify basic stripping equipment and hand tools.
06.02	Identify basic stripping materials and supplies.
06.03	Demonstrate how to produce a single color flat with correct dimensions and window(s).
06.04	Demonstrate how to make necessary corrections to flat (IE, opaque/scribing).
06.05	Identify plate making equipment and tools for offset metal plates.
06.06	Identify plate material types and processing chemicals for making offset metal plates.
06.07	Demonstrate how to produce a correctly exposed and processed metal plate for offset printing.
06.08	Identify direct transfer plate making equipment.
06.09	Identify direct transfer plate and processing materials.
06.10	Demonstrate how to produce a direct transfer plate for offset printing.
06.11	Identify pin registration systems.
07.0	Demonstrate proficiency in performing basic offset press operations--The student will be able to:
07.01	Identify basic offset duplicator parts and operations.
07.02	Identify basic safety and operation procedures for an Offset Duplicator 1 or single color printing.
07.03	Demonstrate basic setup procedures for printing a single color job.
07.04	Produce a printed single color job using an offset duplicator.
08.0	Demonstrate proficiency in basic finishing/binding operations--The student will be able to:
08.01	Identify operational and safety parts of a paper cutter.
08.02	Identify grain direction of paper.

08.03	Demonstrate how to calculate basic paper cuts from a stock sheet.
08.04	Demonstrate how to draw a master cutting diagram for making cuts.
08.05	Demonstrate how to make accurate paper cuts using a mechanized paper cutter.
08.06	Identify basic paper types, weights, grades and classifications used in the printing industry.
08.07	Identify padding materials.
08.08	Demonstrate how to produce correctly made pads of paper.
08.09	Identify stapling and stitching equipment and hand tools.
08.10	Identify stapling and stitching materials and supplies.
08.11	Demonstrate how to produce side and saddle stitched/stapled products.
08.12	Identify punching/drilling equipment and hand tools.
08.13	Demonstrate how to measure to drill 3 ring notebook pages.
08.14	Demonstrate how to make holes for 3 ring notebooks.
08.15	Identify folding equipment and hand tools.
08.16	Identify basic folds for printed products.
08.17	Demonstrate how to make a single fold using an automatic folding machine.
08.18	Identify collating equipment and hand tools.
08.19	Demonstrate how to make sets of paper using collating equipment in proper sequence.
08.20	Demonstrate how to hand collate sets in proper sequence.
08.21	Identify the cut products and the basic procedure for die cutting.
08.22	Identify hot foil stamped products, basic equipment materials and procedures for foil stamping.
09.0	Demonstrate appropriate math skills--The student will be able to:
09.01	Demonstrate how to solve addition, subtraction, multiplication and division of whole numbers.
09.02	Demonstrate how to solve addition, subtraction, multiplication and division of fractions.
09.03	Demonstrate how to solve addition, subtraction, multiplication and division of decimals.

09.04	Demonstrate how to solve fraction to decimal and decimal to fraction conversion problems.
09.05	Demonstrate how to solve decimal to percent and percent to decimal conversion problems.
09.06	Demonstrate how to solve basic ratio and proportion problems.
09.07	Demonstrate how to solve basic liner measurement problems.
09.08	Demonstrate how to solve basic inches to picas and picas to inches conversion problems.
09.09	Demonstrate how to solve inches to points and points to inches conversion problems.
09.10	Demonstrate how to solve cost calculating problems.

<b>Course Number: GRA0013</b>	
<b>Occupational Completion Point: B</b>	
<b>Process Camera Operator – 300 Hours – SOC Code 51-5111</b>	
10.0	Demonstrate proficiency in performing basic film assembly and plate making competencies--The student will be able to:
10.01	Read and comprehend production information on a job jacket/ticket.
10.02	Identify the equipment, tools and materials used in film assembly operations their parts, functions, and safety rules relating to their operation.
10.03	Apply basic math skills to the film assembly operations.
10.04	Demonstrate how to establish the “true edge” and “vertical alignment” on a film assembly table (squaring the table).
10.05	Demonstrate how to layout, measure and rule an unlined masking sheet showing relevant guidelines (guide edge of the sheet, gripper margins, plate clamp, center marks, etc.) for 8 1/2” X 11” single color work.
10.06	Demonstrate how to assemble and properly attach negatives to an 8 1/2” X 11” or larger size color flat.
10.07	Demonstrate how to make appropriate corrections to a film negative and flat.
10.08	Demonstrate how to layout, measure and rule an unlined masking sheet showing relevant guidelines (guide edge of the sheet, gripper margins, plate clamp, center marks, side guides, etc.) for an 11” X 17” or larger single color work.
10.09	Demonstrate how to assemble and properly attach negatives to an 11” X 17” or larger single color flat.
10.10	Demonstrate how to assemble and properly attach negatives to a 10” X 15” or larger single color pre-ruled flat.
10.11	Demonstrate how to layout, measure and rule an unlined masking sheet showing relevant guidelines (guide edge of the sheet, gripper margins, plate clamp, center marks, side guides, etc.) for an 8 1/2” X 11” multicolor work using pin register system.
10.12	Demonstrate how to assemble a single color flat for an envelope.
10.13	Demonstrate how to assemble a single color flat for a work and turn imposition.

10.14	Demonstrate how to assemble a single color flat for a work and tumble imposition.
10.15	Demonstrate how to assemble a single color flat for a screen tint.
10.16	Demonstrate how to assemble a single color flat for a 4-page sheet wise imposition.
10.17	Demonstrate how to assemble a single color flat for an 8-page signature.
10.18	Demonstrate how to assemble a single color flat for a line and halftone combination flat.
10.19	Demonstrate how to assemble multicolor flats with color quality control bars.
10.20	Demonstrate how to assemble a single color flat for step and repeat without using a pin register system.
10.21	Demonstrate how to assemble a single color flat for step and repeat with a pin register system.
10.22	Demonstrate how to assemble a multi-color job that uses masking film as a mechanical negative.
10.23	Demonstrate how to perform exposure tests for light-sensitive materials used in the film assembly area.
10.24	Demonstrate how to check registration of multiple flats using daylight proofing material.
10.25	Demonstrate how to prepare a spread negative or positive for image fit using a contact control wedge as a guide.
10.26	Demonstrate how to produce a choke negative or positive for image fit using a contact wedge as a guide.
10.27	Demonstrate how to produce a composite negative.
10.28	Demonstrate how to assembly multicolor, emulsion-up, flats with registration marks, color bars and slur bars on clear masking material.
10.29	Demonstrate how to expose and process a multicolor job using blue line/color proofing materials.
10.30	Demonstrate how to inspect and compare proof to originals.
10.31	Identify the equipment, tools, and materials used in plate making operations, their parts, functions, and safety rules relating to their operation.
10.32	Apply the basic math skills to the plate making operations.
10.33	Demonstrate how to perform exposure tests for light-sensitive materials used in the plate making area using a sensitivity guide.
10.34	Identify the different plate materials, types and processing chemicals and methods used for each.
10.35	Demonstrate how to expose, process and preserve metal plates.
10.36	Demonstrate how to make additions, deletions and repairs to metal plates.
10.37	Demonstrate how to expose, process and protect photo direct or transfer plates.

10.38 Demonstrate how to make additions, deletions and repairs to photo direct or transfer plates.

10.39 Demonstrate how to inspect and compare plates to proofs.

10.40 Demonstrate how to properly handle, file, store and retrieve flats and plates.

**Course Number: GRA0014**  
**Occupational Completion Point: C**  
**Layout Designer/Planner – 450 Hours – SOC Code 51-5111**

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 kinds of items that can be designed and produced using desktop publishing.

11.03 Identify the basic principles of design (i.e. unity, contrast, page proportions, balance, etc.)

11.04 Demonstrate how to incorporate the basic design principles in hand drawn sketches and measured layouts.

11.05 Identify line copy.

11.06 Identify continuous tone, 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.

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 (i.e. gutters, register

	marks, fold lines, etc.).
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, mean-line, baseline, ascenders, descenders, and their roles in measuring and designing with type.
12.04	Demonstrate how to identify caps, lowercase, uppercase, small caps and ligatures.
12.05	Define dingbats, bullets, rules, and symbols and their uses in publications.
12.06	Demonstrate how to distinguish between display (headline) type and body (text) type by their point sizes and styles.
12.07	Demonstrate how to identify the basic type styles and their uses.
12.08	Define the "weight" and "posture" of type.
12.09	Demonstrate how to distinguish between serif and sans serif type styles.
12.10	Define letter spacing and kerning of type characters.
12.11	Define word spacing and the relationship of 'em' and 'en' in paragraph spacing.
12.12	Define line spacing and explain the measurement principles for the leading of text.
12.13	Define the type arrangements: flush left, ragged right, flush right, ragged left, centered, justified, and forced justified.
12.14	Define and demonstrate copy fitting.
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 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 a page layout program and demonstrate a functional knowledge of computer commands/codes/menus/palette for the software in use.
13.05	Demonstrate text alignment, element positioning and rules of page design for printed matter.

13.06	Demonstrate how to set up column grids for 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 footers and headers.
13.09	Demonstrate how to set text with appropriate margins, formatting, gutters, leading, headings etc.
13.10	Demonstrate a proficiency in conducting basic search operations.
13.11	Demonstrate how to place copy from word processing program to a page layout program according to job specifications.
13.12	Demonstrate how to proofread, edit and make corrections/adjustment to copy on screen.
13.13	Demonstrate how to download fonts.
13.14	Demonstrate how to place graphics, rules, dingbats, from an existing file into a publication.
13.15	Demonstrate the procedure for cropping graphics electronically.
13.16	Demonstrate how to create a 2 sided, 3 panel brochure using graphics and text 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	Demonstrate how to create a printed piece using tints, reverses and manipulated type for effect.
13.20	Demonstrate how to produce a multicolor flyer using electronic spot color separations.
13.21	Demonstrate knowledge of available page layout programs - capabilities, advantage, and disadvantages.
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 scanner hardware and its basic components and operations.
14.02	Identify basic scanner software, 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.
15.0	Demonstrate understanding of a vector base graphics program--The student will be able to:
15.01	Demonstrate how to log-on/boot-up vector-based graphics program and demonstrate a functional knowledge of commands/codes/menus/hand tools and procedures for their uses.



15.02	Demonstrate how to draw a design appropriate for a given job using a graphic program.
15.03	Demonstrate how to create a design using tints, fills and paint for a given job using a graphics program.
15.04	Demonstrate how to create a design using manipulated type (rotated, circled, extended, etc.) for a publication.
15.05	Demonstrate how to trace a drawing/photograph using a graphics program.
15.06	Demonstrate how to create a design/publication using electronic clip art.
16.0	Demonstrate proficiency in electronic prepress operations--The student will be able to:
16.01	Define the application of digital photography in electronic imaging.
16.02	List the capabilities and functions of image setters.
16.03	Identify and compare digital proofs.
16.04	Identify and compare networking systems.
16.05	Define the current systems/techniques for outputting files direct to plate material.
16.06	Demonstrate an understanding of the PostScript page description language.
16.07	Demonstrate how to compare the leading operating systems in performance, use and capabilities.
16.08	Define storage guidelines and limitations.
16.09	List the advantages and disadvantages of different storage media, such as syquest, optical, etc.
16.10	List the use and capabilities of storage devices for electronic imaging work, transport and storage.
16.11	Describe the strengths and weaknesses of TIFF, EPS, PICT and DCS in a Postscript environment.
16.12	Demonstrate how to translate files from DOS to Mac formats.
16.13	Demonstrate how to use a file compression utility for file transfer or storage.
16.14	Describe the differences between True Type and PostScript fonts.
16.15	Demonstrate how to use a telecommunications program and a modem to transfer files.
16.16	Demonstrate how to create a single color layout using clip art.
16.17	Demonstrate how to create a single color layout using work and turn.
16.18	Demonstrate how to change contrast using tint screens and shading techniques.

16.19	Demonstrate how to create a logo design on a computer and integrate it into a brochure design.
16.20	Demonstrate how to produce special effects type using a graphics application.
16.21	Demonstrate how to produce a job on the computer using electronic imposition.
16.22	Demonstrate how to create a job that incorporates electronic trapping.
16.23	Demonstrate how to produce a multicolor job that includes scans, text and spot color artwork.
16.24	Demonstrate how to prepare page layout files containing graphic images for remote output.
16.25	Demonstrate how to follow instructions to produce, modify or output files according to a customer supplied criteria.
16.26	Demonstrate how to use OCR software to capture text.
16.27	Demonstrate how to calibrate a desktop color scanner.
16.28	Demonstrate how to produce a color scan.
16.29	Demonstrate how to use a photo manipulation program to perform basic color correction and basic image cloning.
16.30	Demonstrate how to calibrate a color monitor.
16.31	Define how film processor variations affect final output.
16.32	Define quality control checks on the film processor.
16.33	Define the use and capabilities of storage devices for electronic imaging work transport and storage.
16.34	Define the strengths and weaknesses of TIFF, EPS, PICT and DCS in a Postscript environment.
16.35	Demonstrate how to translate files from DOS to Mac formats.
16.36	Use a file compression utility for file transfer or storage.
16.37	Define the differences between True Type and Postscript fonts.
16.38	Demonstrate how to use a telecommunications program and a modem to transfer files.
16.39	Demonstrate how to create a single color layout using clip art.
16.40	Demonstrate how to create a single color layout using work and turn.
16.41	Demonstrate how to change contrast using tint screens and shading techniques.
16.42	Demonstrate how to create logo design on a computer and integrate into a brochure design.

16.43	Demonstrate how to produce special effects type using a graphics application.
16.44	Demonstrate how to produce a job on the computer using electronic imposition.
16.45	Demonstrate how to create a job that incorporates electronic trapping.
16.46	Demonstrate how to produce a multicolor job that includes scans, text and spot color artwork.
16.47	Demonstrate how to prepare page layout files containing graphic images for remote output
16.48	Demonstrate how to follow instructions to produce, modify or output files according to customer supplied criteria.
16.49	Demonstrate how to use OCR software to capture text.
16.50	Demonstrate how to calibrate a desktop color scanner.
16.51	Demonstrate how to produce a color scan.
16.52	Demonstrate how to use a photo manipulation program to perform basic color correction and basic image cloning.
16.53	Demonstrate how to calibrate a color monitor.
16.54	Define how film processor variations affect final output.
16.55	Define quality control checks on the film processor.

**Course Number: GRA0015**  
**Occupational Completion Point: D**  
**Duplicator Operator – 450 Hours – SOC Code 51-5112**

17.0	Demonstrate proficiency in operation of basic offset press--The student will be able to:
17.01	Identify the equipment and materials used in offset press operations, their parts and functions, and the safety rules relating to their operation.
17.02	Apply basic principles of offset lithography pertaining to physical and chemical properties of ink components (pigment, vehicle, and dryer).
17.03	Apply basic principles of offset lithography pertaining to dampening systems (ducted and continuous).
17.04	Apply basic principles of offset lithography pertaining to fountain solutions chemical components (acid, alkaline, and neutral).
17.05	Apply basic principles of offset lithography pertaining to ph-control and its effects on the lithographic process.
17.06	Apply basic principles of offset lithography pertaining to interrelationships upon the process of paper (coated and uncoated and various grades within).
17.07	Demonstrate how to determine grain directions of paper.

17.08	Demonstrate how to handle and jog paper stock (wire/felt, watermarks, and carbonless sequence).
17.09	Demonstrate how to identify paper weight, coating and sizes.
17.10	Demonstrate how to identify paper problems, curling, dust, moisture, flaring, etc.
17.11	Apply basic principles of offset lithography pertaining to the interrelationships of textured or smooth paper; paper, plastic, metal plates, and conventional or compressible blankets.
17.12	Apply basic principles of offset lithography pertaining to ink and its drying properties in relation to fountain solution, plate and paper used (including effects of ink film thickness and drying time and set off; and problems associated with inappropriate use of spray powder).
17.13	Apply basic principles of plate preservation after presswork for long-time storage (use of gum Arabic and Asphaltum).
17.14	Demonstrate how to prepare a press for operation by reviewing job-ticket specifications and then selecting appropriate press and materials.
17.15	Demonstrate how to prepare a press for operation based on interrelationships of lithographic process.
17.16	Demonstrate how to mix fountain solution from concentrate
17.17	Demonstrate how to mix ink to color matching systems specifications (PMS, etc.).
17.18	Demonstrate how to introduce ink and fountain solution to press in proper sequence.
17.19	Demonstrate how to set up and adjust feeder to paper specifications (air blast, vacuum and choke).
17.20	Demonstrate how to set up and adjust register system to single sheet or stream fed, side guide, and head register.
17.21	Demonstrate how to set up and adjust delivery (chute or chain).
17.22	Demonstrate how to mount blanket (pack if necessary) and adjust to press specifications.
17.23	Demonstrate how to set impression cylinder to paper thickness and press specifications.
17.24	Demonstrate how to set and adjust ink and water rollers pressures to press specifications.
17.25	Demonstrate how to make-ready a press to assure ink and water balance for uniform coverage, volume and replenishment of ink, image position, cylinder pressure, and sheet registration.
17.26	Demonstrate how to make additions, deletions and repairs to offset plate.
17.27	Demonstrate how to inspect and evaluate final make-ready sheet to job-ticket specifications and obtain proof approval to run.
17.28	Demonstrate how to set spray powder.
17.29	Demonstrate how to produce required number of press sheets to job-ticket specifications.
17.30	Demonstrate how to preserve plate for long-term storage.

17.31	Demonstrate how to perform press wash-up and roller treatment.
17.32	Demonstrate how to perform press maintenance to manufacturers' specifications.
17.33	Demonstrate how to apply basic principles of offset press operations with regard to work and turn, work and tumble and sheet wise printed products.
17.34	Demonstrate how to produce a tight register one-color project.
17.35	Demonstrate how to produce a tight register one or two-color, pre-collated carbonless project.
17.36	Demonstrate how to produce a two color tight register project.
17.37	Demonstrate how to print a two color job on a duplicator using a T-head.
17.38	Demonstrate how to produce a one or two color tight register envelope project.
17.39	Demonstrate how to produce a tight register one-color metallic ink project.
17.40	Demonstrate how to produce a tight register one or two color folding two sided project.
17.41	Demonstrate how to produce a multicolor tight register project.
17.42	Demonstrate an understanding and identify troubleshooting problems on a duplicator.
17.43	Define and identify direct imaging technologies.
17.44	Demonstrate how to clean and secure duplicator for down time.

**Course Number: GRA0016**  
**Occupational Completion Point: E**  
**General Bindery Worker – 150 Hours – SOC Code 51-5113**

18.0	Demonstrate proficiency in performing basic finishing and distribution competencies--The student will be able to:
18.01	Demonstrate how to read and comprehend production information on a job jacket/ticket.
18.02	Demonstrate how to identify the equipment and materials used in finishing and distribution operations, their parts, functions, and safety rules relating to their operation.
18.03	Demonstrate how to apply basic math skills to the binding and distribution operations.
18.04	Demonstrate how to prepare folding dummy from press sheet in accordance with job ticket specifications and approved proof.
18.05	Demonstrate how to setup and operate folder in accordance with job ticket specifications and folding dummy
18.06	Demonstrate how to use folding equipment to produce single, gate and accordion folds.

18.07	Define and identify right angle folds.
18.08	Apply basic principles of finishing and distribution following folded bound signature impositions to allow for lips, trims and bleeds according to saddle- and side-stitch binding method.
18.09	Define and identify slitting, perforating and scoring functions and equipment pertaining to folding operations.
18.10	Define how to use and setup cutters.
18.11	Demonstrate how to prepare rule-out of press sheet for finishing operations according to job ticket specifications and approved proof.
18.12	Demonstrate how to setup and operate cutter in accordance with rule-out.
18.13	Demonstrate how to square substrate.
18.14	Define and identify problems with substrate.
18.15	Define the proper maintenance procedures for paper cutters.
18.16	Define how to change the blade on a paper cutter.
18.17	Define and identify the most commonly used types of paper.
18.18	Demonstrate knowledge of paper types related to their printing, folding and binding characteristics.
18.19	Demonstrate how to hand-jog 8 1/2" x 11" substrate.
18.20	Demonstrate how to hand-jog 17" x 22" or larger substrate.
18.21	Demonstrate how to machine-jog substrate.
18.22	Define and identify off-line finishing systems.
18.23	Define the fundamentals of saddle stitching and perfect binding.
18.24	Define and identify the use of automated sorting and labeling equipment.
18.25	Define and identify mail class rates (bulk, presorted, etc.)
18.26	Define and identify the quality control methods for bar codes in relation to postal standards.
18.27	Define and identify embossing procedures and equipment.
18.28	List the common problems encountered in embossing.
18.29	Identify the components of case, spiral and perfect bound books.
18.30	Define and identify modern book binding equipment with hand binding techniques.

18.31	Demonstrate how to store and properly handle substrates.
18.32	Define and identify U-V coatings.
18.33	List the advantages and disadvantages of U-V coatings.
18.34	Demonstrate how to estimate the cost of materials and production for performing bindery operations; cutting, scoring, folding, packaging and coating.
18.35	Demonstrate how to setup and operate stitcher (side and saddle).
18.36	List the techniques used to control waste production and disposal in a modern bindery.
18.37	Define and identify spiral, comb and wire binding equipment and supplies.
18.38	Define tipping procedures.
18.39	Demonstrate how to perform preventive maintenance on binding and finishing equipment.
18.40	Demonstrate methods of counting substrate (machine, measurement, weight and rapid multiple-sheet manual counting by fives).
18.41	Define collating flat sheets.
18.42	Demonstrate how to setup and operate a paper drill for standard loose-leaf binder.
18.43	Define and identify packaging and shrink wrapping equipment.
18.44	Demonstrate how to package and identify completed job according to job specifications.

## **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 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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 8, Language 8, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary



education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Commercial Art Technology  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts, A/V Technology and Communication

**PSAV**

Program Number	I480203
CIP Number	0650040208
Grade Level	30, 31
Standard Length	1500 hours
Teacher Certification	COMM ART @7 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	43-9031 Desktop Publishers 27-1029 Designers All Others 27-1024 Graphic Designers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

**Purpose**

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

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 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 four occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	GRA0036	Desktop Publishing Assistant	450 hours	43-9031
B	GRA0037	Design Technician	450 hours	27-1029
C	GRA0038	Illustrator	300 hours	27-1024
D	GRA0039	Print Media Artist	300 hours	27-1024

## **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 basic commercial art knowledge.
- 02.0 Demonstrate proficiency in graphic production.
- 03.0 Demonstrate proficiency in technical art skills.
- 04.0 Demonstrate proficiency in design skills.
- 05.0 Demonstrate proficiency in lettering skills.
- 06.0 Demonstrate an understanding of typography.
- 07.0 Demonstrate proficiency in layout and paste-up.
- 08.0 Demonstrate proficiency in illustration skills.
- 09.0 Demonstrate proficiency in applied design.
- 10.0 Demonstrate proficiency in graphic art computer skills.
- 11.0 Demonstrate proficiency in airbrush skills.
- 12.0 Demonstrate an understanding of entrepreneurship.

Florida Department of Education  
Student Performance Standards

Program Title: Commercial Art Technology  
PSAV Number: I480203

<b>Course Number: GRA0036</b>	
<b>Occupational Completion Point: A</b>	
<b>Desktop Publishing Assistant – 450 Hours – SOC Code 43-9031</b>	
01.0	Demonstrate basic commercial art knowledge--The student will be able to:
01.01	Take notes, listen and comply with instructions.
01.02	Read instructions thoroughly.
01.03	Request clarification of instructions (ask questions).
01.04	Relay instructions to others orally and in writing.
01.05	Define and explain commercial art terms.
01.06	Document job tasks, costs and maintain records.
01.07	Make project presentations.
01.08	Interact with the employer, fellow employees and customers.
02.0	Demonstrate proficiency in graphic production--The student will be able to:
02.01	Define the differences in production processes and estimate relative costs.
02.02	Recognize limitations for printing.
02.03	Identify and select different printing surfaces.
02.04	Identify and select appropriate printing inks.
02.05	Identify and select finishing processes.
02.06	Identify standard industry material sizes.
02.07	Specify types of folds.

10.0	Demonstrate proficiency in graphic art computer skills--The student will be able to:
10.01	Demonstrate graphic art computer skills using appropriate graphic art programs and hardware.
10.02	Use software and hardware to manipulate and adjust various drawings, pictures and graphic material by computer.
10.03	Produce finished computer projects reflecting current computer graphic art technology.
10.04	Operate various scanners and input devices for computer graphics.

**Course Number: GRA0037**  
**Occupational Completion Point: B**  
**Design Technician – 450 Hours – SOC Code 27-1029**

04.0	Demonstrate proficiency in design skills--The student will be able to:
04.01	Explain proper use and care of tools.
04.02	Apply principles and elements of design.
04.03	Apply color theory (pigment versus light).
04.04	Utilize tones, hues and values.
04.05	Sketch designs using pencil and ink.
04.06	Paint freehand or within sketched designs using mixed colors or apply colors to produce desired shades.
04.07	Apply color for impact (color psychology).
04.08	Differentiate between line halftone, duotone and four-color process.
04.09	Demonstrate balance in design.
04.10	Demonstrate designs with symmetry and asymmetry.
04.11	Develop grids for layouts of magazine pages, ads, etc.
04.12	Paint decorative freehand designs and objects.
04.13	Use palette knife or brush to mix colors.
04.14	Create designs by stripping.
04.15	Demonstrate harmony and contrast of line and shape.

04.16	Demonstrate harmony and contrast of color and tone.
04.17	Demonstrate harmony and contrast of proportion.
04.18	Demonstrate harmony and contrast of texture pattern.
04.19	Demonstrate harmony and contrast of motion.
04.20	Indicate style appropriate to desired impact.
04.21	Make a collage.
06.0	Demonstrate an understanding of typography--The student will be able to:
06.01	Explain proper use, care and cleaning of equipment.
06.02	Identify and select typography materials.
06.03	Define typographic terms, including leading and kerning.
06.04	Identify and select typographic methods.
06.05	Demonstrate the ability to proofread and use proofreaders' marks.
06.06	Explain picas, points and conversion to inches.
06.07	Explain specification of type and copy fitting.
06.08	Identify and select typographic styles.
06.09	Define basic letter structures.
06.10	Demonstrate mixing of families of type.
07.0	Demonstrate proficiency in layout and paste-up--The student will be able to:
07.01	Explain proper use and care of tools.
07.02	Identify parts of a layout.
07.03	Utilize Amberlith, Rubylith, screens, overlays and register marks.
07.04	Make thumbnail sketch pencil layouts.
07.05	Prepare comprehensives from pencil layouts.



07.06	Prepare camera-ready mechanicals from comprehensives.
07.07	Prepare specific forms of instruction on mechanicals for presentations and for a printer.
07.08	Crop and scale artwork and/or photos for layouts.
07.09	Demonstrate enlarging or reducing with a grid, proportion wheel and other methods.
07.10	Make a color separation with overlays.
07.11	Demonstrate various ruling techniques.
07.12	Demonstrate the uses of different adhesives.
07.13	Specify the use of halftones or special effects.
07.14	Explain layout and color trends.
09.0	Demonstrate proficiency in applied design--The student will be able to:
09.01	Locate and identify resource materials and develop a morgue.
09.02	Design logos.
09.03	Design stationery layouts.
09.04	Design a magazine/book cover or record jacket.
09.05	Design an ad campaign that includes newspapers, magazines and billboards.
09.06	Design a greeting card.
09.07	Design a business card.
09.08	Apply advertising psychology.
09.09	Produce an industrial brochure.
09.10	Design a consumer brochure.
09.11	Construct a package design.
09.12	Produce TV story boards.
09.13	Develop a square and half-drop repeat design.

09.14	Produce computer-assisted artwork. (optional)
10.0	Demonstrate proficiency in graphic art computer skills--The student will be able to:
10.01	Demonstrate graphic art computer skills using appropriate graphic art programs and hardware.
10.02	Use software and hardware to manipulate and adjust various drawings, pictures and graphic material by computer.
10.03	Produce finished computer projects reflecting current computer graphic art technology.
10.04	Operate various scanners and input devices for computer graphics.

**Course Number: GRA0038**  
**Occupational Completion Point: C**  
**Illustrator – 300 Hours – SOC Code 27-1024**

03.0	Demonstrate proficiency in technical art skills--The student will be able to:
03.01	Explain care and respect for all tools and equipment.
03.02	Make computations for centering, spacing and scaling drawings.
03.03	Draw on various types of drafting media.
03.04	Interpret information from drawings, prints and sketches.
03.05	Draw freehand sketches.
03.06	Draw auxiliary views.
03.07	Draw a one and two point perspective.
03.08	Make corrections on a drawing.
03.09	Draw in ink on a variety of surfaces.
03.10	Develop a glossary of technical terms.
03.11	Analyze an object to determine size and shape.
03.12	Draw an oblique drawing.
03.13	Draw an isometric drawing.
03.14	Read and interpret technical charts, graphs and diagrams.

03.15	Evaluate a drawing.
03.16	Make an orthographic drawing using a Computer-Assisted Drafting (CAD) system as an individual or team member.
03.17	Make a print on a plotter
08.0	Demonstrate proficiency in illustration skills--The student will be able to:
08.01	Explain proper use and care of tools.
08.02	Demonstrate elementary anatomy drawing skills.
08.03	Illustrate using ink, pencil, washes, markers, tempera, watercolor and paints.
08.04	Demonstrate renderings of different textures using the above media.
08.05	Make illustrations using various subjects.
08.06	Make a montage illustration.
08.07	Draw a cartoon.
10.0	Demonstrate proficiency in graphic art computer skills--The student will be able to:
10.01	Demonstrate graphic art computer skills using appropriate graphic art programs and hardware.
10.02	Use software and hardware to manipulate and adjust various drawings, pictures and graphic material by computer.
10.03	Produce finished computer projects reflecting current computer graphic art technology.
10.04	Operate various scanners and input devices for computer graphics.
11.0	Demonstrate proficiency in airbrush skills--The student will be able to:
11.01	Explain proper use and care of tools.
11.02	Identify airbrush parts.
11.03	Perform airbrush exercises: dots, lines and graded shadings.
11.04	Select appropriate surfaces and painting materials.
11.05	Define the use of masking materials.
11.06	Airbrush a painting using masks or brushes.

11.07	Airbrush geometric shapes.
11.08	Airbrush freehand painting.
11.09	Airbrush an illustration of a product.
11.10	Retouch photos.

<b>Course Number: GRA0039</b>	
<b>Occupational Completion Point: D</b>	
<b>Print Media Artist – 300 Hours – SOC Code 27-1024</b>	
03.0	Demonstrate proficiency in technical art skills--The student will be able to:
03.01	Explain care and respect for all tools and equipment.
03.02	Make computations for centering, spacing and scaling drawings.
03.03	Draw on various types of drafting media.
03.04	Interpret information from drawings, prints and sketches.
03.05	Draw freehand sketches.
03.06	Draw auxiliary views.
03.07	Draw a one and two point perspective.
03.08	Make corrections on a drawing.
03.09	Draw in ink on a variety of surfaces.
03.10	Develop a glossary of technical terms.
03.11	Analyze an object to determine size and shape.
03.12	Draw an oblique drawing.
03.13	Draw an isometric drawing.
03.14	Read and interpret technical charts, graphs and diagrams.
03.15	Evaluate a drawing.
03.16	Make an orthographic drawing using a Computer-Assisted Drafting (CAD) system as an individual or team member.

03.17	Make a print on a plotter
05.0	Demonstrate proficiency in lettering skills--The student will be able to:
05.01	Demonstrate use and care of tools, lettering pens, T-squares and triangles.
05.02	Identify and select lettering styles.
05.03	Perform and use pen, brush, pencil and Leroy lettering.
05.04	Utilize guidelines, margins and spacing for layouts.
05.05	Paint or draw precise lettering for reproduction.
05.06	Utilize various types of prepared lettering processes.
05.07	Produce a sign on poster board.
05.08	Determine and select lettering styles for layout sketches.
05.09	Illuminate a certificate.
10.0	Demonstrate proficiency in graphic art computer skills--The student will be able to:
10.01	Demonstrate graphic art computer skills using appropriate graphic art programs and hardware.
10.02	Use software and hardware to manipulate and adjust various drawings, pictures and graphic material by computer.
10.03	Produce finished computer projects reflecting current computer graphic art technology.
10.04	Operate various scanners and input devices for computer graphics
16.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
16.01	Define entrepreneurship.
16.02	Describe the importance of entrepreneurship to the American economy.
16.03	List the advantages and disadvantages of business ownership.
16.04	Identify the risks involved in ownership of a business.
16.05	Identify the necessary personal characteristics of a successful entrepreneur.
16.06	Identify the business skills needed to operate a small business efficiently and effectively.

## **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Commercial Photography Technology  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts, A/V Technology and Communication

**PSAV**

Program Number	I480204
CIP Number	0650040600
Grade Level	30, 31
Standard Length	1650 hours
Teacher Certification	PHOTOG @7 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4021 – Photographers 51-9151 – Photographic Process Workers and Processing Machine Operators
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

**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.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	PGY0180	Photographic Imaging Specialist 1	250 hours	51-9151
	PGY0181	Photographic Imaging Specialist 2	250 hours	
B	PGY0182	Photography Specialist/Lab Technician	200 hours	51-9151
C	PGY0183	Portrait Photographer 1	250 hours	27-4021
	PGY0184	Portrait Photographer 2	250 hours	
D	PGY0185	Commercial Photographer	450 hours	27-4021

## **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

Program Title: Commercial Photography Technology  
PSAV Number: I480204

**Course Number: PGY0180**  
**Occupational Completion Point: A**  
**Photographic Imaging Specialist 1 – 250 Hours – SOC Code 51-9151**

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.
01.05	Utilize modern processing machines for color printing.
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	Develop effective advertising.
02.06	Maintain presentational portfolio.

**Course Number: PGY0181**  
**Occupational Completion Point: A**  
**Photographic Imaging Specialist 2 – 250 Hours – SOC Code 51-9151**

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.
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.
08.0	Demonstrate appropriate communication skills--The student will be able to:
08.01	Write logical and understandable statements, or phrases, to accurately fill out forms/invoices commonly used in business and industry.
08.02	Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area.
08.03	Read and follow written and oral instructions.
08.04	Answer and ask questions coherently and concisely.
08.05	Read critically by recognizing assumptions and implications and by evaluating ideas.
08.06	Demonstrate appropriate telephone/communication skills.

**Course Number: PGY0182**  
**Occupational Completion Point: B**  
**Photography Specialist/Lab Technician – 200 Hours – SOC Code 51-9151**

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.

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 a storage device.

11.05 Utilize modern processing machines for color printing.

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.

12.06 Analyze a color print for correct color and contrast.

12.07 Utilize modern processing machines for color printing.

**Course Number: PGY0183**  
**Occupational Completion Point: C**  
**Portrait Photographer 1 – 250 Hours – SOC Code 27-4021**

10.0 Operate various format cameras--The student will be able to:

10.02 Use 2¼ format cameras.

13.0 Take studio photographs--The student will be able to:

13.01 Take portraits.

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.

**Course Number: PGY0184**  
**Occupational Completion Point: C (Cont.)**  
**Portrait Photographer 2 – 250 Hours – SOC Code 27-4021**

10.0 Operate various format cameras--The student will be able to:

17.02 Use 2¼ format cameras.

13.0 Take studio photographs--The student will be able to:

13.01 Take portraits.

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.

**Course Number: PGY0185**  
**Occupational Completion Point: D**  
**Commercial Photographer – 450 Hours – SOC Code 27-4021**

13.0 Take studio photographs--The student will be able to:

13.02 Take commercial photographs.

14.0 Produce media presentations--The student will be able to:

14.01 Prepare script for slide presentation.

14.02 Shoot slides for slide presentation.

14.03 Produce slide presentation.

14.04 Prepare script for video presentation.

14.05 Shoot video tape.

14.06 Produce 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.

### **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

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

PSAV	
Program Number	I480205
CIP Number	0610030501
Grade Level	30, 31
Standard Length	990 hours
Teacher Certification	PRINTING @7 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	51-5111 – Prepress Technicians and Workers 43-9031 – Desktop Publishers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

**Purpose**

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the 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 initial employment in the Printing and Graphics Communications Industry.

The course content will include but is not limited to the following: Administrative support operations, pre-press/imaging operations, press operations and finishing operations. The course content should also include training in communication leadership, human relations, employability skills; and safe, efficient work practices.

This program also prepares individuals to set up, operate and maintain preparation, printing, binding and finishing equipment used in the Printing and Graphic Communications Industry. Graduates of this program will also be prepared for further specialized training and education in Graphic Arts Technology and other related technologies.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Printing and Graphic Communications Industry; planning, management, finance, technical and product 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 two occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	GRA0020	Digital Publishing Assistant 1	247 hours	51-5022
	GRA0021	Digital Publishing Assistant 2	248 hours	
B	GRA0022	Desktop Publishing Specialist 1	247 hours	43-9031
	GRA0023	Desktop Publishing Specialist 2	248 hours	

## **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 an understanding of safety and first aid practices.
- 02.0 Demonstrate an understanding of graphic communications and processes.
- 03.0 Demonstrate proficiency in art and copy preparation.
- 04.0 Demonstrate proficiency in using image manipulation programs.
- 05.0 Demonstrate proficiency in basic electronic imaging competencies.
- 06.0 Demonstrate proficiency in the use of type and typography.
- 07.0 Demonstrate proficiency in using page layout operations.
- 08.0 Demonstrate proficiency in scanning (image capture) operations.
- 09.0 Demonstrate an understanding of a vector base graphics programs.
- 10.0 Demonstrate proficiency in electronic pre-press operations.
- 11.0 Demonstrate proficiency in using image manipulation programs.
- 12.0 Demonstrate proficiency in advanced operation of digital production printing system.
- 13.0 Demonstrate proficiency in the use of type and typography.
- 14.0 Demonstrate proficiency in using page layout operations.
- 15.0 Demonstrate proficiency in scanning (image capture) operations.
- 16.0 Demonstrate an understanding of a vector base graphics programs.
- 17.0 Demonstrate proficiency in electronic pre-press operations.
- 18.0 Demonstrate proficiency in making and using files in the portable document format (PDF)—The student will be able to:
- 19.0 Demonstrate proficiency in performing basic finishing and distribution competencies.
- 20.0 Demonstrate understanding of color principles as applied to the preparation, production, evaluation, and correction of color printing.
- 21.0 Demonstrate the ability to maintain and troubleshoot normal operating problems on a digital printing system.

Florida Department of Education  
Student Performance Standards

Program Title: Digital Printing Technology  
PSAV Number: I480205

<b>Course Number: GRA0020</b>	
<b>Occupational Completion Point: A</b>	
<b>Digital Publishing Assistant 1 – 247 Hours – SOC Code 51-5022</b>	
01.0	Demonstrate an understanding of safety and first aid practices--The student will be able to:
01.01	Discuss the importance of the Material Safety Data Sheets (MSDS).
01.02	Practice proper safety procedures when operating equipment.
01.03	Pass a general lab safety test.
01.04	Demonstrate acceptable employee health habits.
01.05	Demonstrate knowledge of the "Florida Right-to-Know Law" as recorded in Florida Statutes, Chapter 442.
01.06	Pass a safety test in an individual's specialty area(s).
01.07	Practice approved methods to dispose of waste materials.
01.08	Read, comprehend and follow instructions on warning labels.
01.09	Demonstrate industry standard behaviors when working with others.
01.10	Demonstrate a working knowledge of the safety color code.
02.0	Demonstrate an understanding of graphic communications and processes--The student will be able to:
02.01	Define the role of graphics in the world.
02.02	Identify printing markets and types of printing business.
02.03	List printing's ranking among other industries.
02.04	Identify the major printing processes.
02.05	List the advantages of each major printing process.

02.06	List the disadvantages of each major printing process.
02.07	Identify the products produced by each major printing process.
02.08	List the flow of printing product from initial need to a final product.
02.09	List the technical production flow from idea to a finished product.
02.10	Identify major occupations in the graphic arts.
02.11	List the major responsibilities for each occupation.
02.12	Identify basic salary/wage expectation ranges for local area.
02.13	Explain the various processes used to produce digitally printed material.
02.14	Identify the various function screens on the user interface for a digital production printing system.
03.0	Demonstrate proficiency in art and copy preparation--The student will be able to:
03.01	Prepare comprehensive layouts including a finished working mock-ups.
03.02	Employ the use of printers' measurements to compute inches and fractions, points and picas, decimals, percentages, and proportions.
03.03	Use copy fitting and mark-up procedures to specify type sizes, styles etc.
03.04	Follow a job ticket to program and run standard jobs using a digital production printing system.
03.05	Program and load stock needed for a standard job.
03.06	Demonstrate basic proficiency in the operation of the scanner component of a black and white digital production printing system.
03.07	Demonstrate basic proficiency in the operation of the printer component of a digital production printing system.
03.08	Demonstrate basic proficiency in the operation of the delivery and binding components of a digital production printing system.
04.0	Demonstrate proficiency in using image manipulation programs--The student will be able to:
04.01	Use a variety of paint/edit/selection tools and special effects filters to manipulate digital images.
04.02	Identify industry standards and practices in file image compression, storage, and retrieval.
04.03	Apply image correction and color correction procedures/tools to continuous tone files.
04.04	Control image editing software to incorporate tone reproduction characteristics into continuous tone files.



04.05 Use photo editing software to incorporate output requirements into continuous tone files.

**Course Number: GRA0021**  
**Occupational Completion Point: A**  
**Digital Publishing Assistant 2 – 248 Hours – SOC Code 51-5022**

05.0 Demonstrate proficiency in basic electronic imaging competencies--The student will be able to:

05.01 Read and comprehend production information on a job jacket/ticket.

05.02 Identify the various kinds of items that can be designed and produced using desktop publishing and digital production printing systems.

05.03 Demonstrate understanding of software capabilities.

05.04 Select appropriate software for word processing, graphics, scanning and page layout.

05.05 Organize a file management system for opening, copying, saving and deleting files.

05.06 Demonstrate file management operations for opening, copying, saving and deleting files.

05.07 Prepare a dummy for a multi-page signature.

05.08 Demonstrate an understanding of data exchange.

06.0 Demonstrate proficiency in the use of type and typography--The student will be able to:

06.01 Measure copy/text in points and picas using a line gauge.

06.02 Identify x-height, mean-line, baseline, ascenders, descenders, and their roles in measuring and designing with type.

06.03 Identify caps, lowercase, uppercase, small caps and ligatures.

06.04 Define dingbats, bullets, rules, and symbols and their uses in publications.

06.05 Distinguish between display (headline) type and body (text) type by their point sizes and styles.

06.06 Identify the basic type styles and their uses.

06.07 Define the "weight" and "posture" of type.

06.08 Distinguish between serif and sans serif type styles.

06.09 Define letter spacing and kerning of type characters.

06.10 Define word spacing and the relationship of em and en in paragraph spacing.

06.11	Define line spacing and explain the measurement principles for the leading of text.
06.12	Define the type arrangements: flush left, ragged right, flush right, ragged left, centered, justified, and forced justified.
06.13	Define and demonstrate copy fitting.
07.0	Demonstrate proficiency in using page layout operations--The student will be able to:
07.01	Demonstrate how to markup a copy for production of a printed piece.
07.02	Select appropriate page layout software for a given job.
07.03	Demonstrate functional knowledge of computer commands/codes/menus/palette for the software in use.
07.04	Demonstrate text alignment, element positioning and rules of page design for printed matter.
07.05	Demonstrate a proficiency in conducting basic search operations.
07.06	Place copy from word processing program to a page layout program according to job specifications.
07.07	Proofread, edit and make corrections/adjustment to copy on screen.
07.08	Download fonts.
07.09	Place graphics, rules, and dingbats from an existing file into a publication.
07.10	Demonstrate the procedure for cropping graphics electronically.
07.11	Create a 2-sided, 3-panel brochure using graphics and text for publication.
07.12	Create a 4-page newsletter using windows, blocks, text, graphics, frames and headings.
07.13	Create a 2-page newsletter using drop caps for paragraph openings, wraparound (runaround) and graphics.
07.14	Create a printed piece using tints, reverses and manipulated type for effect.
07.15	Produce a multicolor flyer using electronic spot color separations.
07.16	Demonstrate knowledge of available page layout programs - capabilities, advantage, and disadvantages.
07.17	Use electronic dictionary, spell checker, and automatic hyphenation.
08.0	Demonstrate proficiency in scanning (image capture) operations--The student will be able to:
08.01	Identify scanner hardware and its basic components and operations.

08.02	Identify basic scanner software, its uses and limitations.
08.03	Demonstrate appropriate scanner/program operations for continuous tone copy.
08.04	Place scanned graphics/photos into existing page layout program.
08.05	Use a camera for capturing images intended for print reproduction.
08.06	Clean and prepare prints for final scans.
08.07	Properly handle customer original art.
09.0	Demonstrate an understanding of a vector base graphics programs--The student will be able to:
09.01	Log-on/boot-up vector-based graphics program and demonstrate a functional knowledge of commands/codes/menus/tools and procedures for their uses.
09.02	Draw a design appropriate for a given job using a graphics program.
09.03	Create a design using tints, fills and paint for a given job using a graphics program.
09.04	Create a design using manipulated type (rotated, circled, extended, etc.) for a publication.
09.05	Trace a drawing/photograph using a graphics program.
09.06	Create a design/publication using electronic clip art.
10.0	Demonstrate proficiency in electronic pre-press operations--The student will be able to:
10.01	Define the application of digital photography in electronic imaging.
10.02	Identify and compare digital proofs.
10.03	Demonstrate an understanding of the PostScript page description language.
10.04	Describe the strengths and weaknesses of TIFF, EPS, PICT, JPEG, PNG, GIF, and DCS image formats.
10.05	Use a file compression utility for file transfer or storage.
10.06	Create a single color layout using clip art.
10.07	Create a single color layout using work and turn.
10.08	Change contrast using tint screens and shading techniques.
10.09	Create a logo design and integrate it into a brochure design.

10.10	Produce special effects type using a graphics application.
10.11	Produce a multicolor job that includes scans, text and spot color artwork.
10.12	Prepare page layout files containing graphic images for remote output.
10.13	Follow instructions to produce, modify or output files according to a customer supplied criteria.
10.14	Produce a color scan.
10.15	Use a photo manipulation program to perform basic color correction and basic image cloning.
10.16	Describe the characteristics output devices.
10.17	Configure software and hardware for output to devices.
10.18	Evaluate image (output) quality.
10.19	Submit files to and use network, non-network and remote output devices.
11.0	Demonstrate proficiency in using image manipulation programs--The student will be able to:
11.01	Use a variety of paint/edit/selection tools and special effects filters to manipulate digital images.
11.02	Identify and apply industry standards and practices in file image compression, storage, and retrieval.
11.03	Apply image correction and color correction procedures/tools to continuous tone files.
11.04	Control image editing software to incorporate tone reproduction characteristics into continuous tone files.
11.05	Use photo editing software to incorporate output requirements into continuous tone files.

**Course Number: GRA0022**  
**Occupational Completion Point: B**  
**Desktop Publishing Specialist 1 – 247 Hours – SOC Code 43-9031**

12.0	Demonstrate proficiency in advanced operation of digital production printing system--The student will be able to:
12.01	Use the system interface to adjust image tone reproduction quality.
12.02	Use the system interface to modify page images through the functions of copy, mask, duplicate, delete, move, add, replace, rotate, and overlay images.
12.03	Use the merge library function.
12.04	Program and run a job with tab stock.

12.05	Program and run a job with folded signatures.
12.06	Program and set-up the various in-line finishing and binding options.
12.07	Program and run productivity features including cover sheets, job separator sheets, and the use of saved job tickets.
12.08	Program and run jobs on a digital color printing system.
12.09	Evaluate and adjust color print quality.
12.10	Apply troubleshooting and problem solving strategies on digital printing systems.
13.0	Demonstrate proficiency in the use of type and typography--The student will be able to:
13.01	Identify strategies and software used for font management in desktop publishing.
13.02	Set-up and use font management software.
13.03	Use the type scaling, kerning, tracking, and baseline shift typographic functions.
13.04	Demonstrate the comparative typography weaknesses and strengths of word processing software and page layout software.
13.05	Identify the difference between formatted and unformatted text files.
13.06	Demonstrate the correct use of paragraph and character style definitions in page layout software applications.
14.0	Demonstrate proficiency in using page layout operations--The student will be able to:
14.01	Set up column grids for electronic page layout according to job specifications.
14.02	Set up/select appropriate pagination for a given job.
14.03	Demonstrate the uses of footers and headers.
14.04	Set text with appropriate margins, formatting, gutters, leading, headings etc.
14.05	Define and apply multiple master pages to a long document.
14.06	Merge documents in part or in their entirety.
14.07	Use paths for type and for image clipping.
14.08	Modify and redefine page and document specifications.
14.09	Apply section numbering for long documents.

14.10	Prepare document index page.
14.11	Save document as a various file formats.
14.12	Determine and set preferences for specific document production requirements.
15.0	Demonstrate proficiency in scanning (image capture) operations--The student will be able to:
15.01	Clean and prepare prints and slides for final scans.
15.02	Calculate needed scan resolution.
15.03	Demonstrate how to calculate needed percentage of enlargement/reduction.
15.04	Properly handle customer original art.
15.05	Scan reflection and transmission originals including following customer specifications for cropping, sizing, file formats, and resolution.
15.06	Acquire files from disks.
15.07	Set-up and use Optical Character Recognition (OCR) software to capture text pages and prepare a document for editing in word processing application.
15.08	Locate and download specified files from the WWW/Internet.

<b>Course Number: GRA0023</b>	
<b>Occupational Completion Point: B</b>	
<b>Desktop Publishing Specialist 2 – 248 Hours – SOC Code 43-9031</b>	
16.0	Demonstrate an understanding of a vector base graphics programs--The student will be able to:
16.01	Draw a design appropriate for a given job using a graphics program.
16.02	Create a design using tints, fills and paint for a given job using a graphics program.
16.03	Create a design using manipulated type (rotated, circled, extended, etc.) for a publication.
16.04	Trace a drawing/photograph using a graphics program.
16.05	Organize and use typography, photography and illustration elements to communicate information in print.
17.0	Demonstrate proficiency in electronic pre-press operations--The student will be able to:
17.01	Calibrate a scanner.
17.02	Calibrate a color monitor.

17.03	Follow instructions to produce, modify or output files according to specified production workflow standards.
17.04	Describe the characteristics of output devices.
17.05	Configure software and hardware for output to devices.
17.06	Define data fields and publish contents of a database.
17.07	Submit files to and use: servers; spoolers; queues; and software and hardware RIPs.
18.0	Demonstrate proficiency in making and using files in the portable document format (PDF)--The student will be able to:
18.01	Define the relationship between PostScript and PDF files.
18.02	Identify and define the attributes and advantages of a PDF file.
18.03	Identify and define the uses for the PDF file in the digital printing workflow.
18.04	Identify and define ways to distribute PDF files.
18.05	Make a PDF file from a PostScript file to meet given production specifications.
18.06	Edit, modify, and annotate a PDF file using appropriate software.
18.07	Use the PDF file format to make a multi-purposed document for both digital printing and for interactive media.
18.08	Make a searchable digital catalog of a collection of PDF files.
18.09	Define and apply security and job options to PDF files.
18.10	Organize and embed fonts in a PDF file.
19.0	Demonstrate proficiency in performing basic finishing and distribution competencies--The student will be able to:
19.01	Read and comprehend production information on a job jacket/ticket.
19.02	Apply basic math skills to the binding and distribution operations.
19.03	Prepare folding dummy from press sheet in accordance with job ticket specifications and approved proof.
19.04	Setup and operate folder in accordance with job ticket specifications and folding dummy.
19.05	Apply basic principles of finishing and distribution following folded bound signature impositions to allow for lips, trims and bleeds according to saddle- and side-stitch binding method.
19.06	Define how to use and setup cutters.

19.07	Prepare rule-out of press sheet for finishing operations according to job ticket specifications and approved proof.
19.08	Setup and operate cutter in accordance with rule-out.
19.09	Square substrate.
19.10	Define and identify problems with substrate.
19.11	Define the proper maintenance procedures for paper cutters.
19.12	Define how to change the blade on a paper cutter.
19.13	Select and identify the most commonly used types of paper.
19.14	Demonstrate knowledge of paper types related to their printing, folding and binding characteristics.
19.15	Hand-jog 8 1/2" x 11" substrate.
19.16	Machine-jog substrate.
19.17	Define and identify off-line finishing systems.
19.18	Define the fundamentals of saddle stitching and perfect binding.
19.19	Identify the components of case, spiral, and perfect bound books.
19.20	Estimate the cost of materials and production for performing bindery operations; cutting, scoring, folding, packaging and coating.
19.21	Setup and operate stitcher (side and saddle).
19.22	List the techniques used to control waste production and disposal in a modern bindery.
19.23	Define and identify spiral, comb, and wire binding equipment and supplies.
19.24	Define tipping procedures.
19.25	Perform preventive maintenance on binding and finishing equipment.
19.26	Demonstrate methods of counting substrate (machine, measurement, weight and rapid multiple-sheet manual counting by fives).
19.27	Define collating flat sheets.
19.28	Setup and operate a paper drill for standard loose-leaf binder.
19.29	Define and identify packaging and shrink-wrapping equipment.



19.30	Demonstrate how to package and identify completed job according to job specifications.
20.0	Demonstrate understanding of color principles as applied to the preparation, production, evaluation, and correction of color printing–The student will be able to:
20.01	Describe the concepts of color theory and color temperature.
20.02	Describe factors affecting the perception and recognition of color.
20.03	Identify and apply industry standard criteria to the evaluation of color in imaging and publishing.
20.04	Describe and identify the components and processes of color publishing systems.
20.05	Evaluate and color correct the quality of color publishing images.
20.06	Identify and describe models used to specify color.
20.07	Describe and identify color output devices of digital imaging systems.
20.08	Evaluate the quality of digital imaging color output devices.
20.09	Identify and describe the purposes of a Color Management System.
21.0	Demonstrate the ability to maintain and troubleshoot normal operating problems on a digital printing system–The student will be able to:
21.01	Perform the preventive maintenance procedures for cleaning sensors, camming motor, and binder.
21.02	Adjust paper path to handle various papers.
21.03	Determine source of machine-based print problems and to apply corrections strategies for which training has been given.
21.04	Determine when to appropriately contact vendor technical support.

## **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

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

**PSAV**

Program Number	K100100
CIP Number	0650060211
Grade Level	30, 31
Standard Length	1050 hours
Teacher Certification	TV PRO TEC @7 G TEC ED 1 @ 2
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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

**Purpose**

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

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 the history of cinema, photo editing software, production writing and management, art direction, lighting, cinematography, audio production, post production and stereography.

**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.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Course Length	SOC Code
A	FIL0085	Video Production Manager	300 hours	27-2012
B	FIL0086	Grip and Lighting Technician	150 hours	27-4011
C	FIL0087	Motion Picture Projectionists/Digital Cinematographer	300 hours	27-4031
D	FIL0088	Digital Video Editor	150 hours	27-4032
E	FIL0089	Visual Effects Artist	150 hours	27-2012

## **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 it applies 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 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

Program Title: Digital Cinema Production  
PSAV Number: K100100

<b>Course Number: FIL0085</b>	
<b>Occupational Completion Point: A</b>	
<b>Video Production Manager – 300 Hours – SOC Code 27-1012</b>	
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.
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 it applies to creative assets--The student will be able to:
03.01	Understand the limits and expectations of copyright protection.
03.02	Understand the use 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 difference 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 file formats and storage options.
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 Photoshop.
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.
07.0	Demonstrate knowledge of production management--The student will be able to:
07.01	Demonstrate ability to breakdown 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	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.
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 and understanding of character profiles.
09.02	Demonstrate the ability to develop character resumes/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 the art direction.
10.05	Break down a script into the various camera shots and character action.
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 side (storyboard thumbnail pages).
11.0	Demonstrate knowledge of funding presentations and pitches--The student will be able to:
11.01	Understand the ecosystem associated with product distribution.
11.02	Identify the job titles and roles of the distributors.
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.

<b>Course Number: FIL0086</b>	
<b>Occupational Completion Point: B</b>	
<b>Grip and Lighting Technician – 150 Hours – SOC Code 27-4011</b>	
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.
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 principal.
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.
15.03	Demonstrate understanding of Ohm's Law.
15.04	Demonstrate use of circuit protection.
15.05	Understand types of distribution circuits (Direct Current, 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 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.
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, 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.

**Course Number: FIL0087**  
**Occupational Completion Point: C**  
**Motion Picture Projectionists/Digital Cinematographer – 300 Hours – SOC Code 27-4031**

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 the camera (shutter, f/stops, lenses, etc.)

22.02 Analyze the aesthetic needs of a shot and accomplish them by using standard industry equipment

22.03 Analyze production requirements to determine camera equipment needs

22.04 Understand the difference between zoom and prime lenses and what lens speeds' are.

22.05 Program and use a light meter 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, preventative and repair maintenance on video equipment.

22.10 Define various recording formats and media.



22.11	Define appropriate digital compression and signal (file) types.
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 motion picture soundtrack.
24.02	Record dialogue replacement lines.
24.03	Record live sound effects.
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, 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.
25.08	Demonstrate understanding of the proper use of microphones.
25.09	Demonstrate knowledge of audio codecs and media.
25.10	Understand the history of Foley and sound effects production.

25.11 Demonstrate the ability to record location sounds.

**Course Number: FIL0088**  
**Occupational Completion Point: D**  
**Digital Video Editor – 150 Hours – SOC Code 27-4032**

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 (including continuity, screen direction, and transitions).

26.03 Sync dailies – Synchronize 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 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.

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 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 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 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 element to picture element.
28.13	Demonstrate basic sound editing skills.
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 & 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.

**Course Number: FIL0089**  
**Occupational Completion Point: E**  
**Visual Effects Artist – 150 Hours – SOC Code 27-2012**

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:

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 and 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.

### **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9 and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Digital Media/Multimedia Design  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts, A/V Technology and Communication

**PSAV**

Program Number	K100200
CIP Number	0609070208
Grade Level	30, 31
Standard Length	1050 hours
Teacher Certification	BUS ED 1 @2 VOE @7 SECRETAR 7 G TEC ELEC @7 COMPU SCI 6 COMM ART @7 7G TV PRO TEC @7 7G TEC ED 1 @2 PRINTING @7 7G DIGI MEDIA 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1014 – Multimedia Artists and Animators
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 10 Language: 10 Reading: 10

**Purpose**

The purpose of this program is to prepare students for careers 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 Web page design, 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.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	DIG0081	Theory and Foundations of Design	150 hours	27-1014
B	DIG0082	Multimedia Digital/Print Designer	300 hours	27-1014
C	DIG0083	Multimedia Web Interactive Designer	300 hours	27-1014
D	DIG0084	Multimedia Integrated Producer Designer	300 hours	27-1014

## **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 proficiency in using illustration software.
- 04.0 Demonstrate knowledge of digital still photography.
- 05.0 Demonstrate knowledge of photo editing software.
- 06.0 Demonstrate proficiency in advanced design.
- 07.0 Demonstrate understanding of color modes.
- 08.0 Demonstrate proficiency in using fonts for advance design.
- 09.0 Demonstrate knowledge of design layout software.
- 10.0 Demonstrate proficiency in Web page design applicable to the WWW.
- 11.0 Demonstrate understanding of HTML and CSS.
- 12.0 Demonstrate proficiency in authoring software for Web page design.
- 13.0 Demonstrate proficiency in animated Web page design applicable to the WWW.
- 14.0 Demonstrate understanding of Action Scripts.
- 15.0 Demonstrate proficiency in animation design software for Web page design, interactive presentation and banners for WWW.
- 16.0 Demonstrate proficiency in using presentation software and equipment to produce a complex presentation.
- 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 obtain personal and professional goals.

Florida Department of Education  
Student Performance Standards

Program Title: Digital Media/Multimedia Design  
PSAV Number: K100200

**Course Number: DIG0081**  
**Occupational Completion Point: A**  
**Theory and Foundations of Design – 150 Hours – SOC Code 27-1014**

01.0	Demonstrate knowledge of presentation production issues--The student will be able to:
01.01	Identify characteristics of design of digital media (print, web, animation, and video, audio).
01.02	Identify presentation materials (slides, handouts) and presentation marketing mediums (social media, print media, newspaper, billboards, posters, magazines, television, movies, computer presentations, interactive CD ROM, kiosks, Web pages).
01.03	Identify design characteristics (fonts, size, color modes, backgrounds) that are suited for each type of design format and material.
01.04	Demonstrate knowledge of copyright laws including copyright statute, disclaimers, and filing procedures.
01.05	Research and identify job titles and skills needed for career positions in multimedia design.
01.06	Demonstrate understanding of multimedia file formats (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).
01.07	Demonstrate knowledge of presentation vocabulary and terms.
02.0	Demonstrate basic computer knowledge--The student will be able to:
02.01	Identify basic computer components (CPU, monitor, and keyboard).
02.02	Demonstrate understanding of computer specifications.
02.03	Demonstrate best practices of computer safety and ergonomics.
02.04	Demonstrate use of computer operating systems.
02.05	Perform software installation, setup and updates.
02.06	Perform peripheral device installation and setup (printer, scanner).
02.07	Demonstrate use of internal and external drives/storage and data backup.
02.08	Identify possible software and hardware malfunctions.

02.09	Identify characteristics of software for (print, photography, web, animation, video and audio).
03.0	Demonstrate proficiency in using illustration software–The student will be able to:
03.01	Evaluate industry standard illustration software packages.
03.02	Identify characteristics of vector and bitmap images.
03.03	Demonstrate understanding of the software workspace (menus/palettes).
03.04	Demonstrate software navigation (views, tabs, zoom).
03.05	Demonstrate use of drawing tools to create, combine and edit basic shapes.
03.06	Demonstrate ability to transform content(scale, rotation, position)
03.07	Demonstrate use of pen and pencil tools to draw/edit straight and curved paths.
03.08	Demonstrate use of color and painting tools (patterns, gradients, color palettes).
03.09	Demonstrate ability to work with type (formatting, font palette, paths).
03.10	Demonstrate use of layers (creating, locking, viewing, and pasting, merging).
03.11	Demonstrate use of blending (gradients, objects).
03.12	Demonstrate use of brushes.
03.13	Explore file exporting options and round trips workflows with page layout software.
03.14	Demonstrate knowledge of bleed for vector and bitmap design software.
03.15	Demonstrate knowledge of bleed for vector and image editor authoring software.
03.16	Demonstrate knowledge of digital photography (F-stop, speed, ISO, flash, light control, exposure, etc.)
03.17	Demonstrate knowledge of digital photography composition.
03.18	Create a photography portfolio that includes: portraits, landscape, etc., in studio and out.
04.0	Demonstrate knowledge of digital still photography--The student will be able to:
04.01	Demonstrate knowledge of digital camera types and uses.
04.02	Demonstrate knowledge of digital photography composition.

04.03	Demonstrate knowledge of digital camera support (tripod, grips, holds).
04.04	Identify parts of a digital camera (lens, sensor, battery).
04.05	Understand digital camera menus and navigation.
04.06	Demonstrate knowledge of auto modes and settings (F-stops, speed, ISO).
04.07	Demonstrate knowledge of manual modes and settings (F-stops, speed, ISO).
04.08	Demonstrate understanding of white balance and lighting.
04.09	Demonstrate proper care, use, and storage of digital cameras.
04.10	Create a photography portfolio that includes: portraits and landscapes for studio and field settings.
05.0	Demonstrate knowledge of photo editing software--The student will be able to:
05.01	Demonstrate understanding file formats and storage options.
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 transforms 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 ability to import, paint and export 3D objects.
05.14	Demonstrate the basic use of video in Photoshop.

**Course Number: DIG0082**  
**Occupational Completion Point: B**  
**Multimedia Digital/Print Designer – 300 Hours – SOC Code 27-1014**

06.0 Demonstrate proficiency in advanced design–The student will be able to:

06.01 Demonstrate knowledge of advanced design.

06.02 Identify design strategies to reach the audience

06.03 Use storyboarding to plan a design.

06.04 Create formal or informal design layouts using (guidelines, colors, fonts, graphics, logos, etc.)

06.05 Demonstrate use of authoring software (vector, image editor, and layout) integration.

06.06 Identify compatibility formats (extensions) for authoring software integration.

07.0 Demonstrate understanding color modes–The student will be able to:

07.01 Demonstrate knowledge of the color process for printing purposes.

07.02 Demonstrate knowledge of color conversion from display to print.

07.03 Demonstrate knowledge of spot colors

07.04 Demonstrate knowledge of Web safe color

07.05 Explain color modes differences

07.06 Understand accessing color modes from authoring software.

08.0 Demonstrate proficiency in using fonts for advanced design–The student will be able to:

08.01 Identify serif and sans-serif fonts.

08.02 Demonstrate knowledge of conversion of fonts to outlines.

08.03 Understand the proprietary copyrights of fonts.

08.04 Demonstrate knowledge of standard font formats (TrueType, Postscript, Open Type, etc.)

08.05 Design and develop a print portfolio that includes: business cards, posters, billboards, magazines, brochures, etc.

09.0 Demonstrate knowledge of design layout software--The student will be able to:

09.01 Demonstrate understanding file formats and storage options.

09.02	Identify parts of the software interface. (menus/panels)
09.03	Demonstrate ability to customize and navigate the workspace.
09.04	Demonstrate understanding of pre-fighting.
09.05	Work with styles, graphics and objects in a design.
09.06	Setup a document and manage pages within document (add/delete/edit: master pages, sections).
09.07	Demonstrate use of layers, text frames and graphic frames.
09.08	Demonstrate ability to align, transform and group objects.
09.09	Understand typography and text editing.
09.10	Demonstrate understanding of color (applying, gradients, tint, spot, and management).
09.11	Import and modify graphics (links, vector/bitmap images, quality, alpha channels).
09.12	Understand output and exporting functions (proofs, separations, prepress).

**Course Number: DIG0083**  
**Occupational Completion Point: C**  
**Multimedia Web Interactive Designer – 300 Hours – SOC Code 27-1014**

10.0	Demonstrate proficiency in Web page design applicable to the WWW–The student will be able to:
10.01	Determine the objectives and the audience for Web pages.
10.02	Identify design strategies to reach and keep an audience
10.03	Use storyboarding to plan a Web site.
10.04	Create styles and other design elements (e.g. backgrounds, colors, fonts, buttons, etc.)
11.0	Demonstrate understanding of HTML and CSS–The student will be able to:
11.01	Interpret HTML coding on an existing Web page.
11.02	Interpret HTML commands to write a Web page.
11.03	Understanding of CSS style sheets on an existing Web page.
12.0	Demonstrate proficiency in authoring software for Web page design–The student will be able to:



12.01	Demonstrate understanding of photograph compression factors such as transmission speed, color reduction, and browser support.
12.02	Save and export a photograph to the Web in the format best for image quality and file size.
12.03	Demonstrate knowledge of image formats related to photos and graphics on the Internet (e.g., Web formats: JPEG, GIF, PNG, etc.)
12.04	Demonstrate understanding of pixels for Web design.
12.05	Create Web pages for publication.
12.06	Apply style sheets for consistent Web site design.
12.07	Format text for Web pages (e.g., font families, sizes).
12.08	Create and edit images, photographs for Web pages using digital imaging software.
12.09	Insert created buttons into a Web page and test for accuracy.
12.10	Create navigational links.
12.11	Insert audio files into a Web page.
12.12	Create, edit and integrate video files into a Web page.
12.13	Create, edit and integrate animation files into a Web page.
12.14	Create Meta commands and key words for search engines.
12.15	Optimize page size for effective downloading to browsers.
12.16	Create and incorporate a form in a Web page.
12.17	Edit and test links for accuracy and validity.
12.18	Create several Web pages for portfolio.
13.0	Demonstrate proficiency in animated Web page design applicable to the WWW–The student will be able to:
13.01	Determine the objectives and the audience for interactive animated Web pages.
13.02	Identify design strategies to reach and keep an audience
13.03	Use storyboarding to plan an interactive animated web site.
13.04	Demonstrate understanding of correct use of authoring design software to create Web pages layouts that will be animated for the WWW.

13.05	Demonstrate understanding of pixel for animated Web pages, interactive presentations, banners, etc.
13.06	Save and export (photograph, graphics, etc.) to the Web in the format best for image quality and file size.
14.0	Demonstrate understanding of Action Scripts–The student will be able to:
14.01	Interpret Action Scripts on an existing Flash Web pages.
14.02	Understand the use of Action Scripts for Flash Web pages.
15.0	Demonstrate proficiency in interactive design software for Web page design, interactive presentation and banners for WWW–The student will be able to:
15.01	Demonstrate knowledge of image formats related to photos and graphics on the Internet (e.g. Web formats (JPEG, GIF, PNG), etc.
15.02	Optimize page size for effective downloading to browser.
15.03	Using Action Script create an interactive Web page, interactive presentation, Web banner for publication.
15.04	Demonstrate knowledge of timeline, scenes, etc.
15.05	Insert audio files into interactive Web pages, interactive presentations and Web banners files.
15.06	Integrate video files into an interactive Web pages, interactive presentations, and Web banners.

**Course Number: DIG0084**

**Occupational Completion Point: D**

**Multimedia Integrated Producer Designer – 300 Hours – SOC Code 27-1014**

16.0	Demonstrate proficiency in using presentation software and equipment to produce a complex presentation–The student will be able to:
16.01	Using authoring editing software, create a multimedia presentation that incorporates graphics, shot and edited video, animation, music, narration and adheres to good design principles.
16.02	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, videographer, interface designers/programmers, etc.)
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 (NLEs).
17.02	Identify components of non-linear video editing equipment.
17.03	Set-up non-linear video editing equipment.
17.04	Compare offline to “real time” video editing.

17.05	Use storyboarding to plan a short nonlinear video project that includes existing video footage with a title, transitions, background sound, voice-over, animation, and rolling credits.
17.06	Create and edit a movie using video editing software that includes video footage with a title, transitions, background sound, voice-over, and rolling credits and output to video.
17.07	Collaborate with team members to plan, edit, and shoot video footage utilizing advanced video editing techniques and output to video.
17.08	Discuss the use of batch processing and project trimming.
17.09	Plan, create, edit and present a short nonlinear QuickTime movie with title, transitions, sub and virtual clips, sound, background music, voice-over, and credits.
18.0	Develop proficiency in using authoring software–The student will be able to:
18.01	Plan interactive projects for use in a kiosk, CD, DVD, E-merchandizing, computer-based presentation or training or corporate presentation
18.02	Use authoring software to create an interactive project for use in a kiosk, CD, DVD, merchandizing application, computer-based training or corporate presentation.
18.03	Have the created interactive project evaluated and tested by users and make modifications to improve the project.
18.04	Collaborate with team members to plan, edit, evaluate, and present a multimedia interactive presentation or product.
19.0	Demonstrate proficiency using all media to create an advertising campaign–The student will be able to:
19.01	Using authoring software plans, create an advertising campaign that includes: collateral materials, digital photography, Web page, animation, video, 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 obtain personal and professional goals–The student will be able to:
21.01	Create a digital resume and print it.
21.02	Create a digital portfolio and publish it on the WWW.
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.

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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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 10, Language 10, and Reading 10. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

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

PSAV	
Program Number	K100300
CIP Number	0650060502
Grade Level	30, 31
Standard Length	1050 hours
Teacher Certification	PHOTOG @7 G
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4021 – Photographers 27-4032 – Film and Video editors
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading 9

**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 four occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Course Length	SOC Code
A	PGY0190	Photographic Specialist	150 hours	27-4021
B	PGY0191	Photography Technician	300 hours	27-4021
C	PGY0192	Studio Photographer	300 hours	27-4032
D	PGY0193	Digital Photographer	300 hours	27-4021

## **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 it 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

Program Title: Digital Photography Technology  
PSAV Number: K100300

**Course Number: PGY0190  
Occupational Completion Point: A  
Photography Specialist – 150 Hours – SOC Code 27-1019**

01.0	Demonstrate understanding of the history of photography--The student will be able to:
01.01	Demonstrate knowledge 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 art.
01.05	Show 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:
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 the photographic medium such as photojournalism, fine art, event, family portrait, fashion, sports, magazine and product.
02.05	Identify the interrelationships between artists.
02.06	Use basic communication concepts such as verbal, memos, paperwork and 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 it applies to creative assets--The student will be able to:
03.01	Examine the limits and expectations of copyright protection.
03.02	Analyze the rights 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 such as lens, battery, flash, shutter and 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 such as power, date/ time and menu navigation.
04.06	Set image format and size.
04.07	Use camera auto, program and scene modes.
04.08	Use camera viewfinder and LCD displays for image review.
04.09	Use basic lens control such as 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 handholds of camera in portrait and landscape.
05.02	Identify basic components of a tripod (head, sticks and 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.
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 including menus and palettes.

07.04	Import photographs from various media sources such as 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 including white balance, color, tone and crop.
07.09	Export images to disk or photo editing software.
07.10	Create and upload web gallery to online photo sharing sites.

<b>Course Number: PGY0191</b>	
<b>Occupational Completion Point: B</b>	
<b>Photographic Technician – 300 Hours – SOC Code 27-4021</b>	
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.
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 the art direction for use in production.
09.06	Perform the 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 difference 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 and cards).
10.09	Perform storage management operations (project/ file).
10.10	Demonstrate knowledge of computer maintenance.
10.11	Troubleshoot computer hardware and software issues.
11.0	Use photo editing software--The student will be able to:
11.01	Identify the computer requirements for photographic software.
11.02	Demonstrate understanding 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 software and file backup plan.
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.
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 use 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.
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, 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 and black and white images.
14.10	Analyze color prints for correct color and contrast.



14.11 Mount, mat and frame photographs.

**Course Number: PGY0192**  
**Occupational Completion Point: C**  
**Studio Photographer – 300 Hours – SOC Code 27-4032**

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 for 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.

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 such as 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.
16.16	Demonstrate use of stabilization rigs.
16.17	Transfer footage to content management software.
17.0	Demonstrate knowledge of video software--The student will be able to:
17.01	Demonstrate understanding 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 file and video 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.
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 relation skills.
18.03	Understand the photography industry's various market sectors including events, family portrait, public relations, product/studio, fashion, catalog, magazine and 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.
18.09	Research online portfolio sites.
18.10	Develop effective advertising.

<b>Course Number: PGY0193</b>	
<b>Occupational Completion Point: D</b>	
<b>Digital Photographer – 300 Hours – SOC Code 27-1021</b>	
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 mirror-less 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).
20.05	Configure camera for HDR photography.
20.06	Acquire HDR image.
20.07	Process and create HDR image 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.
21.0	Develop a professional portfolio of work--The student will be able to:
21.01	Identify elements of a professional portfolio and resume.
21.02	Examine and determine student work to include in a portfolio and resume.
21.03	Gather cohesive photographs and information to include into portfolio and resume.
21.04	Explore the use of internet websites for portfolio distribution.
21.05	Determine the format for portfolio and resume.
21.06	Research local galleries for portfolio exhibition.
21.07	Produce resume 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.

### **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

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Florida Department of Education  
Curriculum Framework

**Program Title:** Stage Production  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts A/V Technology and Communication

**PSAV**

Program Number	K200200
CIP Number	0647010305
Grade Level	30,31
Standard Length	300 Hours
Teacher Certification	TEC ED 1@2 ELECTRICAL @7 7G BLDG CONST @7 7G TEC CONSTR @7 7G
CTSO	SkillsUSA
SOC Codes (all applicable)	27- 4011 Audio/Video Equipment Technicians 47- 3019 Helpers, Construction Trades, All Other
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	N/A

**Purpose**

The purpose of this program is to prepare students for work in stage production.

This program offers a course 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 and; 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 two occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	TPA0390	Stage Production Assistant	150 Hours	47- 3019
B	TPA0391	Stage Production Technician	150 Hours	27- 4011



## **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 and use appropriate theater terminology and language.
- 02.0 Demonstrate appropriate understanding of basic science.
- 03.0 Demonstrate appropriate math skills.
- 04.0 Demonstrate appropriate communication skills.
- 05.0 Demonstrate an understanding of Ohm's Law.
- 06.0 Demonstrate safe work practices.
- 07.0 Demonstrate proficiency in forklift operation, crane safety, rigging, fall protection, scaffolding and aerial lifts.
- 08.0 Perform the duties of a stage hand.
- 09.0 Maintain stage, lighting, sound, and shop equipment.
- 10.0 Install sound equipment for performance.
- 11.0 Hang circuit and focus stage lights to the specifications required in a lighting design.
- 12.0 Perform the duties of a light board operator and follow spot operator.
- 13.0 Install and operate AV/Multimedia presentation equipment.
- 14.0 Demonstrate employability skills.
- 15.0 Demonstrate an understanding of entrepreneurship.
- 16.0 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 Production  
PSAV Number: K200200

<b>Course Number: TPA0390</b>	
<b>Occupational Completion Point: A</b>	
<b>Stage Production Assistant – 150 Hours – SOC Code 47- 3019</b>	
01.0	Understand and use appropriate theater terminology and language—The student will be able to:
01.01	Define stage directions, US, DS, CS, strike, loadin, flyout.
01.02	Define stage proscenium, arena, and amphitheater.
01.03	Identify the different types of light fixtures by proper names.
01.04	Identify the working areas of the stage.
02.0	Demonstrate appropriate understanding of basic science--The student will be able to:
02.01	Understand molecular action as a result of temperature extremes, chemical reaction, and moisture content.
02.02	Draw conclusions or make inferences from data.
02.03	Identify health related problems that may result from exposure to work related chemicals and hazardous materials, and know the proper precautions required for handling such materials.
02.04	Understand pressure measurement in terms of PSI, inches of mercury, and KPA.
02.05	Identify the components that make electro-motive force.
03.0	Demonstrate appropriate math skills--The student will be able to:
03.01	Solve problems for volume, weight, area, circumference and perimeter measurements for rectangles, squares, and cylinders.
03.02	Measure tolerance(s) on horizontal and vertical surfaces using millimeters, centimeters, feet and inches.
03.03	Add, subtract, multiply and divide using fractions, decimals, and whole numbers.
03.04	Demonstrate an understanding of federal, state and local taxes and their computation.
04.0	Demonstrate appropriate communication skills--The student will be able to:

04.01	Write logical and understandable statements or phrases to accurately fill out forms/invoices commonly used in business and industry.
04.02	Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area.
04.03	Read and follow written and oral instructions.
04.04	Answer and ask questions coherently and concisely.
04.05	Read critically by recognizing assumptions and implications and by evaluating ideas.
05.0	Demonstrate an understanding of Ohm's Law--The student will be able to:
05.01	Calculate electrical circuits for voltage, amperage and resistance.
05.02	Calculate electrical circuits for wattage.
05.03	Determine the voltage drop of a circuit in a single phase and three phase system.
06.0	Demonstrate safe work practices--The student will be able to:
06.01	Identify safety rules for stage and shop equipment.
06.02	Identify health and environmental hazards of materials used in stage production.
06.03	Select and use the appropriate protective clothing and equipment when working in a shop or stage environment.
06.04	Use shop and stage equipment in accordance with both manufacturer and industry safety standards.
06.05	Identify and correct unsafe work practices.
06.06	Understand the national electric code requirements for grounding and ground fault protection.
06.07	Describe "Right-to-Know" Law as recorded in (29 CFR-1910.1200).
07.0	Demonstrate proficiency in forklift operation, crane safety, rigging, fall protection, scaffolding and aerial lifts--The student will be able to:
07.01	Operate a forklift safely using proper lifting techniques.
07.02	Understand the proper signals for crane operation.
07.03	Connect rigging to loads by using proper knot configurations.
07.04	Know the correct procedure for the use of personal protective equipment and when to apply the procedures.
07.05	Operate a chain hoist and electrical wench.

08.0	Perform the duties of a stage hand--The student will be able to:
08.01	Operate equipment commonly found in performance venues.
08.02	Use hand and power tools commonly found in scene shops.
08.03	Determine methods for scenery repair within a limited time frame.
08.04	Perform all duties in a disciplined manner as required by the demands of performance.
08.05	Install and operate special effects such as fog, pyrotechnics and automated devices.
08.06	Assume crew chief responsibilities.

**Course Number: TPA0391**  
**Occupational Completion Point: B**  
**Stage Production Assistant – 150 Hours – SOC Code 27- 4011**

09.0	Maintain stage lighting, sound and shop equipment--The student will be able to:
09.01	Calibrate and operate test equipment through all modes of operation as necessary for the maintenance of systems.
09.02	Locate malfunctions using applicable diagnostic methods.
09.03	Read and understand technical manuals.
09.04	Record and maintain documentation on equipment including manufacturer's warranties and parts inventories.
09.05	Troubleshoot electrical circuits by using multi-meters.
10.0	Install sound equipment for performance--The student will be able to:
10.01	Identify sound equipment used in productions.
10.02	Assemble various components under direction of an audio engineer.
10.03	Install a sound system resulting in optimal performance and safety of the equipment.
11.0	Hang circuit and focus stage lights to the specifications required in a lighting design--The student will be able to:
11.01	Read a standard lighting plot.
11.02	Read a standard instrument schedule.
11.03	Identify stage lighting equipment.

11.04	Hang and circuit lights for a stage production.
11.05	Focus lights for a stage production.
11.06	Hang and set control parameters for intelligent lighting fixtures.
11.07	Calculate the number of fixtures allowed on a circuit.
11.08	Draft working drawings when given a ground plan and designer's elevations.
12.0	Perform the duties of a light board operator and follow spot operator--The student will be able to:
12.01	Make and read a lighting cue sheet.
12.02	Program and execute cues on a computerized lighting console in both rehearsal and performance.
12.03	Execute cues for intelligent lighting.
12.04	Execute cues using a follow spot in rehearsal and performance.
13.0	Install and operate AV/Multimedia presentation equipment--The student will be able to:
13.01	Set up and operate basic video production equipment including camcorders, studio cameras, video monitors, video decks, switchers and video DAs.
13.02	Set up and operate a basic 35 mm slide presentation in both single and multi-projector configurations.
13.03	Set up and operate a variety of video projection systems.
13.04	Install and operate data projection equipment.
13.05	Determine layout for an AV show including screen and equipment location.
13.06	Select and install appropriate cable and interfaces for AV set up.
13.07	Perform basic troubleshooting on AV systems.
14.0	Demonstrate employability skills--The student will be able to:
14.01	Conduct a job search.
14.02	Secure information about a job.
14.03	Identify documents that may be required when applying for a job interview.
14.04	Complete a job application form correctly.

14.05	Demonstrate competence in job interview techniques.
14.06	Develop a resume.
14.07	Identify or demonstrate appropriate responses to criticism from employer, supervisor or other employees.
14.08	Identify acceptable work habits.
14.09	Demonstrate knowledge of how to make job changes appropriately.
14.10	Demonstrate acceptable employee health habits.
15.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
15.01	Define entrepreneurship.
15.02	Describe the importance of entrepreneurship to the American economy.
15.03	List the advantages and disadvantages of business ownership.
15.04	Identify the risks involved in ownership of a business.
15.05	Identify the necessary personal characteristics of a successful entrepreneur.
15.06	Identify the business skills needed to operate a small business efficiently and effectively.
16.0	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:
16.01	Perform as a member of a technical team within the framework of an organized production.
16.02	Schedule job assignments in order to meet production deadlines.
16.03	Apply accepted principles of theater technology to production situations.
16.04	Adapt learned skills and generate new approaches in order 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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **Cooperative Training – OJT**

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

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>



**Florida Department of Education  
Curriculum Framework**

**Program Title:** Fashion Technology and Production Services  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts, A/V Technology and Communication

PSAV	
Program Number	K500100
CIP Number	0650040701
Grade Level	30, 31
Standard Length	750 hours primary, 1050 hours secondary
Teacher Certification	TAILORING 7 G TECH ED 1@2 APPRL MFG @7 7G FAM CON SC 1
CTSO	FCCLA
SOC Codes (all applicable)	51-6052 – Tailors, Dressmakers, and Custom Sewers 51-6031 – Sewing Machine Operators 51-6092 - Fabric and Apparel Patternmakers
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 10 Language: 10 Reading: 10

**Purpose**

The purpose of this program is to prepare students for careers in fashion technology and production services. This includes occupations in alterations, tailoring, formalwear, costuming, accessories, embroidering and patternmaking.

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 industrial sewing; entrepreneurship; alterations; the design and construction of menswear, formalwear, costumes, accessories; embroidering and patternmaking.

**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 (OCP). OCP A is comprised of three core courses. Students are considered program completers after finishing OCP A **and** one additional OCP of their choosing.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	CTE0000	Garment Fabrication Specialist	150 hours	51-6031
	CTE0001	Industrial Seamstress	150 hours	
	CTE0002	Introduction to Patternmaking and Entrepreneurship	150 hours	
B	CTE0003	Alterations Specialist	300 hours	51-6052
	CTE0004	<b>AND</b> Tailor for Menswear	300 hours	
	CTE0005	<b>OR</b> Formalwear Specialist	300 hours	
C	CTE0006	Costume Specialist	300 hours	51-6052
	CTE0007	<b>OR</b> Accessories Specialist	300 hours	
	CTE0008	<b>OR</b> Intimate Apparel Specialist	300 hours	
D	CTE0010	Embroiderer	300 hours	51-6092
	CTE0011	Embroidery Digitizer	300 hours	
E	CTE0012	CAD Patternmaker I	300 hours	51-6092
	CTE0013	CAD Patternmaker II	300 hours	

## **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 Select, use and care for tools, equipment and supplies safely.
- 02.0 Identify fiber and textile characteristics.
- 03.0 Set up, operate and maintain a conventional sewing machine.
- 04.0 Set up, operate and maintain a conventional serger.
- 05.0 Take measurements and select patterns based on body type.
- 06.0 Demonstrate simple construction techniques.
- 07.0 Set up, operate safely, maintain and adjust industrial sewing machines.
- 08.0 Create a quality work sample from each industrial machine.
- 09.0 Demonstrate garment construction skills on an industrial machine.
- 10.0 Demonstrate an understanding of the terminology used in the apparel industry.
- 11.0 Identify employment opportunities.
- 12.0 Schedule and participate in industry job shadowing that relates to available specialties (optional).
- 13.0 Identify and exhibit employment skills for occupations related to Fashion Technology and Production Services.
- 14.0 Research the effect of culture on the clothing industry throughout history.
- 15.0 Finalize a portfolio per industry standards.
- 16.0 Navigate computer-aided drafting (CAD) patternmaking software.
- 17.0 Demonstrate basic pattern-making skills.
- 18.0 Manipulate darts.
- 19.0 Understand the differences between childrenswear and adult clothing.
- 20.0 Demonstrate knowledge of technology in the apparel and textile industry.
- 21.0 Describe and explain the elements and principles of design related to Fashion Technology and Production Services.
- 22.0 Demonstrate leadership and organizational skills.
- 23.0 Demonstrate an understanding of entrepreneurship.
- 24.0 Identify and develop business plan (optional).
- 25.0 Use terminology related to alterations and fittings.
- 26.0 Fit a custom garment accurately.
- 27.0 Alter a sample or garment.
- 28.0 Repair a clothing garment or sample.
- 29.0 Exhibit positive customer service skills.
- 30.0 Alter fine/tailored clothing using samples or garments.
- 31.0 Demonstrate clothing repair for fine/tailored clothing.
- 32.0 Create and manage an alterations business (optional).
- 33.0 Demonstrate an understanding of proper fit of menswear.
- 34.0 Construct garments and accessories for men's apparel.
- 35.0 Embroider a monogram on men's clothing.
- 36.0 Construct a speed tailored jacket.
- 37.0 Construct a tailored jacket.

- 38.0 Identify and define terminology related to bridal gowns and formalwear.
- 39.0 Demonstrate management and customer service skills related to formalwear.
- 40.0 Construct formal dresses.
- 41.0 Construct bridal headpieces and accessories.
- 42.0 Construct bridal gown.
- 43.0 Construct simple stretch garments.
- 44.0 Construct advanced stretch garments.
- 45.0 Demonstrate costume construction skills.
- 46.0 Construct costumes of various types.
- 47.0 Navigate workspace of embroidery software.
- 48.0 Digitize various types of text using embroidery software.
- 49.0 Digitize basic appliqués and patches.
- 50.0 Embroider patches.
- 51.0 Construct simple headwear.
- 52.0 Construct simple accessories bags.
- 53.0 Construct complex accessories.
- 54.0 Construct various hats.
- 55.0 Construct costume accessories.
- 56.0 Construct specialty accessories.
- 57.0 Identify and define terminology related to intimate apparel and shapewear.
- 58.0 Construct basic lingerie garments for women.
- 59.0 Embroider a monogram on lingerie.
- 60.0 Construct basic undergarments for men.
- 61.0 Construct various bras.
- 62.0 Construct various fitted undergarments with stretch.
- 63.0 Construct a functioning corset.
- 64.0 Select, use and care for embroidery tools, equipment and supplies safely.
- 65.0 Set up, operate and maintain a conventional embroidery machine.
- 66.0 Demonstrate simple embroidery techniques.
- 67.0 Set up, operate and maintain a multi-needle embroidery machine.
- 68.0 Demonstrate advanced embroidery techniques.
- 69.0 Navigate workspace of embroidery software.
- 70.0 Using embroidery software to digitize various types of text.
- 71.0 Use embroidery software to edit designs.
- 72.0 Use illustration software for embroidery projects.
- 73.0 Embroider a design from a digitized file.
- 74.0 Manipulate basic embroidery stitches.
- 75.0 Edit vector graphics and other images artwork and convert them into stitches.
- 76.0 Split designs into multiple hoops.

- 77.0 Draft foundation patterns, advanced darts, yokes, flanges, tucks, collars and cowls using the flat-pattern method of drafting and computer-aided drafting (CAD) software.
- 78.0 Draft sleeves, cuffs, contours and skirts using the flat-pattern method of drafting and computer-aided drafting (CAD) software.
- 79.0 Draft various articles of clothing using the flat-pattern method of drafting and computer-aided drafting (CAD) software.
- 80.0 Use illustration software for patternmaking.
- 81.0 Draft various stretch garments using the flat-pattern method of drafting and computer-aided drafting (CAD) software.

Florida Department of Education  
Student Performance Standards

Program Title: Fashion Technology and Production Services  
PSAV Number: K500100

<b>Course Number: CTE0000</b>	
<b>Occupational Completion Point:</b>	
<b>Garment Fabrication Specialist – 150 Hours – SOC Code 51-6031</b>	
01.0	Select, use and care for tools, equipment and supplies safely--The student will be able to:
01.01	Select and use shears.
01.02	Use rotary cutters and other cutting equipment.
01.03	Use machine maintenance equipment.
01.04	Use measuring tools.
01.05	Use pressing equipment.
01.06	Apply workroom safety procedures in using conventional sewing machines, home serger machines, pressing equipment and small hand tools.
02.0	Identify fiber and textile characteristics--The student will be able to:
02.01	Research the history of textile origins.
02.02	Identify and describe fiber characteristics.
02.03	Identify and describe types of fabric construction.
02.04	Identify and describe types of fabric finishes.
02.05	Identify and describe types of textiles.
02.06	Identify laws and regulations governing the textile industry including labeling laws.
03.0	Set up, operate and maintain a conventional sewing machine--The student will be able to:
03.01	Identify the parts of the sewing machine.
03.02	Select and insert sewing machine needle based on fabric type.

03.03	Identify the steps and demonstrate threading the sewing machine.
03.04	Demonstrate bobbin winding, threading the bobbin case and inserting the bobbin correctly into the sewing machine.
03.05	Demonstrate straight stitching.
03.06	Demonstrate stitch length and width selection.
03.07	Identify and demonstrate utility stitches.
03.08	Identify and demonstrate decorative stitches.
03.09	Identify the tension and demonstrate tension adjustment.
03.10	Replace light bulb.
04.0	Set up, operate and maintain a conventional serger--The student will be able to:
04.01	Compare and contrast various serger machines and their characteristics.
04.02	Thread the serger following manufacturer's directions.
04.03	Set tension following the manufacturer's directions.
04.04	Clean and maintain the serger following manufacturer's instructions.
04.05	Demonstrate a rolled hem following sample directions.
04.06	Replace knives, needles and light bulbs following manufacturer's directions.
05.0	Take measurements and select patterns based on body type--The student will be able to:
05.01	Take body measurements using the correct method.
05.02	Perform mathematical computations related to the apparel and textile industry.
05.03	Select pattern size and determine figure type.
05.04	Identify and describe styles that suit various body types.
05.05	Select a pattern and fabric for body type.
05.06	Identify and describe characteristics of a properly fitted garment.
06.0	Demonstrate simple construction techniques--The student will be able to:



06.01	Demonstrate basic hand stitching skills.
06.02	Interpret verbal, written and visual directions.
06.03	Select appropriate fabric for pattern.
06.04	Prepare fabric.
06.05	Adjust patterns following pattern directions.
06.06	Lay out, pin, cut and mark fabric according to pattern directions.
06.07	Stitch darts and pin tucks.
06.08	Identify and match garment pieces using markings and stitching following directions.
06.09	Demonstrate correct pressing techniques following fabric requirements.
06.10	Sew a casing.
06.11	Demonstrate ease stitching.
06.12	Demonstrate machine hemming following machine manual instructions.
06.13	Apply fusible interfacing according to manufacturer's instructions.
06.14	Apply shaped facings.
06.15	Apply zippers using different methods, following manufacturer's directions.
06.16	Apply waistbands following prescribed directions.
06.17	Construct belt loops according to instructions.
06.18	Construct various types of pockets.
06.19	Construct mitered corners according to instructions.
06.20	Construct set in/ fitted sleeve according to according to instructions.
06.21	Construct various seam finishes.
06.22	Match plaids and stripes.

**Course Number: CTE0001**  
**Occupational Completion Point:**  
**Industrial Seamstress -- 150 Hours -- SOC Code 51-6031**

07.0 Set up, operate safely, maintain and adjust industrial sewing machines--The student will be able to:

07.01 Thread, maintain and operate a single needle straight stitch machine.

07.02 Thread, maintain and operate a serger.

07.03 Thread, maintain and operate a cover stitch.

07.04 Thread, maintain and operate a button sewer.

07.05 Thread, maintain and operate a buttonholer.

07.06 Thread, maintain and operate a walking foot.

07.07 Thread, maintain and operate a merrow machine.

07.08 Thread, maintain and operate an electronic programmable machine.

07.09 Thread, maintain and operate a blind hem.

08.0 Create a quality work sample from each industrial machine--The student will be able to:

08.01 Demonstrate ability to use each industrial machine by using appropriately on a garment.

08.02 Demonstrate ability to use each industrial machine by creating a sample from each machine and adding it to portfolio.

09.0 Demonstrate garment construction skills on an industrial machine--The student will be able to:

09.01 Construct cuffs and plackets on sleeves.

09.02 Create and attach collar according to pattern/teacher instructions.

09.03 Sew machine buttonholes according to manufacturer's instructions.

09.04 Apply advanced zippers using different methods, following manufacturer's directions.

09.05 Assemble a portfolio including samples created through coursework.

10.0 Demonstrate an understanding of the terminology used in the apparel industry--The student will be able to:

10.01 Use terminology associated with the apparel and textile merchandising and manufacturing industry.

10.02 Define and differentiate market segmentation.

10.03	Develop market research strategies based on demographics, focus groups, etc.
10.04	Demonstrate techniques for inventory management.
10.05	Recognize multichannel (e-commerce) merchandising techniques.
11.0	Identify employment opportunities--The student will be able to:
11.01	Identify occupations in the garment/textile industry and the duties and responsibilities of those occupations.
11.02	Identify levels of training required, opportunities for job advancement and earning/wage levels for garment/textile production occupations.
11.03	Visit various facilities related to industry following recommendations of the instructor.
11.04	Create a presentation on traditional and non-traditional career paths (costume design, theater, entertainment, buyers, fabric store owners etc.) in the garment/textile industry.
12.0	Schedule and participate in industry job shadowing that relates to available specialties (optional)--The student will be able to:
12.01	Research persons working in the one of the specialties offered in the program within the local area.
12.02	Write about a job shadowing experience, applying knowledge gained within the program.
13.0	Identify and exhibit employment skills for occupations related to Fashion Technology and Production Services--The student will be able to:
13.01	Identify and list documents that may be required when applying for a job.
13.02	Complete a job application form.
13.03	Demonstrate competence in job interview techniques.
13.04	Identify and demonstrate appropriate responses to criticism from an employer, supervisor, or co-worker.
13.05	Identify and demonstrate acceptable work habits including a positive attitude.
13.06	Demonstrate knowledge of how to make job changes appropriately.
13.07	Demonstrate customer service and selling techniques.
14.0	Research the effect of culture on the clothing industry throughout history--The student will be able to:
14.01	Identify design periods from 1900 to the present day.
14.02	Explain the influence of earlier design periods on present day design and construction.
14.03	Describe the elements and principles of design as they relate to a particular time period/culture.

14.04 Create a multi-media presentation detailing a selected design period.

15.0 Finalize a portfolio per industry standards--The student will be able to:

15.01 Submit and present a portfolio including all work from the program and an industry appropriate resume.

**Course Number: CTE0002**

**Occupational Completion Point: A**

**Introduction to Patternmaker and Entrepreneurship – 150 Hours – SOC Code 51-6031**

16.0 Navigate computer-aided drafting (CAD) patternmaking software--The student will be able to:

16.01 Navigate menus (file, edit, view, etc.).

16.02 Create objects.

16.03 Select objects.

16.04 Move objects.

16.05 Edit objects (align, copy flip, intersect, locate points, mirror, move points, symbols, rotate, scale, etc.).

16.06 Measure objects.

17.0 Demonstrate basic pattern-making skills--The student will be able to:

17.01 Explain the functions of patternmaking tools.

17.02 Perform mathematical operations related to patternmaking.

17.03 Describe the process of patternmaking using related terminology.

17.04 Demonstrate a proper use of grain line.

17.05 Define draping and demonstrate the basics of the draping method of dress design.

17.06 Draft the basic pattern foundation including the bodice, skirt and sleeve using flat-patternmaking.

17.07 Add appropriate seam allowance to drafted pattern.

17.08 Construct a basic muslin shell using customer's measurements and/or pattern.

17.09 Transfer fitting changes to paper patterns following given directions.

17.10 Analyze and adjust patterns for various figure types.

17.11	Identify, manipulate and combine various techniques to develop design details.
18.0	Manipulate darts--The student will be able to:
18.01	Define and explain dart manipulation, adding fullness and contouring.
18.02	Define and demonstrate slash-spread and overlap patternmaking techniques.
18.03	Define and demonstrate pivotal-transfer patternmaking techniques.
18.04	Demonstrate single-dart and two-dart manipulation.
18.05	Determine various types of princess lines on a sloper/foundation garment.
19.0	Understand the differences between childrenswear and adult clothing--The student will be able to:
19.01	Explain the challenges in creating childrenswear.
19.02	Explain size categories and sizing methods for childrenswear.
19.03	Explain differences in measuring children and adults.
19.04	Draft a basic pattern set for girls and boys.
19.05	Compare and contrast men's wear and women's wear.
19.06	Compare and contrast mature male and the young male figures.
19.07	Demonstrate appropriate measuring on the male figure.
20.0	Demonstrate knowledge of technology in the apparel and textile industry--The student will be able to:
20.01	Use computer terminology related to the apparel and textile industry.
20.02	Demonstrate an awareness of computer-aided drafting (CAD) design technology.
20.03	Identify tools related to CAD in the apparel and textile industry.
20.04	Create, edit and measure objects in industry CAD software.
20.05	List and describe software available in the area of apparel and textile industry.
20.06	Explain how current technologies are used in the creation of fashion products (e.g. fashion profiles, fabrics, garments).
20.07	Identify the development of tools, equipment and technology used in design services as they relate to particular historical periods.

21.0	Describe and explain the elements and principles of design related to Fashion Technology and Production Services--The student will be able to:
21.01	Define the elements of design that are applicable to fashion (space, line, shape, form, texture, color).
21.02	Demonstrate understanding of the color wheel.
21.03	Recognize basic color schemes.
21.04	Understand the psychology of color.
21.05	Define the principles of design that are applicable to fashion and/or interior design (proportion, scale, balance, emphasis, rhythm, harmony).
21.06	Explain the impact of human factors (psychological, physiological and social needs) on decisions relating to the design services process.
21.07	Identify and describe various garment styles, features and parts as they related to the elements and principles of design.
22.0	Demonstrate leadership and organizational skills--The student will be able to:
22.01	Identify professional and youth organizations related to the fashion technology and production services industry.
22.02	Identify purposes and functions of professional and youth organizations.
22.03	Identify roles and responsibilities of members within organizations.
22.04	Demonstrate cooperation as a group member in achieving organizational goals.
22.05	Demonstrate confidence in leadership roles and organizational responsibilities.
23.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
23.01	Define entrepreneurship.
23.02	Identify and describe the necessary personal characteristics and responsibilities of a successful entrepreneur.
23.03	Analyze the advantages and disadvantages of business ownership and describe entrepreneurship opportunities as a career planning option.
23.04	Explain the concept of and applications for, social entrepreneurship.
23.05	Understand the key elements of a business plan.
23.06	Assess the start-up requirements associated with a new venture.
23.07	Assess risks associated with a new venture.
23.08	Identify external resources useful to entrepreneurs in the sewn products industry during concept development.

23.09	Research and identify legal issues affecting small businesses, including contracts, negotiable instruments and privacy issues.
23.10	Describe strategies to protect intellectual property.
23.11	Identify various forms of business ownership.
23.12	Identify IRS business reporting requirements.
23.13	Identify and plan strategies to implement federal and state workplace regulations including OSHA and ADA.
24.0	Identify and develop business plan (optional)--The student will be able to:
24.01	Evaluate a project's strengths, weaknesses, opportunities and threats (SWOT).
24.02	Conduct a competitive analysis.
24.03	Evaluate business acquisition options.
24.04	Develop company goals and objectives.
24.05	Develop a business mission.
24.06	Forecast income and sales.
24.07	Conduct a break-even analysis.
24.08	Develop action and business plans.

<b>Course Number: CTE0003</b>	
<b>Occupational Completion Point:</b>	
<b>Alterations Specialist -- 300 Hours – SOC Code 51-6052</b>	
25.0	Use terminology related to alterations and fittings--The student will be able to:
25.01	Define terminology related to alterations.
26.0	Fit a custom garment accurately--The student will be able to:
26.01	Pin-fit garments to a customer using knowledge gained within the program.
26.02	Chalk and baste a garment to fit a customer.
26.03	Demonstrate appropriate fitting techniques when dealing with customers.
26.04	Define standards of fit and ease.

26.05	Analyze wrinkles to adjust for proper fit.
27.0	Alter a sample or garment--The student will be able to:
27.01	Remove stitches in ready-made garments without damaging fabric.
27.02	Construct and finish seams.
27.03	Mark an even a hemline following guidelines.
27.04	Adjust hemlines in various garments according to customer's measurements.
27.05	Remove the flare from pant legs following a given set of directions.
27.06	Taper a skirt following a given set of directions.
27.07	Convert tucks to gathers following a given set of instructions.
27.08	Add gathers following a given set of instructions.
27.09	Take in the side seams on a garment/sample.
27.10	Shorten or lengthen sleeves using various techniques.
27.11	Press altered areas using acquired pressing techniques.
28.0	Repair a clothing garment or sample--The student will be able to:
28.01	Reinforce seams and buttonholes on a garment/sample.
28.02	Replace zippers in various types of garments/samples.
28.03	Apply patches on a garment/sample.
28.04	Replace various types of buttons on a garment/sample.
28.05	Demonstrate appropriate pressing techniques on repaired garments/samples.
29.0	Exhibit positive customer service skills--The student will be able to:
29.01	Demonstrate effective communication skills.
29.02	Demonstrate ability to use technology in the workplace.
29.03	Prepare alteration tickets accurately.



30.0	Alter fine/tailored clothing using samples or garments--The student will be able to:
30.01	Add or remove shoulder pads following specific instructions.
30.02	Adjust crotch in a garment/sample according to customer body measurements.
30.03	Adjust waist size of various garments according to customer body measurements.
30.04	Correct various garments for high hip or swayback using proper adjustment techniques.
30.05	Adjust, remove, or add cuffs to pants adjusting to client's height difference and customer specifications.
30.06	Adjust bodices according to various customer measurements using proper adjustment techniques.
30.07	Redistribute ease in sleeve cap adjusting fullness according to specified instructions.
30.08	Adjust sleeve cuffs according to specified instructions.
30.09	Shorten wristlets on knitted sleeves according to customer/manufacturer's specifications.
30.10	Reshape trouser legs using proper adjustment techniques.
30.11	Taper men's shirts using proper adjustment techniques.
30.12	Miter hem corners using proper construction techniques.
30.13	Add or remove tucks, pleats, or darts using proper construction techniques.
30.14	Increase and decrease the width of pleats following proper construction techniques.
30.15	Alter closure and fasteners according to customer specifications.
30.16	Alter belt loops according to customer specifications.
30.17	Adjust belts to fit customer form.
30.18	Adjust pockets according to fabric requirements and using proper alteration techniques.
30.19	Shorten sleeves on a tailored jacket.
30.20	Narrow lapels on a tailored jacket.
30.21	Lower the collar on a suit jacket.
30.22	Construct a gusset in trousers.

30.23	Construct a gusset in a dance garment.
31.0	Demonstrate clothing repair for fine/tailored clothing--The student will be able to:
31.01	Apply patches to holes or rips in knit or woven fabrics following specified fabric instructions.
31.02	Repair frayed parts of garments, such as cuffs (turn), collars (turn) and seams following proper repair techniques for specified fabric.
32.0	Create and manage an alterations business (optional) --The student will be able to:
32.01	Identify the occupations necessary to run an alteration business.
32.02	Develop a plan for the alterations business including job assignments and responsibilities, hours of operation, marketing, fees charged, etc.

**Course Number: CTE0004**  
**Occupational Completion Point: B**  
**Tailor for Menswear -- 300 Hours – SOC Code 51-6052**

**Note: Students may choose one of the following courses for the completion of OCP B: 'Tailor for Menswear' or 'Formalwear Specialist'.**

33.0	Demonstrate an understanding of proper fit of menswear--The student will be able to:
33.01	Identify terminology related to menswear.
33.02	Identify standards of fit related to menswear.
33.03	Demonstrate proficiency in identifying male figure types.
33.04	Identify needed corrections for proper fit particular to men.
34.0	Construct garments and accessories for men's apparel--The student will be able to:
34.01	Construct an ascot.
34.02	Construct a tie and bowtie.
34.03	Construct a cummerbund.
34.04	Construct a vest.
34.05	Construct a tuxedo shirt.
34.06	Construct slacks.
34.07	Construct a cargo pants.

35.0	Embroider a monogram on men's clothing--The student will be able to:
35.01	Select appropriate interfacing and stabilizer for embroidery.
35.02	Utilize embroidery software to generate a custom monogram.
35.03	Hoop, position and mark fabric for accurate embroidery.
35.04	Monogram a necktie.
35.05	Construct and monogram a pocket square.
35.06	Monogram a shirt cuff.
36.0	Construct a speed tailored jacket--The student will be able to:
36.01	Construct a speed tailored jacket using a specific set of construction skills according to given directions.
37.0	Construct a tailored jacket--The student will be able to:
37.01	Select suitable fabric for a tailored jacket using identified criteria.
37.02	Select suitable hair canvas, interfacing, linings and underlining for specified fabric.
37.03	Prepare fabrics and alter patterns using pattern directions.
37.04	Lay out patterns, bias, plaid, or one-way prints using correct layout procedures.
37.05	Cut patterns, fabric, hair canvas and linings according to given directions.
37.06	Tailor tack markings using the proper techniques.
37.07	Identify tailor basting and tailor baste layers.
37.08	Tape roll line and edges following prescribed method.
37.09	Pad-stitch lapels and collars following prescribed method.
37.10	Baste and fit a garment according to customer specifications.
37.11	Stitch seams using correct stitches for fabric.
37.12	Apply seam finishes chosen from practice samples.
37.13	Construct tailored pockets following given directions.

37.14	Construct bound buttonholes following given directions.
37.15	Construct chest pieces, shoulder pads and sleeve heads following given directions.
37.16	Set in sleeves following given directions.
37.17	Construct and apply upper collar and facings following given directions.
37.18	Catch-stitch all edges using proper method of stitching.
37.19	Fit a garment using the customer's measurements.
37.20	Construct and apply linings according to fabric requirements.
37.21	Construct hems using proper technique for fabric/garment style.
37.22	Identify steps of and demonstrate tailor pressing.

<b>Course Number: CTE0005</b>	
<b>Occupational Completion Point: B</b>	
<b>Formalwear Specialist -- 300 Hours – SOC Code 51-6052</b>	
<b>Note: Students may choose one of the following courses for the completion of OCP B: 'Tailor for Menswear' or 'Formalwear Specialist'.</b>	
38.0	Identify and define terminology related to bridal gowns and formalwear--The student will be able to:
38.01	Identify and define bridal silhouettes.
38.02	Identify appropriate styles for body types.
38.03	Identify types of fabrics and laces used in bridal fashions.
38.04	Define terminology related to bridal and formalwear.
39.0	Demonstrate management and customer service skills related to formalwear--The student will be able to:
39.01	Develop a schedule for production and fittings.
39.02	Develop standards of operations, pricing and alteration policies for custom formalwear.
39.03	Demonstrate customer service skills relating to brides and bridal parties.
40.0	Construct formal dresses--The student will be able to:
40.01	Construct a bridesmaid dress or evening gown using a specific set of construction skills according to given directions.

40.02	Construct a flower girl dress using a specific set of construction skills according to given directions.
40.03	Construct a mother of the bride dress using a specific set of construction skills according to given directions.
41.0	Construct bridal headpieces and accessories--The student will be able to:
41.01	Construct bridal headpieces according to teacher instructions.
41.02	Construct bridal accessories according to teacher instructions.
42.0	Construct bridal gown--The student will be able to:
42.01	Construct a bridal gown including the following skills: <ul style="list-style-type: none"> <li>• inserting boning</li> <li>• inserting cups</li> <li>• constructing a petticoat/underskirt</li> <li>• applying beading, pearls and rhinestones</li> <li>• constructing a bustle</li> </ul>

**Course Number: CTE0006**  
**Occupational Completion Point: C**  
**Costume Specialist -- 300 Hours – SOC Code 51-6052**

**Note: Students may choose one of the following courses for the completion of OCP C: 'Costume Specialist', 'Accessories Specialist' or 'Intimate Apparel Specialist'.**

43.0	Construct simple stretch garments--The student will be able to:
43.01	Stitch stretch fabric with a 4-thread serge, zigzag and cover stitch.
43.02	Construct a basic T-shirt.
43.03	Construct a basic tank top.
43.04	Construct a gathered dance skirt.
43.05	Construct a basic Leotard with a shelf bra.
43.06	Construct a full face, full body unitard.
43.07	Construct a garment using athletic mesh.
43.08	Construct stirrup pants.
43.09	Construct stretch briefs.

44.0	Construct advanced stretch garments--The student will be able to:
44.01	Construct a stretch garment with bra attachments.
44.02	Construct a fully lined leotard.
44.03	Construct a leotard with mesh sleeves.
44.04	Construct a turtle neck collar.
44.05	Construct fingerless gloves.
44.06	Insert various zippers into stretch fabric.
44.07	Demonstrate application of a stretch appliqué.
45.0	Demonstrate costume construction skills--The student will be able to:
45.01	Construct costumes with the following: <ul style="list-style-type: none"> <li>• Velcro/ Hook and loop</li> <li>• Foam pods</li> <li>• Fur</li> <li>• Vinyl</li> <li>• Feathers</li> <li>• Stones</li> <li>• Beads</li> <li>• Sequins</li> <li>• Sweat wicking fabric</li> <li>• Silk</li> <li>• Chiffon</li> <li>• Tulle</li> <li>• Organza</li> <li>• Cape with hood</li> <li>• Lights, fiber optics, or other wired and battery operated devices</li> </ul>
46.0	Construct costumes of various types--The student will be able to:
46.01	Create costumes of the following types: <ul style="list-style-type: none"> <li>• One-piece fur costume</li> <li>• Suit with shirt insert</li> <li>• Sweat wicking shirt with tuxedo front</li> </ul>

- Dance dress or skirt with gusset inserts
- Ruffled wrap jacket
- Dance pants with “V”- front
- Dance pants with bell bottoms or flared legs.

47.0 Navigate workspace of embroidery software--The student will be able to:

47.01 Change thread colors.

47.02 Use a sewing simulator.

47.03 Open, close and save designs.

47.04 Print embroidery designs.

47.05 View and measure designs.

47.06 Display a hoop.

47.07 Merge designs.

48.0 Digitize various types of text using embroidery software--The student will be able to:

48.01 Create straight horizontal text.

48.02 Create vertical text.

48.03 Create circular text.

48.04 Create text along a path.

48.05 Utilize text enveloping.

48.06 Import and convert TrueType fonts.

49.0 Digitize basic appliqués and patches--The student will be able to:

49.01 Choose an outline shape from artwork.

49.02 Create a basting or placement stitch.

49.03 Create a satin stitch or decorative edge-finishing stitch.

50.0 Embroider patches--The student will be able to:

50.01 Select appropriate interfacing and stabilizer for embroidery.

50.02 Hoop, position and mark fabric for accurate embroidery.

50.03 Cut and trim fabric for patches and appliqués.

50.04 Embroider a basic patch.

**Course Number: CTE0007**  
**Occupational Completion Point: C**  
**Accessories Specialist -- 300 Hours – SOC Code 51-6052**

**Note: Students may choose one of the following courses for the completion of OCP C: 'Costume Specialist', 'Accessories Specialist' or 'Intimate Apparel Specialist'.**

51.0 Construct simple headwear--The student will be able to:

51.01 Construct a bucket hat.

51.02 Construct fascinators.

51.03 Construct hair bows.

51.04 Construct a hair flowers.

52.0 Construct simple accessories bags--The student will be able to:

52.01 Construct a garment bag.

52.02 Construct a zippered handbag.

52.03 Construct a handbag with snaps.

52.04 Construct a handbag with straps.

52.05 Construct a backpack.

52.06 Construct covering for electronic devices (iPad, Phones, laptops, etc.).

**Note: Students may choose between a focus in Complex Accessories or Accessories for Costumes. The following standards are for the Complex Accessories focus:**

53.0 Construct complex accessories--The student will be able to:

53.01 Construct an organizer.

53.02 Construct a fully lined purse with welt zippered pockets.



53.03	Construct a wallet.
53.04	Construct a belt.
53.05	Construct a fedora.
53.06	Use the following fabrics: <ul style="list-style-type: none"> <li>• Vinyl</li> <li>• Leather</li> <li>• Suede</li> <li>• Burlap</li> <li>• Buckram</li> </ul>
54.0	Construct various hats--The student will be able to:
54.01	Construct three headpieces using a specific set of construction skills according to given directions.
<b>Note: Students may choose between a focus in Complex Accessories or Accessories for Costumes. The following standards are for the Accessories for Costumes focus:</b>	
55.0	Construct costume accessories--The student will be able to:
55.01	Construct spats.
55.02	Construct spandex gloves.
55.03	Construct costume character gloves.
55.04	Construct a gun holster.
55.05	Construct cuffs.
55.06	Construct and apply patches.
55.07	Construct microphone packs.
55.08	Construct various head coverings.
55.09	Construct various belts.
55.10	Construct foam pods.
56.0	Construct specialty accessories--The student will be able to:
56.01	Construct three specialty accessories using a specific set of construction skills according to given directions.

**Course Number: CTE0008**  
**Occupational Completion Point: C**  
**Intimate Apparel Specialist -- 300 Hours – SOC Code 51-6052**

**Note: Students may choose one of the following courses for the completion of OCP C: 'Costume Specialist', 'Accessories Specialist' or 'Intimate Apparel Specialist'.**

57.0 Identify and define terminology related to intimate apparel and shapewear--The student will be able to:

57.01 Identify and define types and functions of intimate apparel and shapewear.

57.02 Identify appropriate styles for body types.

57.03 Identify types of fabrics and laces used in intimate apparel.

57.04 Define terminology related to intimate apparel and shape wear.

58.0 Construct basic lingerie garments for women--The student will be able to:

58.01 Construct a half-slip.

58.02 Construct a full slip or baby doll.

58.03 Construct various women's underwear.

58.04 Construct a camisole.

58.05 Construct a pair of garters and garter belt.

58.06 Construct a full length nightgown including lace trim, beading and stoning.

58.07 Construct a full length robe including feather trim.

58.08 Construct a netted slip.

59.0 Embroider a monogram on lingerie--The student will be able to:

59.01 Select appropriate interfacing and stabilizer for embroidery.

59.02 Utilize embroidery software to generate a custom monogram.

59.03 Hoop, position and mark fabric for accurate embroidery.

59.04 Monogram a basic piece of women's lingerie.

60.0 Construct basic undergarments for men--The student will be able to:

60.01	Construct boxer shorts.
60.02	Construct boxer briefs.
61.0	Construct various bras--The student will be able to:
61.01	Construct a sports bra.
61.02	Construct a bra with removable cups.
61.03	Construct a bra with underwire and shaped cups.
61.04	Construct a strapless or convertible strap bra.
62.0	Construct various fitted undergarments with stretch--The student will be able to:
62.01	Construct shaping shorts.
62.02	Construct a body suit.
63.0	Construct a functioning corset--The student will be able to:
63.01	Construct a corset including boning, hooks and eyes and other specifications.

**Course Number: CTE0010**  
**Occupational Completion Point:**  
**Embroiderer – 300 Hours – SOC Code 51-6092**

64.0	Select, use and care for embroidery tools, equipment and supplies safely--The student will be able to:
64.01	Select and use the following: stabilizers, adhesives and fusible sprays, marking tools, various threads and fabrics, positioning aids, hooping aides, scissors, spool aids and various embroidery frames.
64.02	Define terminology related to embroidery.
65.0	Set up, operate and maintain a conventional embroidery machine--The student will be able to:
65.01	Identify types of conventional embroidery machines.
65.02	Identify types of parts and functions of conventional embroidery machines.
65.03	Identify media and formats of embroidery designs.
65.04	Identify and demonstrate the selection and use of embroidery needles.
65.05	Identify and navigate a conventional embroidery screen/display.

65.06	Identify sizes and types of embroidery fields.
65.07	Change, manipulate and convert thread colors.
65.08	Combine embroidery patterns.
65.09	Edit embroidery designs.
65.10	Attach the hoop.
65.11	Demonstrate proper stabilizing and hooping.
65.12	Save embroidery patterns.
65.13	Set tension following the manufacturer's directions.
65.14	Troubleshoot minor embroidery problems.
66.0	Demonstrate simple embroidery techniques--The student will be able to:
66.01	Demonstrate proper pressing of designs.
66.02	Demonstrate proper placement of designs.
66.03	Demonstrate care for embroidery designs.
66.04	Sew embroidery designs on various fabrics such as: <ul style="list-style-type: none"> <li>• Cotton, broadcloth, or duck cloth</li> <li>• Knits (t-shirts)</li> <li>• Densely woven fabrics</li> <li>• Loosely woven fabrics</li> </ul>
66.05	Embroider an applique.
66.06	Embroider a patch.
66.07	Use machine alphabet patterns.
66.08	Embroider various monograms.
67.0	Set up, operate and maintain a multi-needle embroidery machine--The student will be able to:
67.01	Identify types of multi-needle embroidery machines.
67.02	Identify types of parts and functions of multi-needle embroidery machines.

67.03	Demonstrate tension setting for a multi-needle embroidery machine following the manufacturer's directions.
67.04	Identify and demonstrate the selection and use of accessories for multi-needle embroidery machines.
67.05	Demonstrate linking a multi-needle embroidery machine to a computer.
67.06	Demonstrate troubleshooting embroidery problems.
68.0	Demonstrate advanced embroidery techniques--The student will be able to:
68.01	Quilt embroidery patterns.
68.02	Demonstrate cutwork.
68.03	Demonstrate lacework.
68.04	Embroider a dimensional project.
68.05	Demonstrate continuous embroidery.
68.06	Embroider a multi hoop project.
68.07	Demonstrate linking characters.
68.08	Demonstrate embroidery on curved surfaces such as: <ul style="list-style-type: none"> <li>• Sleeves</li> <li>• Caps</li> <li>• Coozies</li> <li>• Socks</li> </ul>
68.09	Demonstrate sewing embroidery designs on various surfaces such as: <ul style="list-style-type: none"> <li>• Spandex</li> <li>• Non fabrics such as leather or vinyl.</li> <li>• Sheer fabrics</li> <li>• Napped fabrics</li> <li>• High pile fabrics</li> </ul>

**Course Number: CTE0011**  
**Occupational Completion Point: D**  
**Embroidery Digitizer – 300 Hours – SOC Code 51-6092**

69.0	Navigate workspace of embroidery software--The student will be able to:
69.01	Change thread colors.

69.02	Use a sewing simulator.
69.03	Open, close and save designs.
69.04	Print embroidery designs.
69.05	View and measure designs.
69.06	Display a hoop.
69.07	Merge designs.
70.0	Using embroidery software to digitize various types of text--The student will be able to:
70.01	Create straight horizontal text.
70.02	Create vertical text.
70.03	Create circular text.
70.04	Create various monograms.
70.05	Create text along a path.
70.06	Utilize text enveloping.
70.07	Import and convert TrueType fonts.
71.0	Use embroidery software to edit designs--The student will be able to:
71.01	Split, move, insert or delete stitches.
71.02	Split designs.
71.03	Adjust stitches based on fabric choice.
71.04	Resize designs and adjust fill stitches accordingly.
71.05	Review density on a map.
71.06	Find and remove hidden stitches in overlapped designs.
71.07	Adjust density to project specifics.
72.0	Use illustration software for embroidery projects--The student will be able to:

72.01	Evaluate industry standard illustration software packages.
72.02	Identify characteristics of vector and bitmap images.
72.03	Demonstrate understanding of the software workspace (menus/palettes).
72.04	Demonstrate software navigation (views, tabs, zoom).
72.05	Demonstrate use of drawing tools to create, combine and edit basic shapes.
72.06	Demonstrate ability to transform content (scale, rotation, position).
72.07	Demonstrate use of pen and pencil tools to draw/edit straight and curved paths.
72.08	Demonstrate use of color and painting tools (patterns, gradients, color palettes).
72.09	Demonstrate ability to work with type (formatting, font palette, paths).
72.10	Demonstrate use of layers (creating, locking, viewing, pasting and merging).
72.11	Demonstrate use of blending (gradients, objects).
72.12	Demonstrate use of brushes.
72.13	Explore file exporting options and round trips workflows with page layout software.
72.14	Demonstrate knowledge of bleed for vector and bitmap design software.
72.15	Demonstrate knowledge of bleed for vector and image editor authoring software.
73.0	Embroider a design from a digitized file--The student will be able to:
73.01	Embroider a design that uses text, multiple merged designs and resized designs.
74.0	Manipulate basic embroidery stitches--The student will be able to:
74.01	Delete, move and edit stitches.
74.02	Convert and edit segments of stitch types.
74.03	Demonstrate use of common embroidery stitch effects.
74.04	Blend thread colors in a segment.
74.05	Digitize a design using run stitches and satin stitches.

74.06	Group and ungroup stitches.
74.07	Change stitch properties.
74.08	Change fill properties and stitches.
74.09	Change underlay properties.
74.10	Apply specialty fills to outline shapes.
74.11	Fit designs on custom paths including circular and carousel patterns.
74.12	Emboss shapes into a fill.
74.13	Adjust pull compensation.
74.14	Digitize using auto stipple stitches.
74.15	Create ripple effect around designs for continuous quilting motifs.
74.16	Rearrange multiple designs for random scatter effect.
74.17	Add basting stitches to design.
74.18	Add button holes to a design.
75.0	Edit vector graphics and other images artwork and convert them into stitches--The student will be able to:
75.01	Draw lines, shapes and artwork/vector images.
75.02	Convert vector images to embroidery.
75.03	Import, manipulate and export images.
75.04	Identify characteristics of vector and bitmap images.
75.05	Demonstrate understanding of the software workspace (menus/palettes).
75.06	Demonstrate software navigation (views, tabs, zoom).
75.07	Use drawing tools to create, combine and edit basic shapes.
75.08	Transform content (scale, rotation, position).
75.09	Use pen and pencil tools to draw/edit straight and curved paths.



75.10	Use color and painting tools (patterns, gradients, color palettes).
75.11	Work with type (formatting, font palette, paths).
75.12	Use layers (creating, locking, viewing, pasting, merging).
75.13	Use blending (gradients, objects).
75.14	Use brushes.
75.15	Explore file exporting options and round trips workflows with page layout software.
75.16	Demonstrate knowledge of bleed for vector and bitmap design software.
75.17	Demonstrate knowledge of bleed for vector and image editor authoring software.
76.0	Split designs into multiple hoops--The student will be able to:
76.01	Split large embroidery designs to fit hoop.
76.02	Align split designs into position for sewing.

**Course Number: CTE0012**  
**Occupational Completion Point:**  
**CAD Patternmaker I -- 300 Hours – SOC Code 51-6092**

77.0	Draft foundation patterns, advanced darts, yokes, flanges, tucks, collars and cowls using the flat-pattern method of drafting and computer-aided drafting (CAD) software--The student will be able to:
77.01	Draft the men's foundation set.
77.02	Draft and explain the differences between tuck-darts, pleats, flares and gathers.
77.03	Draft various dart clusters.
77.04	Draft and describe the differences between graduated and radiating, parallel, asymmetric and intersecting darts.
77.05	Draft various front and back yokes (inverted box pleat, gathers, action pleat, etc.).
77.06	Draft various flanges (tuck dart flange, flange to waist and inset flange).
77.07	Draft various tucks.
77.08	Draft various collars for women.
77.09	Draft various collars for children.

77.10	Draft various collars for men.
77.11	Draft various built-up necklines.
77.12	Draft various inset bands.
77.13	Draft various types of cowls.
77.14	Construct multiple garments based on the basic foundation garment with techniques learned through coursework.
78.0	Draft sleeves, cuffs, contours and skirts using the flat-pattern method of drafting and computer-aided drafting (CAD) software--The student will be able to:
78.01	Define and explain terminology related to sleeves.
78.02	Draft various sleeves for women.
78.03	Draft various sleeves for children.
78.04	Draft various sleeves for men.
78.05	Draft various shirt cuffs.
78.06	Draft various shirts for a woman (three shirt and blouse foundations, basic sleeves, yoke shirt, shirt facing and band variations).
78.07	Draft a basic shirt for a man including cuffs and plackets.
78.08	Draft various shirts for children.
78.09	Describe different types of contouring (empire style line, strapless bra top, surplice, cutout armholes and necklines).
78.10	Draft using a contour guide pattern.
78.11	Draft a garment with various contour style lines.
78.12	Describe the four skirt foundations (straight, A-shape, pegged, bell shape).
78.13	Describe different skirt characteristics (sweep, movement, break point).
78.14	Draft various skirts for women.
78.15	Draft various skirts for children.
78.16	Construct multiple garments based on the basic foundation garment with techniques learned through coursework.

**Course Number: CTE0013**  
**Occupational Completion Point: E**  
**CAD Patternmaker II – 300 Hours – SOC Code 51-6092**

79.0 Draft various articles of clothing using the flat-pattern method of drafting and computer-aided drafting (CAD) software--The student will be able to:

79.01 Draft various dresses for women.

79.02 Draft various dresses for children.

79.03 Draft various pants.

79.04 Draft various jeans.

79.05 Draft various waistbands.

79.06 Draft for various pant derivatives.

79.07 Draft various jumpsuits.

79.08 Draft various pants and pants derivatives for children.

79.09 Draft various trousers for men.

79.10 Draft slacks for men.

79.11 Draft various jeans for men.

79.12 Draft the men's jacket foundation.

79.13 Draft variations of the men's jacket foundation.

79.14 Demonstrate an understanding of correct fit for a man's suit jacket.

79.15 Draft various casual men's shirts.

79.16 Draft drafting various vests.

79.17 Draft various bias cut patterns.

80.0 Use illustration software for patternmaking--The student will be able to:

80.01 Evaluate industry standard illustration software packages.

80.02 Identify characteristics of vector and bitmap images.

80.03	Demonstrate understanding of the software workspace (menus/palettes).
80.04	Demonstrate software navigation (views, tabs, zoom).
80.05	Use drawing tools to create, combine and edit basic shapes.
80.06	Transform content (scale, rotation, position).
80.07	Use pen and pencil tools to draw/edit straight and curved paths.
80.08	Use color and painting tools (patterns, gradients, color palettes).
80.09	Work with type (formatting, font palette, paths).
80.10	Use layers (create, lock, view, paste and merge).
80.11	Use blending tool (gradients, objects).
80.12	Use brushes.
80.13	Explore file exporting options and round trips workflows with page layout software.
80.14	Demonstrate knowledge of bleed for vector and bitmap design software.
80.15	Demonstrate knowledge of bleed for vector and image editor authoring software.
80.16	Construct multiple garments based on the basic foundation garment with techniques learned through coursework.
81.0	Draft various stretch garments using the flat-pattern method of drafting and computer-aided drafting (CAD) software--The student will be able to:
81.01	Draft a foundation pattern for knits for women.
81.02	Draft a foundation pattern for knits for men.
81.03	Draft a foundation pattern for knits for children.
81.04	Draft various patterns for active wear.
81.05	Draft various patterns for dancewear.
81.06	Draft various patterns for swimwear.
81.07	Draft various bodysuit.
81.08	Draft various tights for children.

81.09 Draft various leotards for children.
81.10 Draft various swimwear garments for children.
81.11 Draft various undergarments for women.
81.12 Draft various shapewear for women.
81.13 Construct multiple garments based on the basic foundation garment with techniques learned through coursework.

## **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)**

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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 10, Language 10, and Reading 10. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Commercial Art Technology 1  
**Program Type:** Career Preparatory  
**Career Cluster:** Art, A/V Technology and Communication

**PSAV**

Program Number	K600100	
CIP Number	0650040214	
Grade Level	30, 31	
Standard Length	900 hours	
Teacher Certification	COMM ART @7 7G	
CTSO	SkillsUSA	
SOC Codes (all applicable)	27-1029 – Designers, All Other 43-9031 – Desktop Publishers	
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>	
Basic Skills Level	Mathematics:	9
	Language:	9
	Reading:	9

**Purpose**

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

The purpose of this program is to prepare students for employment as artists and related workers, illustrators, commercial designers (SOC 27-1024).

The course content will include the following: basic art skills; lettering skills; preparation of layouts and illustrations; preparation of camera ready paste-up; and development of specialized skills.



The course content should also include training in communication, leadership, human relations and employability skills; and safe, efficient work practices.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Commercial Art industry; planning, management, finance, technical and product 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 two occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	GRA0036	Desktop Publishing Assistant	450 hours	43-9031
B	GRA0037	Design Technician	450 hours	27-1029

## **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 basic commercial art knowledge.
- 02.0 Demonstrate proficiency in graphic production.
- 03.0 Demonstrate proficiency in graphic art computer skills.
- 04.0 Demonstrate proficiency in design skills.
- 05.0 Demonstrate an understanding of typography.
- 06.0 Demonstrate proficiency in layout and paste-up.
- 07.0 Demonstrate proficiency in applied design.
- 08.0 Demonstrate proficiency in graphic art computer skills.

Florida Department of Education  
Student Performance Standards

Program Title: Commercial Art Technology 1  
PSAV Number: K600100

**Course Number: GRA0036**  
**Occupational Completion Point: A - CORE**  
**Desktop Publishing Assistant – 450 Hours – SOC Code 43-9031**

01.0	Demonstrate basic commercial art knowledge--The student will be able to:
01.01	Take notes, listen and comply with instructions.
01.02	Read instructions thoroughly.
01.03	Request clarification of instructions (ask questions).
01.04	Relay instructions to others orally and in writing.
01.05	Define and explain commercial art terms.
01.06	Document job tasks, costs and maintain records.
01.07	Make project presentations.
01.08	Interact with the employer, fellow employees and customers.
02.0	Demonstrate proficiency in graphic production--The student will be able to:
02.01	Define the differences in production processes and estimate relative costs.
02.02	Recognize limitations for printing.
02.03	Identify and select different printing surfaces.
02.04	Identify and select appropriate printing inks.
02.05	Identify and select finishing processes.
02.06	Identify standard industry material sizes.
02.07	Specify types of folds.

03.0	Demonstrate proficiency in graphic art computer skills--The student will be able to:
03.01	Demonstrate graphic art computer skills using appropriate graphic art programs and hardware.
03.02	Use software and hardware to manipulate and adjust various drawings, pictures and graphic material by computer.
03.03	Produce finished computer projects reflecting current computer graphic art technology.
03.04	Operate various scanners and input devices for computer graphics.

**Course Number: GRA0037**  
**Occupational Completion Point: B**  
**Design Technician – 450 Hours – SOC Code 27-1029**

04.0	Demonstrate proficiency in design skills--The student will be able to:
04.01	Explain proper use and care of tools.
04.02	Apply principles and elements of design.
04.03	Apply color theory (pigment versus light).
04.04	Utilize tones, hues and values.
04.05	Sketch designs using pencil and ink.
04.06	Paint freehand or within sketched designs using mixed colors or apply colors to produce desired shades.
04.07	Apply color for impact (color psychology).
04.08	Differentiate between line halftone, duotone and four-color process.
04.09	Demonstrate balance in design.
04.10	Demonstrate designs with symmetry and asymmetry.
04.11	Develop grids for layouts of magazine pages, ads, etc.
04.12	Paint decorative freehand designs and objects.
04.13	Use palette knife or brush to mix colors.
04.14	Create designs by stripping.
04.15	Demonstrate harmony and contrast of line and shape.

04.16	Demonstrate harmony and contrast of color and tone.
04.17	Demonstrate harmony and contrast of proportion.
04.18	Demonstrate harmony and contrast of texture pattern.
04.19	Demonstrate harmony and contrast of motion.
04.20	Indicate style appropriate to desired impact.
04.21	Make a collage.
05.0	Demonstrate an understanding of typography--The student will be able to:
05.01	Explain proper use, care and cleaning of equipment.
05.02	Identify and select typography materials.
05.03	Define typographic terms, including leading and kerning.
05.04	Identify and select typographic methods.
05.05	Demonstrate the ability to proofread and use proofreaders' marks.
05.06	Explain picas, points and conversion to inches.
05.07	Explain specification of type and copy fitting.
05.08	Identify and select typographic styles.
05.09	Define basic letter structures.
05.10	Demonstrate mixing of families of type.
06.0	Demonstrate proficiency in layout and paste-up--The student will be able to:
06.01	Explain proper use and care of tools.
06.02	Identify parts of a layout.
06.03	Utilize amberlith, rubylith, screens, overlays and register marks.
06.04	Make thumbnail sketch pencil layouts.
06.05	Prepare comprehensives from pencil layouts.

06.06	Prepare camera-ready mechanicals from comprehensives.
06.07	Prepare specific forms of instruction on mechanicals for presentations and for a printer.
06.08	Crop and scale artwork and/or photos for layouts.
06.09	Demonstrate enlarging or reducing with a grid, proportion wheel and other methods.
06.10	Make a color separation with overlays.
06.11	Demonstrate various ruling techniques.
06.12	Demonstrate the uses of different adhesives.
06.13	Specify the use of halftones or special effects.
06.14	Explain layout and color trends.
07.0	Demonstrate proficiency in applied design--The student will be able to:
07.01	Locate and identify resource materials and develop a morgue.
07.02	Design logos.
07.03	Design stationery layouts.
07.04	Design a magazine/book cover or record jacket.
07.05	Design an ad campaign that includes newspapers, magazines and billboards.
07.06	Design a greeting card.
07.07	Design a business card.
07.08	Apply advertising psychology.
07.09	Produce an industrial brochure.
07.10	Design a consumer brochure.
07.11	Construct a package design.
07.12	Produce TV story boards.
07.13	Develop a square and half-drop repeat design.

07.14 Produce computer-assisted artwork. (Optional)

08.0 Demonstrate proficiency in graphic art computer skills--The student will be able to:

08.01 Demonstrate graphic art computer skills using appropriate graphic art programs and hardware.

08.02 Use software and hardware to manipulate and adjust various drawings, pictures and graphic material by computer.

08.03 Produce finished computer projects reflecting current computer graphic art technology.

08.04 Operate various scanners and input devices for computer graphics.



## **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Commercial Art Technology 2  
**Program Type:** Career Preparatory  
**Career Cluster:** Art, A/V Technology and Communication

**PSAV**

Program Number	K600200	
CIP Number	0650040215	
Grade Level	30, 31	
Standard Length	600 hours	
Teacher Certification	COMM ART @7 7G	
CTSO	SkillsUSA	
SOC Codes (all applicable)	27-1024 – Graphic Designers	
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>	
Basic Skills Level	Mathematics:	9
	Language:	9
	Reading:	9

**Purpose**

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

The program content includes the following: basic art skills; lettering skills; preparation of layouts and illustrations; preparation of camera ready paste-up; and development of specialized skills. Additionally, the program includes training in communication, leadership, human relations and employability skills; and safe, efficient work practices.

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

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Commercial Art industry; planning, management, finance, technical and product 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 two occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	GRA0038	Illustrator	300 hours	27-1024
B	GRA0039	Print Media Artist	300 hours	27-1024

## **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 technical art skills.
- 02.0 Demonstrate proficiency in illustration skills.
- 03.0 Demonstrate proficiency in graphic art computer skills.
- 04.0 Demonstrate proficiency in airbrush skills.
- 05.0 Demonstrate proficiency in lettering skills.

Florida Department of Education  
Student Performance Standards

Program Title: Commercial Art Technology 2  
PSAV Number: K600200

**Course Number: GRA0038**  
**Occupational Completion Point: A**  
**Illustrator – 300 Hours – SOC Code 27-1024**

01.0	Demonstrate proficiency in technical art skills--The student will be able to:
01.01	Explain care and respect for all tools and equipment.
01.02	Make computations for centering, spacing and scaling drawings.
01.03	Draw on various types of drafting media.
01.04	Interpret information from drawings, prints and sketches.
01.05	Draw freehand sketches.
01.06	Draw auxiliary views.
01.07	Draw a one and two point perspective.
01.08	Make corrections on a drawing.
01.09	Draw in ink on a variety of surfaces.
01.10	Develop a glossary of technical terms.
01.11	Analyze an object to determine size and shape.
01.12	Draw an oblique drawing.
01.13	Draw an isometric drawing.
01.14	Read and interpret technical charts, graphs and diagrams.
01.15	Evaluate a drawing.
01.16	Make an orthographic drawing using a Computer-Assisted Drafting (CAD) system as an individual or team member.

01.17	Make a print on a plotter.
02.0	Demonstrate proficiency in illustration skills--The student will be able to:
02.01	Explain proper use and care of tools.
02.02	Demonstrate elementary anatomy drawing skills.
02.03	Illustrate using ink, pencil, washes, markers, tempera, watercolor and paints.
02.04	Demonstrate renderings of different textures using the above media.
02.05	Make illustrations using various subjects.
02.06	Make a montage illustration.
02.07	Draw a cartoon.
03.0	Demonstrate proficiency in graphic art computer skills--The student will be able to:
03.01	Demonstrate graphic art computer skills using appropriate graphic art programs and hardware.
03.02	Use software and hardware to manipulate and adjust various drawings, pictures and graphic material by computer.
03.03	Produce finished computer projects reflecting current computer graphic art technology.
03.04	Operate various scanners and input devices for computer graphics.
04.0	Demonstrate proficiency in airbrush skills--The student will be able to:
04.01	Explain proper use and care of tools.
04.02	Identify airbrush parts.
04.03	Perform airbrush exercises: dots, lines and graded shadings.
04.04	Select appropriate surfaces and painting materials.
04.05	Define the use of masking materials.
04.06	Airbrush a painting using masks or brushes.
04.07	Airbrush geometric shapes.
04.08	Airbrush freehand painting.



04.09 Airbrush an illustration of a product.

04.10 Retouch photos.

**Course Number: GRA0039**  
**Occupational Completion Point: B**  
**Print Media Artist – 300 Hours – SOC Code 27-1024**

01.0 Demonstrate advanced proficiency in technical art skills--The student will be able to:

01.01 Explain care and respect for all tools and equipment.

01.02 Make computations for centering, spacing and scaling drawings.

01.03 Draw on various types of drafting media.

01.04 Interpret information from drawings, prints and sketches.

01.05 Draw freehand sketches.

01.06 Draw auxiliary views.

01.07 Draw a one and two point perspective.

01.08 Make corrections on a drawing.

01.09 Draw in ink on a variety of surfaces.

01.10 Develop a glossary of technical terms.

05.0 Demonstrate proficiency in lettering skills--The student will be able to:

05.01 Demonstrate use and care of tools, lettering pens, T-squares and triangles.

05.02 Identify and select lettering styles.

05.03 Perform and use pen, brush, pencil and Leroy lettering.

05.04 Utilize guidelines, margins and spacing for layouts.

05.05 Paint or draw precise lettering for reproduction.

05.06 Utilize various types of prepared lettering processes.

05.07 Produce a sign on poster board.

05.08 Determine and select lettering styles for layout sketches.

## **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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

**PSAV – Cooperative Education - OJT**

Course Number	K609999
CIP Number	06509999CP
Grade Level	30, 31
Standard Length	Multiple hours
Teacher Certification	MKTG 1 ANY VOC FIELD OR COV/TC COOP ED E G ANY FIELD BA OR HIGHER/TC WK EXP E COOR WK EXP @7
CTSO	SkillsUSA
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>

**Purpose**

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

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

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

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

Arts, A/V 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.

## **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  
 PSAV Number: K609999

<b>Standards and Benchmarks</b>	
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 at <http://www.fldoe.org/workforce/dwdframe/pdf/STEPS-Manual.pdf>.

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.

### **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.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Commercial Photography Technology 1  
**Program Type:** Career Preparatory  
**Career Cluster:** Art, A/V Technology and Communication

**PSAV**

Program Number	K610100	
CIP Number	0650040605	
Grade Level	30, 31	
Standard Length	700 hours	
Teacher Certification	PHOTOG @7 7G	
CTSO	SkillsUSA	
SOC Codes (all applicable)	51-9151 – Photographic Process Workers and Processing Machine Operators	
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>	
Basic Skills Level	Mathematics:	9
	Language:	9
	Reading:	9

**Purpose**

The purpose of this program is to prepare students for work as photographers.

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.

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 Art, 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 Art, 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 two occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	PGY0180	Photographic Imaging Specialist (1)	250 hours	51-9151
	PGY0181	Photographic Imaging Specialist (2)	250 hours	
B	PGY0182	Photography Specialist/Lab Technician	200 hours	51-9151

## **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 Reproduce photographic media.
- 09.0 Demonstrate appropriate communication skills.
- 10.0 Operate various format cameras.
- 11.0 Process color images.
- 12.0 Procure color photographs.

Florida Department of Education  
Student Performance Standards

Program Title: Commercial Photography Technology 1  
PSAV Number: K610100

**Course Number: PGY0180**  
**Occupational Completion Point:**  
**Photographic Imaging Specialist (1 of 2) – 250 Hours – SOC Code 51-9151**

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.
01.05	Utilize modern processing machines for color printing.
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	Develop effective advertising.
02.06	Maintain presentational portfolio.

**Course Number: PGY0181**  
**Occupational Completion Point: A**  
**Photographic Imaging Specialist (2 of 2) – 250 Hours – SOC Code 51-9151**

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.
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.
08.0	Demonstrate appropriate communication skills--The student will be able to:
08.01	Write logical and understandable statements, or phrases, to accurately fill out forms/invoices commonly used in business and industry.
08.02	Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area.
08.03	Read and follow written and oral instructions.
08.04	Answer and ask questions coherently and concisely.
08.05	Read critically by recognizing assumptions and implications and by evaluating ideas.
08.06	Demonstrate appropriate telephone/communication skills.



**Course Number: PGY0182**  
**Occupational Completion Point: B**  
**Photography Specialist/Lab Technician – 200 Hours – SOC Code 51-9151**

09.0 Reproduce photographic media--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.

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 a storage device.

11.05 Utilize modern processing machines for color printing.

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.

12.06 Analyze a color print for correct color and contrast.

12.07 Utilize modern processing machines for color printing.

## **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Commercial Photography Technology 2  
**Program Type:** Career Preparatory  
**Career Cluster:** Art, A/V Technology and Communication

**PSAV**

Program Number	K610200	
CIP Number	0650040606	
Grade Level	30, 31	
Standard Length	950 hours	
Teacher Certification	PHOTOG @7 G	
CTSO	SkillsUSA	
SOC Codes (all applicable)	27-4021 – Photographers	
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>	
Basic Skills Level	Mathematics:	9
	Language:	9
	Reading:	9

**Purpose**

The purpose of this program is to prepare students for employment as photographers.

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.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Commercial Photography industry; planning, management, finance, technical and product skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

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 Art, 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 Art, 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 two occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	PGY0183	Portrait Photographer 1	250 hours	27-4021
	PGY0184	Portrait Photographer 2	250 hours	
B	PGY0185	Commercial Photographer	450 hours	27-4021

## **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 Operate various format cameras.
- 02.0 Take studio photographs.
- 03.0 Use digital imaging.
- 04.0 Produce media presentations.
- 05.0 Demonstrate an understanding of entrepreneurship.

Florida Department of Education  
Student Performance Standards

Program Title: Commercial Photography Technology 2  
PSAV Number: K610200

**Course Number: PGY0183**  
**Occupational Completion Point:**  
**Portrait Photographer 1 – 250 Hours – SOC Code 27-4021**

01.0	Operate various format cameras--The student will be able to:
01.01	Use 2¼ format cameras.
02.0	Take studio photographs--The student will be able to:
02.01	Take portraits.
03.0	Use digital imaging--The student will be able to:
03.01	Use basic photographic computer skills.
03.02	Use a professional imagining program.
03.03	Use a flatbed and film scanner.
03.04	Output photographic quality images using a digital printer.
03.05	Use digital camera.

**Course Number: PGY0184**  
**Occupational Completion Point: A**  
**Portrait Photographer 2 – 250 Hours – SOC Code 27-4021**

01.0	Operate various format cameras--The student will be able to:
01.01	Use 2¼ format cameras.
02.0	Take studio photographs--The student will be able to:
02.01	Take portraits.
03.0	Use digital imaging--The student will be able to:



03.01	Use basic photographic computer skills.
03.02	Use a professional imaging program.
03.03	Use a flatbed and film scanner.
03.04	Output photographic quality images using a digital printer.
03.05	Use digital camera.

**Course Number: PGY0185**  
**Occupational Completion Point: B**  
**Commercial Photographer – 450 Hours – SOC Code 27-4021**

04.0	Take studio photographs--The student will be able to:
04.01	Take commercial photographs.
05.0	Produce media presentations--The student will be able to:
05.01	Prepare script for slide presentation.
05.02	Shoot slides for slide presentation.
05.03	Produce slide presentation.
05.04	Prepare script for video presentation.
05.05	Shoot video tape.
05.06	Produce 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.

### **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Digital Design 1  
**Program Type:** Career Preparatory  
**Career Cluster:** Art, A/V Technology and Communication

**PSAV**

Program Number	K700100	
CIP Number	0510030307	
Grade Level	30, 31	
Standard Length	600 hours	
Teacher Certification	BUS ED 1 @2 VOE @ 7 BUS DP @ 7 %G ELECT DP @ 7 %G CLERICAL @ 7 7G SECRETAR 7 G STENOGR @ 4 @ 7 TEC ELEC \$ 7 G COMP SCI @6 @2 COMM ART @7 PRINTING @7 7G TC COOP ED @7	
CTSO	SkillsUSA	
SOC Codes (all applicable)	15-1151 – Computer Support Specialists 43-9031 – Desktop Publisher	
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>	
Basic Skills Level	Mathematics:	9
	Language:	9
	Reading:	9

**Purpose**

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

This program is designed to prepare students for employment as an Information Technology Assistant, Production Assistant, Digital Assistant Designer, Graphic Designer, and Multi-Media Designer.

This program offers a broad foundation of knowledge and skills to prepare students for employment in digital publishing positions. The content includes enhanced practical experiences in computer generated art and text, graphic design, graphic production, electronic design skills, preparation of electronic layouts and illustrations, and electronic scanning; and development of specialized skills in multimedia presentations.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the digital publishing industry: planning; management; finance; technical and production skills; underlying principles of technology and design.

Instructional strategies for this program must include methods that require students to acquire; 1. Digital-Age Literacy - basic scientific, mathematical, and technological literacies - visual and information literacies - cultural literacy and global awareness; 2. Inventive Thinking - adaptability/ability to manage complexity - curiosity, creativity, and risk taking - higher order thinking and sound reasoning; 3. Effective Communication - teaming, collaboration, and interpersonal skills - personal and social responsibility - interactive communication; 4. High Productivity - ability to prioritize, plan, and manage for results - effective use of real-world tools - relevant, high-quality products.

**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.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	OTA0040	Information Technology Assistant*	150 hours	15-1151
B	GRA0024	Production Assistant	150 hours	43-9031
C	GRA0025	Digital Assistant Designer	300 hours	43-9031

\* Note: OTA0040 is a core program.

## **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, skill, and application of information systems to accomplish job objectives and enhance workplace performance.
- 02.0 Demonstrate comprehension and communication skills
- 03.0 Use technology to enhance the effectiveness of communication skills.
- 04.0 Demonstrate proficiency using computer networks, internet and online databases to facilitate collaborative or individual learning and communication.
- 05.0 Use database and spreadsheet applications.
- 06.0 Incorporate appropriate leadership and supervision techniques, customer service strategies, and standards of personal ethics to accomplish job objectives and enhance workplace performance.
- 07.0 Investigate management functions and organizational structures as they relate to today's workplace and employer/employee roles.
- 08.0 Apply mathematical operations and processes as well as financial planning strategies to commonly occurring situations in the workplace to accomplish job objectives and enhance workplace performance.
- 09.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals.
- 10.0 Demonstrate personal and interpersonal skills appropriate for the workplace.
- 11.0 Perform e-mail activities.
- 12.0 Demonstrate proficiency using slide presentation software.
- 13.0 Demonstrate proficiency using HTML commands.
- 14.0 Demonstrate proficiency in page design applicable to the WWW.
- 15.0 Investigate emerging technologies.
- 16.0 Demonstrate proficiency using common software applications.
- 17.0 Demonstrate knowledge of different operating systems.
- 18.0 Demonstrate proficiency in computer skills.
- 19.0 Demonstrate knowledge of digital publishing concepts.
- 20.0 Perform decision-making activities.
- 21.0 Perform layout, design, and measurement activities.
- 22.0 Demonstrate proficiency in digital publishing operations.
- 23.0 Demonstrate proficiency in digital imaging.
- 24.0 Demonstrate proficiency in creating a simple website.
- 25.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals.
- 26.0 Demonstrate proficiency in computer skills.
- 27.0 Perform decision-making activities.
- 28.0 Demonstrate proficiency in digital publishing operations.
- 29.0 Demonstrate proficiency in digital imaging.
- 30.0 Demonstrate proficiency in multimedia presentation.

Florida Department of Education  
Student Performance Standards

Program Title: Digital Design  
PSAV Number: B070600

<b>Course Number: OTA0040</b>	
<b>Occupational Completion Point: A</b>	
<b>Information Technology Assistant – 150 Hours – SOC Code 15-1151</b>	
01.0	Demonstrate knowledge, skill, and application of information systems to accomplish job objectives and enhance workplace performance – The student will be able to:
01.01	Develop keyboarding skills to enter and manipulate text and data.
01.02	Describe and use current computer technology and software to perform personal and business related tasks in the workplace by establishing digital calendars, meetings, appointments, and create and manipulate e-mail contacts.
01.03	Identify and describe types of file systems and classify common file extensions based on software application programs used in the workplace environment.
01.04	Use reference materials such as on-line help, tutorials, and manuals available for application software.
01.05	Demonstrate basic computer file management skills and file naming conventions to accurately organize files into hierarchies by labeling file folders for easy accessibility.
01.06	Discuss the process of troubleshooting problems with computer hardware peripherals, including input and output devices in the workplace environment.
01.07	Describe ethical issues and problems associated with computers and information systems, including federal laws against anti-piracy with computers and PC software security protection.
01.08	Apply ergonomic principles and view devices applicable to computer workstation and the workplace environment.
02.0	Demonstrate comprehension and communication skills – The student will be able to:
02.01	Read and comprehend technical and non-technical reading assignments related to course content, including, books, magazines and electronic sources.
02.02	Write clear and well-organized research papers using MLA or APA documentation formats, integrating software applications for documentation setup. Demonstrate knowledge of ethical behavior regarding plagiarism and copyright violations.
02.03	Prepare and deliver a report using appropriate presentation software.
02.04	Select a team leader to facilitate large group discussions with team members.
02.05	Take notes, organize, summarize, and paraphrase main ideas and details using various note taking systems and reading strategies.
02.06	Apply the writing process to the creation of appropriate documents following designated business formats.



02.07	Interpret data on line graphs, pie charts, diagrams, and tables commonly used in spreadsheet software applications that incorporate industry data.
02.08	Demonstrate an awareness of project management concepts and tools (e.g., timelines, deadlines, resource allocation, time management, delegation of tasks, collaboration, etc.).
03.0	Use technology to enhance the effectiveness of communication skills – The student will be able to:
03.01	Select and use word processing software and accompanying features to enhance written business communications.
03.02	Share and maintain documents by applying different views and protection to a document and manage document versions. Share and save a document and apply a template.
03.03	Format content to a document by applying font, paragraph attributes, indent and tab settings to text and paragraphs. Apply spacing settings to text and paragraphs. Navigate and search through a document, create and manipulate tables.
03.04	Apply page layout and reusable content by editing and manipulating page setup settings and applying themes. Construct content by using the building blocks tools. Create and manipulate page backgrounds, headers and footers.
03.05	Use image design theory and software to create illustrations, shapes, and graphics and include a selection in a document. Insert and format pictures, shapes, and clipart. Apply and manipulate text boxes.
03.06	Proofread documents by validating content through the use of spell and grammar check. Configure autocorrect settings, insert and modify comments in a document.
03.07	Apply references and hyperlinks, create end and footnotes, and create a table of contents in a document.
03.08	Perform various mail merge options.
04.0	Demonstrate proficiency using computer networks, internet and online databases to facilitate collaborative or individual learning and communication – The student will be able to:
04.01	Demonstrate how to connect to the Internet and use appropriate Internet protocol. Identify and describe web terminology, addresses and how browsers work.
04.02	Demonstrate proficiency using basic features of GUI browsers, including: bookmarks, basic configurations, e-mail configurations, and address books. Describe appropriate browser security configurations.
04.03	Describe information technology terminology, including Internet, intranet, ethics, copyright laws, and regulatory control.
04.04	Demonstrate proficiency using search engines and search tools.
04.05	Use various web tools, including: downloading files, transfer of files, telnet, PDF, plug-ins, and data compression. Identify Boolean search strategies.
04.06	Use computer networks, including on-line databases and resources to facilitate collaborative or individual learning and communication.
04.07	Describe how business transactions and academic applications are supported by interactive web applications, including sharing photos and video clips, messaging, chatting and collaborating.
04.08	Describe appropriate use of social networking sites and applications, blogs and collaborative tools for file sharing and using list servers.
05.0	Use database and spreadsheet applications – The student will be able to:

05.01	Manage the worksheet environment by navigating through and printing a worksheet. Personalize the environment by manipulating the ribbon tabs, group settings, importing data, manipulating properties, files and folders.
05.02	Create cell data, apply auto fill and hyperlinks.
05.03	Format cells and worksheets by applying cell formats, merging and splitting cells, create row and column titles, hide and unhide column titles, rows and columns. Manipulate page set up options. Create and apply cell styles.
05.04	Manage worksheets and workbooks by creating and formatting worksheets and manipulating views.
05.05	Apply formulas and functions by creating formulas, enforcing precedence and cell formula references. Apply conditional formula logic, name and cell ranges.
05.06	Demonstrate data visually by creating and modifying charts and images.
05.07	Share worksheet data through email, changing file type and different versions. Manage comments.
05.08	Analyze and organize data through filters, sorting and applying conditional formatting.
06.0	Incorporate appropriate leadership and supervision techniques, customer service strategies, and standards of personal ethics to accomplish job objectives and enhance workplace performance – The student will be able to:
06.01	Demonstrate awareness of the following workplace essentials: Quality customer service; business ethics; confidentiality of information; copyright violations; accepted workplace rules, regulations, policies, procedures, processes, and workplace safety, and appropriate attire and grooming.
07.0	Investigate management functions and organizational structures as they relate to today's workplace and employer/ employee roles – The student will be able to:
07.01	Explore, design, implement, and evaluate organizational structures and cultures for managing project teams.
07.02	Explore and demonstrate an awareness of current trends in business and the employee's role in maintaining productive business environments in today's global workplace.
08.0	Apply mathematical operations and processes as well as financial planning strategies to commonly occurring situations in the workplace to accomplish job objectives and enhance workplace performance – The student will be able to:
08.01	Analyze, interpret, compile, and demonstrate the ability to present and communicate data in understandable and measurable terms using common statistical procedures using charts and graphs.
08.02	Use common standards of measurement including the metric system in solving work-related or business problems (e.g., length, weight, currency, time).
08.03	Select and use the correct mathematical processes and tools to solve complex problem situations that are typical of business settings and use formulas and spreadsheets when appropriate.
09.0	Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals – The student will be able to:
09.01	Analyze personal skills and aptitudes in comparison with various business related job and career options.
09.02	Use career resources to develop an information base that reflects local and global business related occupations and opportunities for continuing education and workplace experience.
09.03	Demonstrate job-seeking skills required for entry-level employment, including resume, cover letter, thank you letter, online/hard copy application, mock interview, and follow-up call.

09.04	Design and initiate a plan to facilitate growth and skill development related to anticipated job requirements and career expectations.
09.05	Refine and implement a plan to facilitate personal growth and skill development related to anticipated job requirements and career expectations.
09.06	Demonstrate an awareness of specific job requirements and career paths (e.g., requirements, characteristics needed) in business environments.
09.07	Demonstrate an awareness of the potential impact of local and global trends on career plans and life goals.
09.08	Describe the importance of building community and mentor relationships in a variety of professional and workplace situations.
10.0	Demonstrate personal and interpersonal skills appropriate for the workplace – The student will be able to:
10.01	Demonstrate ways of accepting constructive criticism on team projects within the workplace.
10.02	Apply appropriate strategies to manage and resolve conflicts in work situations.
10.03	Demonstrate human relations, personal and interpersonal skills appropriate for the workplace, including: responsibility, dependability, punctuality, integrity, positive attitude, initiative, respect for self and others, and professional dress.
11.0	Perform e-mail activities – The student will be able to:
11.01	Describe and perform e-mail capabilities and functions. Create and send messages, manage signature and automated messages. Save, send, schedule, and manage junk mail, e-mail and spam. Configure message sensitivity, security and delivery options.
11.02	Use the Internet to perform e-mail activities, including: attaching external files, saving e-mail attachments, viewing mailbox details, establishing appointments, creating contact groups, and sending a meeting to a contact group to communicate in the workplace.
11.03	Manage tasks and organize information.
12.0	Demonstrate proficiency using slide presentation software – The student will be able to:
12.01	Manage and configure the presentation software environment, including: adjusting views, manipulating window, configuring toolbar and file options.
12.02	Create slide presentations utilizing various project development elements, including: adding and removing slides, slide layouts, format slide design, insert or format placeholders.
12.03	Locate, create and incorporate graphical and multimedia elements, including: shapes, graphics, images, bullets, hyperlinks, video, and audio into a slide presentation appropriate for the project.
12.04	Explore and apply design and color theory to create dynamic and appealing visuals.
12.05	Explore various design tools and applications.
12.06	Create and manipulate graphical and multimedia elements to improve or develop new contacts appropriate for the project, including: creation of images, color selections, tone, hue and contrast.
12.07	Demonstrate various business-related elements that can be created, embedded and manipulated in a slide presentation, including: charts, graphs, tables, spreadsheets, flowcharts, and organizational charts.
12.08	Apply slide transitions and create custom animations to slide presentations appropriate for the target audience.

12.09	Demonstrate different delivery methods for slide presentations, including: packaging for CD delivery, video projection – on mouse click, rehearsed timings, printing options - outlines, handouts, slides and notes.
13.0	Demonstrate proficiency using HTML commands – The student will be able to:
13.01	Identify elements of a Web page.
13.02	Describe individual Web page layouts and content (e.g., writing for the Web, Web structure).
13.03	Define basic HTML terminology.
13.04	Analyze HTML source code developed by others.
13.05	Create Web pages using basic HTML tags (e.g., links, lists, character styles, text alignment, tables).
13.06	Use storyboarding techniques for subsequent Web pages (e.g., linear, hierarchical).
13.07	Edit and test HTML documents for accuracy and validity.
13.08	Use basic functions of WYSIWYG editors.
13.09	Use basic functions of HTML, DHTML, and XML editors and converters.
13.10	Enhance web pages through the addition of images and graphics including animation.
14.0	Demonstrate proficiency in page design applicable to the WWW – The student will be able to:
14.01	Develop an awareness of acceptable Web page design, including index pages in relation to the rest of the Web site.
14.02	Describe and apply color theory as it applies to Web page design (e.g., background and text color).
14.03	Access and digitize graphics through various resources (e.g., scanner, digital cameras, on-line graphics, clipart, CD-ROMs).
14.04	Use image design software to create and edit images.
14.05	Demonstrate proficiency in publishing to the Internet.
14.06	Demonstrate proficiency in adding downloadable forms to web pages.
14.07	Explain the need for web-based applications.
15.0	Develop an awareness of emerging technologies – The student will be able to:
15.01	Compare and contrast various methods of evaluation for emerging technologies.
15.02	Demonstrate knowledge of the process of planning upgrades and changeovers.

15.03	Compare and contrast emerging technologies and describe how they impact business in the global marketplace (e.g., wireless, wireless web, cell phones, portables/handhelds, smart appliances, home networks, peer-to-peer, etc.).
16.0	Demonstrate proficiency using common software applications – The student will be able to:
16.01	Compare and contrast the appropriate use of various software applications (e.g., word processing, desktop publishing, graphics design, web browser, e-mail, presentation, database, scheduling, financial management, Java applet, music, etc.).
16.02	Demonstrate proficiency in the use of various software applications (e.g., word processing, desktop publishing, graphics design, web browser, e-mail, presentation, database, scheduling, financial management, Java applet, music, etc.).
17.0	Demonstrate knowledge of different operating systems – The student will be able to:
17.01	Identify operating system file naming conventions.
17.02	Demonstrate proficiency with file management and structure (e.g., folder creation, file creation, backup, copy, delete, open, save).
17.03	Demonstrate a working knowledge of standard file formats.
17.04	Explain the history and purpose of various operating systems (e.g., DOS, Windows, Mac, and Unix/Linux).

**Course Number: GRA0024**  
**Occupational Completion Point: B**  
**Production Assistant – 150 Hours – SOC Code 43-9031**

18.0	Demonstrate proficiency in computer skills--The student will be able to:
18.01	Identify basic computer parts (e.g., RAM, ROM).
18.02	Demonstrate an understanding of all functions of a computer.
18.03	Utilize appropriate font management techniques (e.g., true type, postscript, install and remove fonts).
18.04	Perform storage management (e.g., hard drive, DVD, CD).
18.05	Perform basic maintenance of computers and peripherals.
19.0	Demonstrate knowledge of digital publishing concepts--The student will be able to:
19.01	Identify the skills needed by a digital designer.
19.02	Define commonly used terms in graphic communications.
19.03	Identify characteristics of paper.
19.04	Identify different kinds of color (e.g., spot, process).
19.05	Identify software used in digital publishing.

19.06	Demonstrate knowledge of copyright laws.
20.0	Perform decision-making activities--The student will be able to:
20.01	Determine work priorities.
20.02	Evaluate information to be used and choose relevant material.
20.03	Determine the audience.
20.04	Demonstrate an understanding of various advertising mediums.
20.05	Recognize and maintain ethical standards.
21.0	Perform layout, design, and measurement activities--The student will be able to:
21.01	Identify characteristics of type, type families, type series, and type styles.
21.02	Assemble mechanical elements electronically
21.03	Prepare rough layout designs.
21.04	Identify elements of design.
22.0	Demonstrate proficiency in digital publishing operations--The student will be able to:
22.01	Key with speed and accuracy to meet industry standards
22.02	Demonstrate core publishing skills, including creating tables, text boxes, manipulating graphics and inserting images.
22.03	Insert and format references and captions
22.04	Complete projects using a variety of fonts, sizes, leading, and alignments.
22.05	Output projects using a variety of devices (e.g., printers, image setters).
22.06	Design with type using kerning, tracking, horizontal/vertical scale, baseline shift, etc.
22.07	Produce projects using tables, layouts and templates.
22.08	Produce projects using white space.
22.09	Assemble multipage documents.
22.10	Create documents that use master pages.

22.11	Use a variety of styles to produce effective layouts
22.12	Produce a document using printer and reader spreads.
22.13	Use publishing software to create a pre-press profile.
22.14	Produce a variety of designs using layout/paste up software.
22.15	Create various print and digital publications, including: business cards, letterheads, brochures, newsletters, and calendars.
22.16	Create electronic forms.
22.17	Assign passwords and create restrictions with portable document formats.
22.18	Design an electronic portfolio.
23.0	Demonstrate proficiency in digital imaging--The student will be able to:
23.01	Demonstrate proper use of a scanner/input devices/digital camera.
23.02	Proofread electronically and manually.
24.0	Demonstrate proficiency in creating a simple website--The student will be able to:
24.01	Create a webpage.
24.02	Create a simple website and use hyperlinks.
24.03	Convert publications for viewing on the Internet.
24.04	Save files in multiple formats.
24.05	Create, send and manage a survey and survey results.

**Course Number: GRA0025**

**Occupational Completion Point: C**

**Digital Assistant Designer – 300 Hours – SOC Code 43-9031**

25.0	Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals--The student will be able to:
25.01	Prepare a portfolio.
25.02	Present a portfolio to an audience.
26.0	Demonstrate proficiency in computer skills--The student will be able to:

26.01	Understand computer management skills (e.g., install and remove software, folder management, shortcuts, etc.).
26.02	Perform storage management activities using a variety of devices (e.g., CD ROM, monitors, modems, zip drives, jazz drives).
26.03	Understand disk utilities and virus protection activities.
26.04	Understand how to update existing software to new versions.
27.0	Perform decision-making activities--The student will be able to:
27.01	Determine project specifications.
28.0	Demonstrate proficiency in digital publishing operations--The student will be able to:
28.01	Produce multiple color designs using different color techniques including process color and spot color.
28.02	Prepare output files using pre-press preparations (e.g., color separation, font management, file management, use of postscript fonts, etc.)
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 elements of design.
28.06	Demonstrate proficiency in the use of a vector and pixel based illustration programs.
29.0	Demonstrate proficiency in digital imaging--The student will be able to:
29.01	Crop and scale photographs electronically.
29.02	Demonstrate proficiency in use of an understanding of formats and modes (e.g., EPS, TIFF, PICT, JPEG, ASCII, binary).
29.03	Demonstrate use of image editing software.
29.04	Complete projects using proper resolution and screen values (e.g., PPI, LPI, DPI).
29.05	Produce electronically retouched photographs.
29.06	Produce projects using a digital camera.
29.07	Scan multiple documents.
29.08	Crop and scale photographs electronically using a scanner.
29.09	Apply the use of proper resolution and screen values (e.g., PPI, LPI, DPI in documents).



29.10 Produce electronically retouched photographs using tones, hues, and values.

29.11 Apply special effects to image files.

30.0 Demonstrate proficiency in multimedia presentation--The student will be able to:

30.01 Create various quality PDF 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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Digital Design 2  
**Program Type:** Career Preparatory  
**Career Cluster:** Art, A/V Technology and Communication

**PSAV**

Program Number	K700200	
CIP Number	0510030308	
Grade Level	30, 31	
Standard Length	600 hours	
Teacher Certification	BUS ED 1 @ 2 VOE @ 7 BUS DP @ 7 %G ELECT DP @ 7 %G CLERICAL @ 7 7G SECRETAR 7 G STENOGR @ 4 @ 7 TEC ELEC \$ 7 G COMP SCI @6 @2 COMM ART @7 PRINTING @7 7G TC COOP ED @7	
CTSO	SkillsUSA	
SOC Codes (all applicable)	27-1014 – Multimedia Artists and Animators 27-1024 – Graphic Designers	
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>	
Basic Skills Level	Mathematics:	9
	Language:	9
	Reading:	9

**Purpose**

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

This program is designed to prepare students for employment as an Information Technology Assistant, Production Assistant, Digital Assistant Designer, Graphic Designer, and Multi-Media Designer.

This program offers a broad foundation of knowledge and skills to prepare students for employment in digital publishing positions. The content includes enhanced practical experiences in computer generated art and text, graphic design, graphic production, electronic design skills, preparation of electronic layouts and illustrations, and electronic scanning; and development of specialized skills in multimedia presentations.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the digital publishing industry: planning; management; finance; technical and production skills; underlying principles of technology and design.

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

### **Program Structure**

This program is a planned sequence of instruction consisting of two occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	GRA0026	Graphic Designer	300 hours	27-1024
B	GRA0027	Media Designer	300 hours	27-1014

## **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 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals.
- 02.0 Demonstrate proficiency in digital publishing operations.
- 03.0 Demonstrate proficiency in digital imaging.
- 04.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional.
- 05.0 Demonstrate proficiency in computer skills.
- 06.0 Perform decision-making activities.
- 07.0 Demonstrate proficiency in digital publishing operations.
- 08.0 Demonstrate proficiency in multimedia presentation.

Florida Department of Education  
Student Performance Standards

Program Title: Digital Design 2  
PSAV Number: K700200

<b>Course Number: GRA0026</b>	
<b>Occupational Completion Point: A</b>	
<b>Graphic Designer – 300 Hours – SOC Code 27-1024</b>	
01.0	Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals--The student will be able to:
01.01	Create an electronic resume.
01.02	Prepare a portfolio
01.03	Create an electronic portfolio.
01.04	Present a portfolio to an audience.
02.0	Demonstrate proficiency in digital publishing operations--The student will be able to:
02.01	Produce designs integrating all elements of design
02.02	Produce electronic vector illustrations using digital software.
02.03	Produce multiple projects using a variety of digital software.
02.04	Prepare output files using pre-press protocols (e.g., color separation, font management, file management, use of postscript fonts, etc.).
02.05	Perform integrated functions using various design software applications.
02.06	Create documents using advanced features in layout software.
03.0	Demonstrate proficiency in digital imaging--The student will be able to:
03.01	Produce projects using vector and pixel art, gray scale, duotone, and four-color process.
03.02	Emphasize, interpret, and establish mood and emotion using illustrations.
03.03	Apply special effects to projects.



**Course Number: GRA0027**  
**Occupational Completion Point: B**  
**Media Designer – 300 Hours – SOC Code 27-1014**

04.0 Incorporate knowledge gained from individual assessment and job/career exploration to design an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals -- The student will be able to:

04.01 Create an electronic resume.

04.02 Create an electronic portfolio.

04.03 Present a portfolio to an audience.

05.0 Demonstrate proficiency in computer skills--The student will be able to:

05.01 Demonstrate basic functions of presentation formats (website, multimedia, digital slide show).

06.0 Perform decision-making activities--The student will be able to:

06.01 Compare and select appropriate multimedia tools.

07.0 Demonstrate proficiency in digital publishing operations--The student will be able to:

07.01 Produce a variety of designs integrating multimedia software.

07.02 Produce multiple color designs using proper color balance for presentation.

07.03 Create electronic presentations.

08.0 Demonstrate proficiency in multimedia presentation--The student will be able to:

08.01 Select appropriate fonts for on-screen presentation.

08.02 Generate presentations with fully integrated text and images.

08.03 Create PDF files.

08.04 Create links.

08.05 Optimize images for the Web (e.g., file size, transmission time).

08.06 Build pages for media presentations and standards.

08.07 Link media elements into Web-delivered documents

08.08 Create presentations using color effects.

## **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.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9 Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

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

**PSAV**

Program Number	V200400
CIP Number	0419090606
Grade Level	30, 31
Standard Length	600 hours
Teacher Certification	HME EC OCC $\phi$ 7 HOMEMAKING @2 $\phi$ 7 FAM CON SC 1 APPRL MFG $\phi$ 7 @7G TEC ED 1 @2 TAILORING $\phi$ 7 FASH TECH 7G
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
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

**Purpose**

The purpose of this program is to prepare students for initial employment or continued study in the Fashion 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 the following aspects of the fashion 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.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	HEV0010	Retail Sales	150 hours	41-2031
B	HEV0011	Tailor, Dressmaker, Custom Sewer	150 hours	51-6052
C	HEV0012	Fabric and Apparel Patternmakers	150 hours	51-6092
D	HEV0013	Fashion Coordinator/Stylist	150 hours	27-1022

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

Florida Department of Education  
Student Performance Standards

Program Title: Fashion Design Services  
PSAV Number: V200400

<b>Course Number: HEV0010</b>	
<b>Occupational Completion Point: A</b>	
<b>Retail Sales – 150 Hours – SOC Code 41-2031</b>	
01.0	Demonstrate leadership and organizational skills–The student will be able to:
01.01	Identify professional and youth organizations.
01.02	Identify purposes and functions of professional and youth organizations.
01.03	Identify roles and responsibilities of members.
01.04	Demonstrate cooperation as a group member in achieving
01.05	Demonstrate confidence in leadership roles and organizational responsibilities.
02.0	Demonstrate appropriate basic skills essential to working in occupations in design services–The student will be able to:
02.01	Identify the communication knowledge, skills, and attitudes necessary to perform the occupational tasks.
02.02	Demonstrate communication competencies necessary to perform the occupational tasks.
03.0	Identify and exhibit employment skills–The student will be able to:
03.01	Conduct a job search using the internet, media center, phone, or a computerized model.
03.02	Secure information about a job and advanced training opportunities for the job and report in a written or oral format.
03.03	Demonstrate computer proficiency through creating, revising, retrieving and verifying information.
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 of human factors to design services–The student will be able to:
04.01	Define the elements of design that are applicable to fashion and/or interior design (space, line, shape, form, texture, color).



04.02	Define the principles of design that applicable to fashion and/or interior design (proportion, scale, balance, emphasis, rhythm, harmony).
04.03	Explain the impact of human factors (psychological, physiological, and social needs) on decisions relating to the design services process.
04.04	Identify and describe modifications necessary to accommodate individuals with special needs.
04.05	Identify and describe the impact of human needs and wants on the cost of design services and customized garments.
04.06	Identify and describe the importance of barrier-free design and accessibility related to design services.
04.07	Identify and describe characteristics of properly fitted garments/interior spaces and furnishings.
04.08	Take accurate measurements to determine correct size of garments or home furnishings items.
05.0	Identify textile characteristics and care—After teacher demonstration, textbook/multi-media research or following sample instruction the student will be able to:
05.01	Identify and describe fiber characteristics.
05.02	Identify and describe types of fabric construction.
05.03	Identify and describe types of fabric finishes.
05.04	Identify and describe types of textiles.
05.05	Identify laws and regulations governing the textile industry including labeling laws.
06.0	Select and use tools and equipment safely—After teacher demonstration or textbook/multi-media research the student will be able to:
06.01	Identify the tools and equipment used in design services.
06.02	Select the appropriate tools and equipment for assigned projects.
06.03	Demonstrate the proper and safe use of tools and equipment.
06.04	Identify and demonstrate safety procedures in using conventional sewing machines and home sergers.
06.05	Identify and demonstrate safety procedures in using pressing equipment.
06.06	Clean and maintain various types of tools and equipment.
06.07	Keep an inventory record of tools, equipment, supplies, and materials using computer application software.
06.08	Explain the importance of observing Occupational Safety and Health Administration (OSHA) rules and regulations.
06.09	Research innovations in materials and technologies that have contributed to safeguards in the tools and equipment used in design services.

06.10	Identify the development of tools, equipment and technology used in design services as they relate to particular historical periods.
06.11	Identify and apply drafting tools and techniques to a specific design services project.
07.0	Operate and maintain a conventional and commercial/industrial sewing machine—After teacher demonstration, textbook/multi-media research or following manufacturer’s instructions, the student will be able to:
07.01	Identify the parts of the sewing machine.
07.02	Identify the process and demonstrate needle insertion, selecting the needle that is appropriate for various fabrics.
07.03	Identify the steps and demonstrate threading the sewing machine.
07.04	Diagram and demonstrate bobbin winding, threading the bobbin case, and inserting the bobbin correctly into the sewing machine.
07.05	Demonstrate straight stitching.
07.06	Identify and demonstrate stitch length and width selection.
07.07	Demonstrate utility and decorative stitches.
07.08	Identify the tension and demonstrate tension adjustment.
07.09	Demonstrate cleaning and lubricating the machine following manufacturer’s instructions.
08.0	Operate specialty machines (minimum of four machines if available)—After a teacher demonstration the student will be able to identify and operate at least four of the following machines:
08.01	Electronic programmable machines.
08.02	Serger
08.03	Pleater
08.04	Blindstitch machine
08.05	Straight stitch machine
08.06	Chain stitch machine
08.07	Cutting machine
08.08	Bar tack
08.09	Zigzag machine
09.0	Select and prepare materials—The student will be able to:

09.01	Identify and match pattern pieces.
09.02	Read and interpret instructions and specifications.
09.03	Identify fabric content.
09.04	Prepare fabric.
09.05	Adjust patterns following pattern directions.
09.06	Lay out, pin, cut, and mark fabric according to pattern directions.
09.07	Demonstrate stay stitching and ease stitching.
09.08	Lay out fabrics according to pattern/teacher instructions.
09.09	Match grain lines and patterns according to pattern/teacher instructions.
09.10	Mark fabric for assembly according to pattern/teacher instructions.
09.11	Mark fabric for trims according to pattern/teacher instructions.
09.12	Match thread with fabric synthesizing visual arts knowledge.
09.13	Identify, select, and use content label(s) according to fabric requirements.
10.0	Construct a machine sewn design project for inclusion in portfolio–The student will be able to:
10.01	Construct a project that includes a seaming, darts, interfacing, seam finishing, hem, closure and pocket.
10.02	Line up notches, dots, or clips according to pattern/teacher instructions.
10.03	Stitch on woven, stretch, or specialty fabrics using appropriate stitch length for fabrics.
10.04	Demonstrate correct pressing techniques following fabric requirements.
10.05	Demonstrate machine hemming following machine manual instructions.
11.0	Develop a design portfolio–The student will be able to:
11.01	Assemble a portfolio including all samples.

**Course Number: HEV0011**  
**Occupational Completion Point: B**  
**Tailor, Dressmaker, Custom Sewer – 150 Hours – SOC Code 51-6052**

12.0	Identify employment opportunities in Fashion Design Services–The student will be able to:
12.01	Secure information about a job and advanced training opportunities for the job and report in a written or oral format.
12.02	Demonstrate computer proficiency through creating, revising, retrieving and verifying information.
12.03	Apply the principles of time management, work simplification, and teamwork when performing assigned tasks.
12.04	Demonstrate pride in the quality of work performed.
12.05	Identify career options in Fashion Design Services such as entrepreneurship.
12.06	Create a presentation on non-traditional career paths (costume design, theater, entertainment, buyers, fabric store owners etc.) in the garment/textile industry.
12.07	Analyze current trends as they may affect the future of occupations in Fashion Design Services.
12.08	Identify different earning and wage level options for occupations in Fashion Design Services.
13.0	Demonstrate appropriate basic skills essential to working in occupations in Fashion Design Services–The student will be able to:
13.01	Identify the mathematics knowledge, skills, and attitudes necessary to perform the occupational tasks.
13.02	Identify the scientific knowledge, skills, and attitudes necessary to perform the occupational tasks.
13.03	Demonstrate math competencies necessary to perform the occupational tasks.
13.04	Demonstrate scientific competencies necessary to perform the occupational tasks.
13.05	Distinguish between specifics of individual vs. mass production design needs.
14.0	Identify and exhibit employment skills for occupations related to Fashion Design Services–The student will be able to:
14.01	Identify and list documents that may be required when applying for a job.
14.02	Complete a job application form accurately.
14.03	Demonstrate competence in job interview techniques using role playing techniques.
14.04	Identify and demonstrate appropriate responses to criticism from an employer, supervisor, or co-worker.
14.05	Identify and demonstrate acceptable work habits including a positive attitude.
14.06	Demonstrate knowledge of how to make job changes appropriately.

14.07	Identify and describe acceptable employee health and hygiene habits.
14.08	Demonstrate customer relations skills synthesizing given instructions.
14.09	Develop and create a resume' and portfolio following a given format.
15.0	Demonstrate an understanding of the elements and principles of design—After teacher demonstration, textbook/multimedia research or professional presentation, the student will be able to:
15.01	Identify and explain the elements of design and how various effects can be achieved in relation to Fashion Design Services through written/oral reporting or demonstrations: texture, pattern, line, form and shape, space, color, and light.
15.02	Identify and explain the principles of design and how they can be used effectively in Fashion Design Services using a variety of research and reporting methods: proportion, scale, balance, rhythm, emphasis, and harmony.
15.03	Apply the elements and principles of design to Fashion Design Services.
15.04	Develop a project applying color and color schemes in a design.
15.05	Evaluate good design by using the laws of design.
15.06	Create elements and principles of design portfolio.
16.0	Demonstrate an understanding of the terminology used in the apparel industry—The student will be able to:
16.01	Complete a research project dealing with aspects of fashion retail and production including terminology, labels, designers, manufacturers and stores used within the apparel industry.
17.0	Operate specialty machines (if available)—After a teacher demonstration the student will be able to identify and operate at least four of the following machines:
17.01	Electronic programmable machines.
17.02	Serger
17.03	Straight stitch machine
17.04	Zigzag machine
17.05	Embroidery machine
18.0	Demonstrate skill in construction of simple garments—The student will be able to:
18.01	Identify common ready to wear sizes.
18.02	Identify and describe characteristics of a properly fitted garment.
18.03	Take accurate body measurements, select pattern size, and determine figure type.
18.04	Interpret verbal, written, and visual directions.

18.05	Prepare fabric and adjust patterns following pattern directions.
18.06	Lay out, pin, cut, and mark fabric according to pattern specifications.
18.07	Demonstrate stay stitching and ease stitching.
18.08	Demonstrate stitching darts and tucks.
18.09	Identify and match garment pieces using markings and stitching following directions.
18.10	Match plaids, stripes and one-way designs following specified instructions.
18.11	Demonstrate correct pressing techniques following fabric requirements.
18.12	Demonstrate casing and elastic installation.
18.13	Demonstrate machine hemming following machine manual instructions.
18.14	Identify types of sergers and their characteristics
19.0	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:
19.01	Demonstrate an understanding of eco fashion.
19.02	Identify materials that can be used to make eco-friendly fashions and accessories and why these materials are eco-friendly.
19.03	Compare the working conditions of employees in the workplace when materials are produced following eco-friendly guidelines and when they are not.
19.04	Research methods for using vegetable and plant materials for eco-friendly fashions and replacing these materials back into the environment.
19.05	Describe ways to be eco-friendly and the environmental and social responsibility of eco-friendly methods.
19.06	Design and create an eco-friendly fashion product.

**Course Number: HEV0012**  
**Occupational Completion Point: C**  
**Fabric and Apparel Patternmakers – 150 Hours – SOC Code 51-6092**

20.0	Research how fashion design is affected by history and culture–The student will be able to:
20.01	Identify design periods from 1900 to the present day.
20.02	Explain the influence of earlier design periods on present day design.
20.03	Describe the elements and principles of design as they relate to a particular time period/culture.
20.04	Create a multi-media presentation detailing a selected design period.
21.0	Demonstrate sketching and free hand drawing skills–The student will be able to:
21.01	Demonstrate sketching and shading techniques.
21.02	Create inspiration boards to display the sketches and drawings.
21.03	Select and develop a design collection according to determined criteria using sketching and shading techniques to be used in portfolio.
22.0	Demonstrate an understanding of how technology is used in the fashion industry–The student will be able to:
22.01	Research and list software available in the area of fashion design.
22.02	Demonstrate an understanding of how current technologies (CAD, electronic sewing, knitting, embroidery machines, sergers) are used in the creation of fashion products (e.g. fashion profiles, fabrics, garments).
22.03	Analyze how certain technologies are used in the fashion design industry.
22.04	Create a fashion product using two or more technologies appropriately.
22.05	Research innovations in materials and technologies that have contributed to safeguards in the tools and equipment used in design services.
22.06	Identify the development of tools, equipment and technology used in design services as they relate to particular historical periods.
23.0	Identify the psychological and practical needs for clothing for special markets–The student will be able to:
23.01	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).
23.02	Plan and implement a fashion design project based on a specific human or environmental factor.
24.0	Create an original pattern for a garment–The student will be able to:

24.01	Plan and report on a fashion design project using established criteria.
24.02	Using appropriate software, insert body measurements to produce a pattern.
24.03	Create a muslin prototype of the pattern.
24.04	Evaluate the prototype for proper fit and adjust as needed.
24.05	Construct a specialty garment(s) according to teacher instructions - project must include a minimum number of construction skills as designated by teacher.
25.0	Demonstrate alteration skills on a sample or garment–The student will be able to:
25.01	Remove stitches in ready-made garments without damaging fabric.
25.02	Mark and even a hemline following guidelines.
25.03	Lengthen and shorten hems in pants, skirts, or dresses (include cuffs and use of hem tape)
25.04	Remove the flare from pant legs following a given set of directions.
25.05	Taper a skirt following a given set of directions.
25.06	Shorten the crotch rise in a garment/sample.
25.07	Take in the waist on a man’s garment/sample.
25.08	Take in the waist on a woman’s garment/sample.
25.09	Take in the side seams on a blouse/shirt.
25.10	Shorten sleeves at the cuff on a garment/sample.
25.11	Shorten sleeves at the shoulder cap on a garment/sample.
25.12	Finish seams and press altered areas using pressing techniques.
26.0	Demonstrate clothing repair on a garment or sample–The student will be able to:
26.01	Reinforce seams and buttonholes on a garment/sample.
26.02	Replace zippers in various types of garments/samples (including fly/jeans).
26.03	Apply patches on a garment/sample.
26.04	Replace various types of buttons on a garment/sample.



26.05 Demonstrate appropriate pressing techniques on repaired garments/samples.

**Course Number: HEV0013**

**Occupational Completion Point: D**

**Fashion Coordinator/Stylist – 150 Hours – SOC Code 27-1022**

27.0 Identify and describe the different specialties related to Fashion Design Services: Window Display, Fashion Design Assistant, Tailor's Assistant, Personal Shopper, Stylist–The student will be able to:

27.01 Identify future trends in Fashion Design Services.

27.02 Research, identify, and describe the different job responsibilities of a Window Displayer, Fashion Design Assistant, Tailor's Assistant, Personal Shopper, and Stylist.

28.0 Select one specialty area and complete the student performance standards for that area–The student will be able to:

**Window Display**

28.01 Demonstrate knowledge of the elements of design: color, line, proportion, scale, harmony, and light.

28.02 Demonstrate an understanding of fashion as an ethno-cultural expression.

28.03 Demonstrate space planning in a window display according to a given criteria.

28.04 Develop window displays in accordance with seasonal promotions.

28.05 Plan and create a window display project given established criteria.

**Fashion Design Assistant**

28.06 Demonstrate knowledge of pattern making.

28.07 Apply techniques of design draping.

28.08 Exhibit effective communication skills.

28.09 Demonstrate computer skills.

28.10 Demonstrate garment construction skills.

28.11 Explain the elements of design.

28.12 Demonstrate appropriate customer relations skills.

28.13 Plan and develop a project related to fashion design according to specifications given by designer.

<b>Tailor's Assistant</b>
28.14 Select suitable fabric for a tailored jacket using identified criteria.
28.15 Select suitable hair canvas, interfacing, linings, and underlining for specified fabric.
28.16 Prepare fabrics and alter patterns using pattern directions.
28.17 Lay out patterns, bias, plaid, or one-way prints using correct layout procedures.
28.18 Cut patterns, fabric, hair canvas, and linings according to given directions.
28.19 Tailor tack markings using the proper techniques.
28.20 Baste and fit a garment according to customer specifications.
28.21 Stitch seams using correct stitches for fabric.
28.22 Apply seam finishes chosen from practice samples.
28.23 Apply zippers according to manufacturer's instructions and the application chosen for different types of garments.
28.24 Construct tailored pockets following given directions.
28.25 Construct buttonholes following given directions.
28.26 Construct chest pieces, shoulder pads, and sleeve heads following given directions.
28.27 Set in sleeves following given directions.
28.28 Construct and apply upper collar and facings following given directions.
28.29 Construct and apply linings according to fabric requirements.
28.30 Construct hems using proper techniques for fabric/garment style.
28.31 Select patterns and cut fabric for tailored pants.
28.32 Alter patterns and cut fabric for tailored pants according to
28.33 Fit and construct tailored pants according to customer specifications.
28.34 Construct and apply linings to tailored pants using proper techniques.
28.35 Refit and alter a ready to wear garment according to customer specifications.

<b>Costume Design</b>
28.36 Demonstrate taking body measurements using the correct measuring method.
28.37 Compare and alter basic patterns according to given instructions.
28.38 Construct a basic muslin shell using customer's measurements and/or pattern.
28.39 Transfer fitting changes to paper patterns following given directions.
28.40 Construct an oak tag board sloper from muslin following given demonstration.
28.41 Draft a pattern according to costume specifications.
28.42 Identify and describe styles that suit body types.
28.43 Identify and design garments to suit body types.
28.44 Choose fabric for body type and design based on customer criteria.
28.45 Design garments for dance, theater, sports activities, costumes, music videos, and print ads.
28.46 Define draping and demonstrate the draping method of design.
<b>Personal Shopper</b>
28.47 Demonstrate effective communication skills.
28.48 Identify different body types.
28.49 Identify and demonstrate knowledge of appropriate attire for various ages, body types, and occasions.
28.50 Demonstrate an understanding of the relationship between color and skin tones.
28.51 Demonstrate the ability to work within a customer's budget.
28.52 Coordinate wardrobe essentials.
28.53 Plan and develop a personal shopping project according to clients' established criteria.
28.54 Exhibit skills necessary for a quality presentation of selections to clients.
28.55 Identify future trends in personal shopping.

<b>Stylist</b>
28.56 Demonstrate effective communication skills.
28.57 Identify different body types.
28.58 Identify and demonstrate knowledge of appropriate attire for various ages, body types, and occasions.
28.59 Demonstrate an understanding of the relationship between color and skin tones.
28.60 Demonstrate the ability to work within a customer's budget.
28.61 Identify future trends and future techniques in styling sets.
28.62 Identify and select fashion and accessories based on specific criteria.
28.63 Explain how the media has helped to define fashion and influence design trends.
28.64 Coordinate wardrobe essentials.
28.65 Plan and develop a stylist project based on established criteria.
29.0 (Optional) Schedule and participate in Fashion Design Services job shadowing–The student will be able to:
29.01 Research persons working in the Fashion Design Services profession within the local area.
29.02 Formalize in writing, a job shadowing experience, applying knowledge gained within the program and using the guidelines set by the district, instructor and employer and using knowledge synthesized within the program.
30.0 Finalize a fashion portfolio per industry standards–The student will be able to:
30.01 Submit a portfolio including all work from the Fashion Technology and Design Services program.
30.02 Construct basic hand techniques.
30.03 Stay stitching and ease stitching.
30.04 Straight seams, clean finish and various seam finishes.
30.05 Hemming techniques.

## **Additional Information**

### **Laboratory Activities**

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

### **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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Interior Decor Fabrication  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts, A/V Technology and Communication

**NOTE:** This program has been daggered for deletion due to low/ no enrollment. New students may enroll in the following:

Secondary students: Interior Design Services (0450040803)  
 PSAV students: Interior Decorating Services (0450040804)

PSAV	
Program Number	V200505
CIP Number	0450040806
Grade Level	30, 31
Standard Length	1050 hours
Teacher Certification	HOMEMAKING $\phi$ 7 @2 @7 G HME EC OCC $\phi$ 7 @7 G FAM CON SC 1 INT DEC 7G
CTSO	FCCLA
SOC Codes (all applicable)	51-6031 – Sewing Machine Operators 51-6099 – Textile, Apparel, and Furnishings Workers, All Other
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

**Purpose**

The purpose of this program is to prepare students for employment or advanced training in the interior-decorating fabrication 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. This program offers a broad foundation of knowledge and skills to prepare students for employment in network support services positions.

This program focuses on broad, transferable skills, stresses the understanding of all aspects of the interior-decorating fabrication industry, and demonstrates such elements of the industry as 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 three occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	HEV0420	Sewing Machine Operator, Nongarment	450 hours	51-6031
B	HEV0450	Draperly Operator	150 hours	51-6099
C	HEV0451	Draperly Supervisor	450 hours	51-6099



## **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 membership skills.
- 02.0 Describe the basic characteristics of interior fabrication.
- 03.0 Demonstrate safety and sanitation skills.
- 04.0 Select and use tools and equipment.
- 05.0 Demonstrate power-machinery operation skills.
- 06.0 Exhibit employability skills.
- 07.0 Measure, plot, mark, and cut fabric.
- 08.0 Operate power machinery for interior fabrications.
- 09.0 Demonstrate sales skills.
- 10.0 Design and plan a fabrication project.
- 11.0 Maintain power machinery.
- 12.0 Demonstrate employability skills.
- 13.0 Demonstrate sales techniques for interior fabrication.
- 14.0 Identify drapery hardware.
- 15.0 Design and construct shirred draperies.
- 16.0 Design and construct pleated draperies.
- 17.0 Describe the basic principles of color and design.
- 18.0 Design and apply special construction techniques.
- 19.0 Design and construct top treatments.
- 20.0 Design and construct bed treatments.
- 21.0 Design and construct decorative accessories and update previously upholstered items.
- 22.0 Design and apply quality-control management skills.
- 23.0 Demonstrate an understanding of entrepreneurship.

Florida Department of Education  
Student Performance Standards

Program Title: Interior Decor Fabrication  
PSAV Number: V200505

<b>Course Number: HEV0420</b>	
<b>Occupational Completion Point: A</b>	
<b>Sewing Machine Operator, Nongarment – 450 Hours – SOC Code 51-6031</b>	
01.0	Demonstrate leadership and membership skills--The student will be able to:
01.01	Identify professional and youth organizations.
01.02	Identify purposes and functions of professional and youth organizations.
01.03	Identify roles and responsibilities of members of professional and youth organizations.
01.04	Work cooperatively as a group member to achieve organizational goals.
01.05	Demonstrate confidence in leadership roles and organizational responsibilities.
01.06	Demonstrate commitment to achieve organizational goals.
02.0	Describe the basic characteristics of interior fabrication--The student will be able to:
02.01	Identify and describe the basic characteristics and uses of textiles:
	<ul style="list-style-type: none"> <li>• Name of fiber</li> <li>• Characteristics of fiber</li> <li>• Care requirements according to the manufacturer's cleaning codes</li> <li>• Suitability for window treatments, slipcovers, upholstery, bedspreads, and accessories</li> </ul>
02.02	Identify and describe the basic characteristics and uses of window treatments and accessories.
02.03	Identify and describe various interior-decorating styles.
03.0	Demonstrate safety and sanitation skills--The student will be able to:
03.01	Research and follow standard (federal, state, and local) fire, safety, and sanitation practices.

03.02	Identify safety standards and perform a routine safety inspection of work areas.
03.03	Identify disaster-plan procedures and follow standard disaster-plan procedures within the workplace setting.
03.04	Identify hazardous materials and follow safety procedures when using and disposing of hazardous materials (Florida's "Right-to-Know" Law).
03.05	Explain health-related problems caused by exposure to hazardous materials.
03.06	Describe eligibility requirements and the basic procedures for obtaining Worker's Compensation.
04.0	Select and use tools and equipment--After a teacher demonstration, textbook/multimedia research, or following the manufacturer's instructions the student will be able to:
04.01	Identify the tools, machinery, and equipment used for design and fabrication.
04.02	Select the tools and equipment necessary for assigned projects.
04.03	Demonstrate the correct and safe use of various fabrication tools and equipment.
04.04	Clean and maintain various types of tools and equipment.
05.0	Demonstrate power-machinery operation skills--After a teacher demonstration, textbook/multimedia research, or following the manufacturer's instructions the student will be able to:
05.01	Identify and describe the various types and functions of machines used in interior decor fabrication.
05.02	Identify and describe the main parts and functions of power machines.
05.03	Identify, select, and insert various machine needles for the fabric and project.
05.04	Diagram and thread sewing machines following the manufacturer's instructions.
05.05	Demonstrate the ergonomically correct sitting posture when operating machines.
06.0	Exhibit employability skills--The student will be able to:
06.01	Identify and demonstrate acceptable personal hygiene and a professional appearance.
06.02	Identify and demonstrate productive work habits and positive attitudes.
06.03	Identify and apply the principles of time management, work simplification, and teamwork when performing assigned tasks.
06.04	List quality characteristics and demonstrate pride in the quality of work performed.
07.0	Measure, plot, mark, and cut fabric--After a teacher demonstration, textbook/multimedia research, or following the manufacturer's instructions the student will be able to:
07.01	Read, interpret, and follow instructions for a project.

07.02	Read and interpret charts, diagrams, and tables.
07.03	Apply the principles of design in matching fabrics with nap, stripes, plaids, repeat pattern, and fabric width.
07.04	Evaluate the quality of the fabric, examining it for flaws.
07.05	Organize the work area for the efficient use of time and motion.
07.06	Measure and plot a pattern according to sample directions.
07.07	Measure the item and compute fabric needs for a specific project.
07.08	Cut the fabric to calculated specifications.
08.0	Operate power machinery for interior fabrications--After a teacher demonstration, textbook/multimedia research, or following the manufacturer's instructions the student will be able to:
08.01	Select appropriate thread for the machine and the project.
08.02	Identify and attach the appropriate presser foot for the fabric and project.
08.03	Operate power machinery with speed and accuracy, observing previously identified safety precautions.
09.0	Demonstrate sales skills--After a teacher demonstration, textbook/multimedia research, or following the manufacturer's instructions the student will be able to:
09.01	Read and interpret pricing tables and diagrams of products.
09.02	Fill out sales receipts, purchase orders, and invoices.
09.03	Identify characteristics of a quality sales person and exhibit these characteristics in a workplace setting.
09.04	Identify and demonstrate appropriate responses to criticism and praise.
09.05	Explain the relationship between positive human relations and success in the industry.
09.06	Demonstrate respect for the customer's desires and property.
10.0	Design and plan a fabrication project--The student will be able to:
10.01	Design and plan a fabrication project according to established criteria.
10.02	Select the appropriate styles and materials, considering energy efficiency and safety factors, for the project.
10.03	Calculate the cost of materials and labor for the project.
11.0	Maintain power machinery--The student will be able to:

11.01	Oil and clean machines, using the manufacturer's manual as a guide.
11.02	Identify and describe the possible causes of machine malfunction using the manufacturer's manual as a guide.
11.03	Make minor adjustments to machinery, using the manufacturer's manual as a guide and following safety precautions.
11.04	Keep a maintenance record of tools and equipment following the manufacturer's recommended maintenance schedule.
12.0	Demonstrate employability skills--The student will be able to:
12.01	Conduct a job search and identify advanced-training opportunities.
12.02	Secure information about a job.
12.03	Identify documents that may be required for a job application.
12.04	Research and complete a job-application form.
12.05	Identify and demonstrate competence in job-interview techniques.
12.06	Demonstrate knowledge of how to make job changes appropriately.
12.07	Identify and demonstrate ethical and responsible practices.
12.08	Identify and describe the importance of a drug-free workplace and the industry policies toward drug use.
12.09	Identify and describe the importance of keeping a good driving record on employment opportunities.
12.10	Explain the importance of confidentiality in the workplace.

**Course Number: HEV0450**  
**Occupational Completion Point: B**  
**Drapery Operator – 150 Hours – SOC Code 51-6099**

13.0	Demonstrate sales techniques for interior fabrication--The student will be able to:
13.01	Ask and answer questions coherently and concisely.
13.02	Design and give a sales presentation orally and in writing.
13.03	Using quality guidelines and art principles, locate information on sales products and services according to client specifications.
13.04	Recommend fabric, styles, and related products to meet the customer's needs.
13.05	Demonstrate appropriate computer and telecommunication skills.

13.06	Demonstrate sales-transaction skills.
14.0	Identify drapery hardware--After a teacher demonstration, textbook/multimedia research or following pattern/manufacturer's instructions the student will be able to:
14.01	Identify and describe the parts, types, and characteristics of drapery hardware.
14.02	Explain how the hardware affects drapery construction, including pin setting.
14.03	Measure and install basic drapery hardware following the manufacturer's directions/visual application.
14.04	Identify, select and install proper screws, toggle bolts and wall anchors for various types of walls.
14.05	Demonstrate method of correctly installing hardware for rod pocket and pleated draperies according to manufacturer's instructions.
15.0	Design and construct shirred draperies--After a teacher demonstration, textbook/multimedia research or following pattern/manufacturer's/sample instructions the student will be able to:
15.01	Measure the window area and calculate fabric needs according to customer specifications.
15.02	Prepare materials and the work site for construction using prior knowledge of construction techniques.
15.03	Perform basic hand and machine stitches following ample instructions.
15.04	Construct plain, serged, and French seams following sample instructions.
15.05	Perform pressing techniques matching pressing to fabric requirements.
15.06	Select a hem and weights to match fabric specifications.
15.07	Apply lining-construction techniques following customer specifications.
15.08	Table the draperies to determine hems and top headings.
15.09	Sew hems and top headings following textbook/teacher instructions.
15.10	Press and prepare draperies for delivery according to fabric requirements.
15.11	Design and construct tiebacks following pattern directions.
15.12	After identifying quality characteristics, perform a quality check.
16.0	Design and construct pleated draperies--After a teacher demonstration, textbook/multimedia research or following pattern/manufacturer's instructions the student will be able to:
16.01	Measure the window area and calculate fabric needs according to customer specifications.
16.02	Perform basic hand and machine stitches according to sample/manufacturer's instructions.

16.03	Design and construct plain, serged, and French seams following sample instructions.
16.04	Perform preliminary pressing techniques matching pressing to fabric.
16.05	Select hem and weights to match fabric specifications.
16.06	Apply lining-construction techniques following fabric/customer requirements.
16.07	Table draperies to determine hems and top headings.
16.08	Calculate, plot, mark, and sew pleats following sample instructions.
16.09	Set pins according to fabric requirements.
16.10	Press and fold draperies for delivery according to fabric care.

<b>Course Number: HEV0451</b>	
<b>Occupational Completion Point: C</b>	
<b>Drapery Supervisor (Consultant) – 450 Hours – SOC Code 51-6099</b>	
17.0	Describe the basic principles of color and design--After a teacher demonstration, textbook/multimedia research or following pattern/manufacturer's instructions the student will be able to:
17.01	Identify the elements and principles of design.
17.02	Apply the elements and principles of design to housing environments.
17.03	Apply the use of color and color schemes in design.
18.0	Design and apply special construction techniques--After a teacher demonstration, textbook/multimedia research or following sample/sample/pattern/manufacturer's instructions the student will be able to:
18.01	Measure the window area and calculate fabric needs according to customer specifications.
18.02	Gather or shirr fabric by machine and by hand according to visual/sample/pattern instructions.
18.03	Construct ruffles according to pattern instructions.
18.04	Make and cut straight and bias welt cording according to sample instructions.
18.05	Construct closures (commercial zippers, buttonholes, Velcro, and snaps) according to customer's requirements.
18.06	Make and use patterns and templates according to customer specifications.
18.07	Using Auto CAD design a pattern template for a window treatment according to customer specifications.
19.0	Design and construct top treatments--After a teacher demonstration, textbook/multimedia research or following pattern/manufacturer's instructions the student will be able to:



19.01	Measure the window area and calculate fabric needs according to customer specifications.
19.02	Identify and describe the types and characteristics of top treatments, such as: Valances, Cascades, swags, jabots, Austrian, Roman, hobbled, balloon, and laminated shades, cornices and lambrequins
19.03	Select mounting methods for different types of top treatments according to wall type.
19.04	Calculate, plot the design, and cut the fabric for specific top treatments.
19.05	Identify and describe various methods of installation in relation to mounting surfaces.
19.06	Construct top treatments following pattern/customer specifications.
19.07	Prepare top treatment for appropriate installation according to required installation requirements.
20.0	Design and construct bed treatments--After a teacher demonstration, textbook/multimedia research or following pattern/manufacturer's instructions the student will be able to:
20.01	Measure the areas and calculate fabric needs according to customer specifications.
20.02	Identify various styles and types of quilting, and explain how they affect fabric needs and durability.
20.03	Construct bedspreads, comforters, duvets, pillow shams, bed canopies, and bed skirts following pattern/manufacturer's/customer's specifications.
21.0	Design and construct decorative accessories and update previously upholstered items--After a teacher demonstration, textbook/multimedia research or following pattern/manufacturer's instructions the student will be able to:
21.01	Measure the items and calculate fabric needs according to manufacturer's/customer specifications.
21.02	Design and construct custom home accessories, such as pillows, boxed cushions, tablecloths, napkins, lampshade covers, chair pads, covered headboards, and specialty tiebacks according to manufacturer/customer specifications.
21.03	Apply decorative trims, such as beads, bias cording, tassels, and fringe using visual arts principals.
21.04	Mark fabric for stripping following prescribed guidelines.
21.05	Tear down covering following proper procedures.
22.0	Design and apply quality-control management skills--The student will be able to:
22.01	Identify and describe quality-control standards.
22.02	Evaluate the quality of the products, applying quality-control standards synthesized from presentations/research/practical applications.
23.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
23.01	Define "entrepreneurship."

23.02	Identify and describe the importance of entrepreneurship to the American economy and the role of small business in the free-enterprise system.
23.03	Identify and describe the advantages and disadvantages of business ownership and the different types of business entities.
23.04	Explain the risks involved in the ownership of a business.
23.05	Identify and describe the personal characteristics of a successful entrepreneur.
23.06	Identify the skills needed to operate a small business efficiently and effectively, including computer skills.
23.07	Describe the responsibility of the employer to support the business.

## **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)**

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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>

Florida Department of Education  
Curriculum Framework

**Program Title:** Interior Decorating Services  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts, A/V Technology and Communication

**PSAV**

Program Number	V200600
CIP Number	0450040804
Grade Level	30, 31
Standard Length	1050 hours
Teacher Certification	HOMEMAKING $\phi$ 7 @2 @7G HME EC OCC $\phi$ 7 @7 G FAM CON SC 1 INT DEC 7G
CTSO	FCCLA
SOC Codes (all applicable)	27-1029 – Designers, All Other 41-3099 – Sales Representative, Services, All Other
CTE Program Resources	<a href="http://www.fl DOE.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fl DOE.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

**Purpose**

The purpose of this program is to prepare students for employment or advanced training in the residential decoration 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.

This program focuses on broad, transferable skills, stresses the understanding of all aspects of the residential decoration industry and demonstrates such elements of the industry as 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.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	HEV0412	Sales/Color Consultant	200 hours	41-3099
B	HEV0452	Furniture Arranger/Space Planner	350 hours	27-1029
C	HEV0453	Merchandise Stylist/Visual Displayer	300 hours	27-1029
D	HEV0413	Interior Decorator/ Interior Decorating Consultant	200 hours	27-1029

## **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 Identify employment opportunities.
- 02.0 Describe the relationship of human factors to the decorating industry.
- 03.0 Analyze the principles of color and design.
- 04.0 Select and use tools and equipment safely.
- 05.0 Demonstrate sales techniques applicable to the decorating industry.
- 06.0 Analyze the benefits of membership in professional organizations.
- 07.0 Explain the importance of sustainable design.
- 08.0 Identify the basic interior decorating components.
- 09.0 Develop an understanding of the elements and principles of design.
- 10.0 Identify and apply principles of space planning.
- 11.0 Demonstrate the ability to use decorating software.
- 12.0 Plan and develop a decorating project.
- 13.0 Demonstrate an understanding of basic decorative styles.
- 14.0 Identify furniture for appropriate application
- 15.0 Identify fabric for appropriate application.
- 16.0 Identify floor coverings for appropriate application.
- 17.0 Identify wall treatments for appropriate application.
- 18.0 Identify window treatments for appropriate application.
- 19.0 Identify bedding and accessories for appropriate application.
- 20.0 Identify, and place lighting fixtures for appropriate application.
- 21.0 Demonstrate an understanding of entrepreneurship.
- 22.0 Plan and implement an interior-design project to meet a client's needs.
- 23.0 Present a portfolio per industry requirements.



Florida Department of Education  
Student Performance Standards

Program Title: Interior Decorating Services  
PSAV Number: V200600

<b>Course Number: HEV0412</b>	
<b>Occupational Completion Point: A</b>	
<b>Sales/Color Consultant – 200 Hours – SOC Code 41-3099</b>	
01.0	Identify employment opportunities–The student will be able to:
01.01	Explain the roles of a decorator and a designer.
01.02	Identify employment, career-growth, and advanced-training opportunities in the décor industry.
01.03	Describe the personal and professional qualities required for employment in the profession.
02.0	Describe the relationship of human factors to the decorating industry–The student will be able to:
02.01	Explain the impact of human factors (such as psychological, physiological, and social needs) on decisions relating to decorating services.
02.02	Describe modifications necessary to accommodate individuals with special needs.
02.03	Describe the impact of human needs and wants on the cost of decorating services.
02.04	Describe the importance of barrier-free design and accessibility related to decorating services.
03.0	Analyze the principles of color and design–The student will be able to:
03.01	Identify the elements and principles of design.
03.02	Explain the uses of a color wheel.
03.03	Identify value and intensity and how they relate to color.
03.04	Identify the different color schemes and how they are achieved.
03.05	Apply the color schemes to a decorating plan.
04.0	Select and use tools and equipment safely–The student will be able to:
04.01	Identify the tools and equipment used in decorating services.

04.02	Demonstrate appropriate tools and equipment safely.
04.03	Keep an inventory record of tools, equipment, supplies, and materials using computer application software.
04.04	Explain the importance of observing Occupational Safety and Health Administration (OSHA) rules and regulations.
05.0	Demonstrate sales techniques applicable to the decorating industry--The student will be able to:
05.01	Research different styles of sales techniques.
05.02	Practice various sales techniques for the decorating industry.
05.03	Research and recommend decorating products that meet the customer's specifications.
05.04	Demonstrate appropriate computer and telecommunication skills as they relate to sales transactions.
05.05	Explain the importance of a sense of responsibility and ethical behavior in the interior decorating industry.
06.0	Analyze the benefits of membership in professional organizations--The student will be able to:
06.01	Identify purposes, benefits, and functions of design professional organizations related to interior decorating.
06.02	Work cooperatively as a team to achieve organizational goals.

**Course Number: HEV0452**  
**Occupational Completion Point: B**  
**Furniture Arranger/Space Planner – 350 Hours – SOC 27-1029**

07.0	Explain the importance of sustainable design--The student will be able to:
07.01	Define sustainable design as related to interior design.
07.02	Analyze, evaluate, and select materials and furnishings for sustainable design.
07.03	Identify methods and materials used to increase energy efficiency.
07.04	Identify and describe energy sources.
07.05	Explain the differences between energy efficiencies and energy conservation.
08.0	Identify the basic interior decorating components--The student will be able to:
08.01	Identify decorating styles and their history.
08.02	Identify periods and styles of furniture.

08.03	Analyze and describe environmental concerns affecting future interiors using internet and textual resources.
09.0	Develop an understanding of the elements and principles of design--The student will be able to:
09.01	Identify and explain the elements of design and their effects on room décor, i.e. texture, pattern, line, form and shape, space, color and light.
09.02	Identify and explain the principles of design and their use in interior decorating; proportion, scale, balance, rhythm, emphasis, and harmony.
09.03	Analyze good design by using the elements, principles and goals of design.
10.0	Identify and apply principles of space planning--The student will be able to:
10.01	Identify the components of space planning.
10.02	Identify architectural symbols.
10.03	Read and interpret a blueprint.
10.04	Practice calculating areas, sizes, circumferences, square footages, in scale drawings.
10.05	Apply space planning techniques in furniture placement.
11.0	Demonstrate the ability to use decorating software--The student will be able to:
11.01	Identify and discuss the benefits of using software in the decorating field.
11.02	Complete a tutorial of a decorating software program.
11.03	Complete a project using decorating software.
12.0	Plan and develop a decorating project--The student will be able to:
12.01	Develop a decorating project via computer technology and presentation boards.
12.02	Select appropriate materials and for the project, i.e. surface treatments, upholstery, case goods, and accessories, applying the elements and principles of design.
12.03	Measure and calculate materials required for a decorating project.
12.04	Demonstrate the ability to work within a given time frame and budget.

**Course Number: HEV0453**  
**Occupational Completion Point: C**  
**Merchandise Stylist/Visual Displayer – 300 Hours – SOC Code 27-1029**

13.0 Demonstrate an understanding of basic decorative styles--The student will be able to:

13.01	Demonstrate various decorating styles through the use of diagrams, photos, and other resources.
13.02	Research, identify and describe the various movements in the evolution of housing architecture and interior decorating.
13.03	Identify future trends in interior décor and design.
14.0	Identify and select furniture for appropriate applications--The student will be able to:
14.01	Describe the methods of furniture construction.
14.02	Compare and contrast types of wood and illustrate comparisons in a presentation, written report or computerized presentation.
14.03	Describe the types of finishes and the care required for each type of wood.
14.04	Compare and contrast man-made fibers, i.e. polyester, metal, synthetic plastic, with the natural materials used in furniture construction.
14.05	Measure and calculate the materials for upholstered items according to client specifications.
14.06	Select furniture considering its functions and design.
15.0	Identify and select fabric for appropriate application--The student will be able to:
15.01	Identify fiber content of fabrics used in decorating.
15.02	Compare different types of fabrics used in decorating.
15.03	Explain durability.
15.04	Select fabric that is appropriate for window treatments, upholstery, and accessories.
15.05	Demonstrate how to coordinate different patterns and textures for an overall decorating scheme.
16.0	Identify and select floor coverings for appropriate application--The student will be able to:
16.01	Identify and describe the characteristics of different types of floor coverings.
16.02	Compare durability and maintenance factors for floor covering materials.
16.03	Develop criteria for the selection of floor coverings; include considerations of color, texture, type, style, pattern, client's lifestyle, durability, energy conservation, and environmental safety using multiple resources.
16.04	Identify and select floor-covering materials, using the developed criteria.
16.05	Measure and calculate space and materials for a floor covering application based upon client criteria.
17.0	Identify and select wall treatments for appropriate application--The student will be able to:

17.01	Identify and describe characteristics of different types of wall treatments.
17.02	Compare durability and maintenance factors for wall treatment materials.
17.03	Develop criteria for the selection of wall treatments; include considerations of color, texture, type, style, pattern, client's lifestyle, durability, energy conservation, and environmental safety using multiple resources.
17.04	Identify and select wall treatment materials, using the developed criteria.
17.05	Calculate the materials needed for a specific wall treatment using criteria provided.
18.0	Identify and select window treatments for appropriate application--The student will be able to:
18.01	Identify and describe different functions of windows and window treatments.
18.02	Categorize window treatments as hard or soft.
18.03	Describe the characteristics of draperies and their headings.
18.04	Recognize the different types and uses of appropriate hardware for window treatments.
18.05	Develop criteria for the selection of window treatments; include considerations of color, texture, type, style, pattern, client's life style, energy conservation, and environmental safety.
18.06	Select window treatments, using the criteria above.
18.07	Estimate yardage required for various window treatments.
18.08	Select appropriate window fabrics and treatments for various decorating styles.
19.0	Identify and select bedding and accessories for appropriate application--The student will be able to:
19.01	Describe different styles of accessories.
19.02	Research artwork appropriate for various decorating styles.
19.03	Select accessories, applying the elements and principles of design for a given decorating project.
19.04	Demonstrate appropriate grouping and placement of accessories using the golden mean.
19.05	Select bedding and accessories using established criteria.
20.0	Identify, select, and place lighting fixtures for appropriate application--The student will be able to:
20.01	Explain the purposes of the different types of lighting
20.02	Research the different types direct and indirect lighting

20.03 Identify the characteristics of incandescent fluorescent, LED, CFR, and other lights.

20.04 Identify lighting symbols on plans and drawings

**Course Number: HEV0413**  
**Occupational Completion Point: D**  
**Interior Decorator/Interior Decorating Consultant – 200 Hours – SOC Code 27-1029**

21.0 Demonstrate an understanding of entrepreneurship--The student will be able to:

21.01 Define entrepreneurship.

21.02 Research procedures needed for the startup of a new business.

21.03 Debate the advantages and disadvantages of business ownership.

21.04 Identify advantages and disadvantages and cost of an employee.

22.0 Plan and implement an interior design project to meet a client's needs--The student will be able to:

22.01 Develop client criteria for decorating project.

22.02 Calculate areas, sizes, circumferences, square footage, etc., to create a scale drawing.

22.03 Select appropriate materials and products for the project, i.e. surface treatments, case goods, upholstery, and accessories, applying the elements and principles of design.

22.04 Estimate materials required for client project.

22.05 Determine the budgetary limitations.

22.06 Estimate the cost required to implement the plan and evaluate the estimate in relation to the client's budget.

22.07 Implement the project, using decorating computer software.

22.08 Deliver an oral presentation of the project.

23.0 Present a portfolio per industry requirements--The student will be able to:

23.01 Compile and present a portfolio to include a resume, biographical data, project pictures, and any other applicable information.

## **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)**

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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>



Florida Department of Education  
Curriculum Framework

**Program Title:** Sewing Technology and Services  
**Program Type:** Career Preparatory  
**Career Cluster:** Arts, A/V Technology and Communication

**NOTE:** This program has been daggered for deletion. New students may enroll in ‘Fashion Technology and Production Services’ K500100.

PSAV	
Program Number	V200700
CIP Number	0419090605
Grade Level	30, 31
Standard Length	900 hours
Teacher Certification	TAILORING @7 G TECH ED 1 @2 HME EC OCC ¢7 @7 G APPRL MFG ¢7 @7 G FAM CON SC 1 HOMEMAKING ¢7 @2 @7G
CTSO	FCCLA
SOC Codes (all applicable)	51-6052 – Tailors, Dressmakers, and Custom Sewers 51-6031 – Sewing Machine Operators
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

**Purpose**

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the 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 Sewing Technology and Services program is designed to prepare students for initial employment in the garment and textile industry. The core has the foundation and basic skills so the student may progress to other levels of Sewing Technology and Services.

This program focuses on broad, transferable skills, stresses the understanding of all aspects of the garment/textile industry and demonstrates such elements of the industry as planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

The Sewing Technology and Services program is a planned sequence of instruction consisting of six occupational completion points. The Core (OCP A and B) includes the basic fundamentals necessary for completion of the program. Students must complete the core before advancing in the program. The recommended sequence allows students to complete specified portions of the program for employment or to remain for advanced training. A student who completes the applicable competencies at listed occupational completion points may either continue the training program or terminate as an occupational completer. Suggested exit points are detailed below.

**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 six occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Length	SOC Code
A	HEV0203	Seamstress	200 hours	51-6052
B	HEV0240	Power Machine Operator	50 hours	51-6031
C	HEV0211	Alterationist	150 hours	51-6052
D	HEV0212	Construction Specialist	150 hours	51-6052
E	HEV0217	Alterationist for Fine Clothing	150 hours	51-6052
F	HEV0232	Custom Tailor/Patternmaker	200 hours	51-6052

## **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 Identify employment opportunities.
- 02.0 Demonstrate leadership and organizational skills.
- 03.0 Select, use and care for tools, equipment and supplies safely.
- 04.0 Identify fiber and textile characteristics.
- 05.0 Set up, operate, and maintain a conventional sewing machine.
- 06.0 Set up, operate, and maintain a conventional serger.
- 07.0 Demonstrate accurate measuring techniques and ability to correlate body shape to pattern selection.
- 08.0 Demonstrate simple construction techniques.
- 09.0 Construct a simple garment.
- 10.0 Set up, operate safely, maintain, and adjust industrial machines related to this industry.
- 11.0 Demonstrate efficient time and motion techniques.
- 12.0 Create a quality work sample from each industrial machine.
- 13.0 Define terminology related to alterations and fittings.
- 14.0 Fit a custom garment accurately.
- 15.0 Exhibit positive customer service skills.
- 16.0 Demonstrate alteration skills on a sample or garment.
- 17.0 Demonstrate clothing repair on a sample or garment.
- 18.0 Demonstrate garment construction skills.
- 19.0 Construct specialty garments.
- 20.0 Research alternative career opportunities within the garment and textile industry.
- 21.0 Demonstrate an awareness of the history of fashion/garments.
- 22.0 Demonstrate garment alteration skills for fine/tailored clothing.
- 23.0 Demonstrate clothing repair for fine/tailored clothing.
- 24.0 Create and manage an alterations business (suggested activity).
- 25.0 Construct a tailored jacket.
- 26.0 Draft, design, or drape garments or patterns and construct garments from these patterns.
- 27.0 Participate in a student internship.

Florida Department of Education  
Student Performance Standards

Program Title: Sewing Technology and Services  
PSAV Number: V200700

<b>Course Number: HEV0203</b>	
<b>Occupational Completion Point: A</b>	
<b>Seamstress – 200 Hours – SOC Code 51-6052</b>	
01.0	Identify employment opportunities–The student will be able to:
01.01	Identify occupations in the garment/textile industry and the duties and responsibilities of those occupations.
01.02	Identify levels of training required, opportunities for job advancement, and earning/wage levels for garment/textile production occupations.
01.03	Analyze current trends as they may affect the future of the industry.
02.0	Demonstrate leadership and organizational skills–The student will be able to:
02.01	Identify professional and youth organizations within this career area.
02.02	Identify purposes and functions of professional and youth organizations.
02.03	Identify roles and responsibilities of members.
02.04	Demonstrate cooperation as a group member in achieving organizational goals.
02.05	Demonstrate confidence in leadership roles and organizational responsibilities.
03.0	Select, use and care for tools, equipment and supplies safely–The student will be able to:
03.01	Identify and demonstrate the selection and use of shears.
03.02	Identify and demonstrate the selection and use of rotary cutter and other high-tech cutting equipment.
03.03	Identify and demonstrate the selection and use of machine maintenance equipment.
03.04	Identify and demonstrate the use of measuring tools.
03.05	Identify and demonstrate the use of pressing equipment.
03.06	Identify and demonstrate safety procedures in using conventional sewing machines.

03.07	Identify and demonstrate safety procedures in using home sergers.
03.08	Identify and demonstrate safety procedures in using pressing equipment.
03.09	Identify and demonstrate safety procedures in using small hand tools.
03.10	Identify and demonstrate workroom safety procedures.
04.0	Identify fiber and textile characteristics–The student will be able to:
04.01	Identify and describe fiber characteristics.
04.02	Identify and describe types of fabric construction.
04.03	Identify and describe types of fabric finishes.
04.04	Identify and describe types of textiles.
04.05	Identify laws and regulations governing the textile industry including labeling laws.
05.0	Set up, operate, and maintain a conventional sewing machine–The student will be able to:
05.01	Identify the parts of the sewing machine.
05.02	Identify the process and demonstrate needle insertion, picking the right size needle for the fabric.
05.03	Identify the steps and demonstrate threading the sewing machine.
05.04	Demonstrate bobbin winding, threading the bobbin case, and inserting the bobbin correctly into the sewing machine.
05.05	Demonstrate straight stitching.
05.06	Demonstrate stitch length and width selection.
05.07	Identify and demonstrate utility.
05.08	Identify and demonstrate decorative stitches.
05.09	Identify the tension and demonstrate tension adjustment.
05.10	Demonstrate light bulb replacement.
06.0	Set up, operate and maintain a conventional serger–The student will be able to:
06.01	Identify types of sergers and their characteristics.

06.02	Demonstrate threading of the serger following manufacturer's directions.
06.03	Demonstrate tension setting following the manufacturer's directions.
06.04	Demonstrate cleaning and care of the serger following manufacturer's instructions.
06.05	Demonstrate flat locking.
06.06	Demonstrate a rolled hem and pin tucking following sample directions.
06.07	Demonstrate replacing knives, needles, and light bulbs following manufacturer's directions.
07.0	Demonstrate accurate measuring techniques and ability to correlate body shape to pattern selection–The student will be able to:
07.01	Demonstrate taking body measurements using the correct method.
07.02	Select pattern size and determine figure type.
07.03	Identify and describe styles that suit various body types.
07.04	Select a pattern and fabric for body type.
08.0	Demonstrate simple construction techniques–The student will be able to:
08.01	Demonstrate basic hand stitching skills.
08.02	Identify and describe characteristics of a properly fitted garment.
08.03	Interpret verbal, written, and visual directions.
08.04	Prepare fabric.
08.05	Adjust patterns following pattern directions.
08.06	Lay out, pin, cut, and mark fabric according to pattern directions.
08.07	Demonstrate stay stitching and ease stitching.
08.08	Demonstrate stitching darts and tucks.
08.09	Identify and match garment pieces using markings and stitching following directions.
08.10	Demonstrate correct pressing techniques following fabric requirements.
08.11	Demonstrate a casing.

08.12	Demonstrate machine hemming following machine manual instructions.
08.13	Apply fusible and non-fusible interfacing according to manufacturer's instructions.
08.14	Apply shaped facings.
08.15	Apply zippers using different methods, following manufacturer's directions.
08.16	Demonstrate under stitching following prescribed directions.
08.17	Apply waistbands and cuffs following prescribed directions.
08.18	Make machine buttonholes according to manufacturer's instructions.
08.19	Make and attach collars according to pattern/teacher instructions.
08.20	Construct sleeve according to manufacturer's instructions.
08.21	Put in side seam pockets; make and apply patch pockets according to manufacturer's specifications.
08.22	Assemble a portfolio including all samples.
09.0	Construct a simple garment—The student will be able to:
09.01	Construct garment/garments that includes a zipper, seaming, waistband, darts, interfacing, seam finishing, hem, closure and pocket. Include garment (or photo) in portfolio.

**Course Number: HEV0240**  
**Occupational Completion Point: B**  
**Power (Sewing) Machine Operator -- 50 Hours – SOC Code 51-6031**

10.0	Set up, operate safely, maintain, and adjust industrial machines related to this industry—The student will be able to:
10.01	Operate the following industrial machines accurately and efficiently: industrial sewing machine; single needle straight stitch machine; industrial serger; coverstitch; buttonsewer; buttonholer; walking foot; merrow, electronic programmable machine.
11.0	Demonstrate efficient time and motion techniques—The student will be able to:
11.01	Explain the principles of time and motion techniques.
11.02	Distinguish between program bundles, modular manufacturing, and combine manufacturing techniques.
12.0	Create a quality work sample from each industrial machine—The student will be able to:
12.01	Demonstrate ability to use each industrial machine by creating a sample from each machine and adding it to portfolio.
12.02	Participate in a timed test sample that correlates to industry.



**Course Number: HEV0211**  
**Occupational Completion Point: C**  
**Alterationist – 150 Hours – SOC Code 51-6052**

13.0 Define terminology related to alterations and fittings–The student will be able to:

13.01 Define fitting, basting, taper, flare, marking, alteration ticket, crotch rise, inseam, and outseam.

14.0 Fit a custom garment accurately–The student will be able to:

14.01 Pin-fit garments to a customer using knowledge gained within the program.

14.02 Chalk and baste a garment to fit a customer.

14.03 Demonstrate appropriate fitting techniques when dealing with customers.

15.0 Exhibit positive customer service skills–The student will be able to:

15.01 Demonstrate effective communication skills.

15.02 Demonstrate ability to use technology in the workplace.

15.03 Prepare alteration tickets accurately.

16.0 Demonstrate alteration skills on a sample or garment–The student will be able to:

16.01 Remove stitches in ready-made garments without damaging fabric.

16.02 Construct and finish seams.

16.03 Mark and even a hemline following guidelines.

16.04 Lengthen and shorten hems in pants, skirts, or dresses (include cuffs and use of hem tape).

16.05 Remove the flare from pant legs following a given set of directions.

16.06 Taper a skirt following a given set of directions.

16.07 Convert tucks to gathers and add gathers following a given set of instructions.

16.08 Shorten the crotch rise in a garment/sample.

16.09 Take in the waist on a man's garment/sample.

16.10 Take in the waist on a woman's garment/sample.

16.11	Take in the side seams on a blouse/shirt.
16.12	Shorten sleeves at the cuff on a garment/sample.
16.13	Shorten sleeves at the shoulder cap on a garment/sample.
16.14	Make casing and insert elastic in waistband following a given set of instructions.
16.15	Press altered areas using acquired pressing techniques.
17.0	Demonstrate clothing repair on a garment or sample–The student will be able to:
17.01	Reinforce seams and buttonholes on a garment/sample.
17.02	Replace zippers in various types of garments/samples (including fly/jeans).
17.03	Apply patches on a garment/sample.
17.04	Replace various types of buttons on a garment/sample.
17.05	Demonstrate appropriate pressing techniques on repaired garments/samples.

**Course Number: HEV0212**  
**Occupational Completion Point: D**  
**Construction Specialist – 150 Hours – SOC Code 51-6052**

18.0	Demonstrate garment construction skills–The student will be able to:
18.01	Select appropriate fabric for pattern.
18.02	Create samples of the following: <ul style="list-style-type: none"> <li>• Set in sleeves</li> <li>• Belt loops</li> <li>• Pockets – welt, side, back</li> <li>• Fly zipper</li> <li>• Invisible zipper</li> <li>• Trim application</li> <li>• Bias conversion to trim</li> <li>• Mitered corners</li> <li>• Boning</li> <li>• Matching plaids and stripes</li> <li>• Construction on napped fabrics, vinyl, spandex, lingerie fabric, velvet, lace, sequins, and beads</li> <li>• French seaming</li> </ul>

	<ul style="list-style-type: none"> <li>• Flat felt seams</li> <li>• Seam finishes</li> </ul>
19.0	Construct specialty garments–The student will be able to:
19.01	Construct a specialty garment(s) according to teacher instructions - project must include a minimum number of construction skills as designated by teacher.
20.0	Research alternative career opportunities within the garment and textile industry–The student will be able to:
20.01	Create a presentation on non-traditional career paths (costume design, theater, entertainment, buyers, fabric store owners etc.) in the garment/textile industry.
21.0	Demonstrate an awareness of the history of fashion/garments–The student will be able to:
21.01	Describe the progression of fashion history.
21.02	Prepare an oral presentation on garments/fashion during a specific time period in history.

**Course Number: HEV0217**

**Occupational Completion Point: E**

**Alterationist for Fine Clothing – 150 Hours – SOC Code 51-6052**

22.0	Demonstrate garment alteration skills for fine/tailored clothing–The student will be able to: (using samples or garments)
22.01	Add or remove shoulder pads following specific instructions.
22.02	Lengthen and decrease pants crotch according to customer body measurements.
22.03	Increase and decrease waist size of pants, skirts, and dresses according to customer body measurements.
22.04	Correct skirts, dresses, and pants for high hip or swayback using proper adjustment techniques.
22.05	Remove and add cuffs to pants adjusting to client’s height difference.
22.06	Widen and narrow cuffs according to client’s height difference.
22.07	Shorten and lengthen bodices according to client’s body measurements.
22.08	Increase and decrease bust on bodices according to customer measurements using proper adjustment techniques.
22.09	Narrow shoulder lines on a bodice according to customer measurements using proper adjustment techniques.
22.10	Redistribute ease in sleeve cap adjusting fullness according to specified instructions.
22.11	Add and remove sleeve cuffs according to specified instructions.
22.12	Lengthen and narrow cuffs on pants and sleeves according to customer specifications.

22.13	Shorten wristlets on knitted sleeves according to customer/manufacturer's specifications.
22.14	Reshape trouser legs using proper adjustment techniques.
22.15	Taper men's shirts using proper adjustment techniques.
22.16	Miter hem corners, including seamed mitered corner and hand whipped miter using proper construction techniques.
22.17	Add and remove tucks, pleats, and darts using proper construction techniques.
22.18	Increase and decrease the width of pleats following proper construction techniques.
22.19	Alter closure and fasteners, such as: buttons, zippers, snaps, thread loops, and hooks and eyes according to customer specifications.
22.20	Add, remove, lengthen, and shorten belt loops according to customer specifications.
22.21	Lengthen and shorten belts to fit customer form.
22.22	Add and remove pockets according to fabric requirements.
22.23	Alter size of pockets using proper alteration techniques.
22.24	Shorten sleeves on a tailored jacket.
22.25	Narrow lapels on a tailored jacket.
22.26	Lower the collar on a suit jacket.
22.27	Construct a gusset in trousers.
22.28	Construct a gusset in a dance garment.
23.0	Demonstrate clothing repair for fine/tailored clothing–The student will be able to:
23.01	Apply patches to holes or rips in knit or woven fabrics following specified fabric instructions.
23.02	Repair frayed parts of garments, such as: cuffs (turn), collars (turn), and seams following proper repair techniques for specified fabric.
24.0	Create and manage an alterations business (suggested activity)–The student will be able to:
24.01	Identify the occupations necessary to run an alteration business.
24.02	Develop a plan for the alterations business including job assignments and responsibilities, hours of operation, marketing, fees charged, etc.
24.03	Implement the plan for the alterations business.

**Course Number: HEV0232**  
**Occupational Completion Point: F**  
**Custom Tailor/Patternmaker – 200 Hours – SOC Code 51-6052**

- 25.0 Construct a tailored jacket–The student will be able to:
- 25.01 Select suitable fabric for a tailored jacket using identified criteria.
  - 25.02 Select suitable hair canvas, interfacing, linings, and underlining for specified fabric.
  - 25.03 Prepare fabrics and alter patterns using pattern directions.
  - 25.04 Lay out patterns, bias, plaid, or one-way prints using correct layout procedures.
  - 25.05 Cut patterns, fabric, hair canvas, and linings according to given directions.
  - 25.06 Tailor tack markings using the proper techniques.
  - 25.07 Identify tailor basting and tailor baste layers.
  - 25.08 Tape roll line and edges following prescribed method.
  - 25.09 Pad-stitch lapels and collars following prescribed method.
  - 25.10 Baste and fit a garment according to customer specifications.
  - 25.11 Stitch seams using correct stitches for fabric.
  - 25.12 Apply seam finishes chosen from practice samples.
  - 25.13 Construct tailored pockets following given directions.
  - 25.14 Construct bound buttonholes following given directions.
  - 25.15 Construct chest pieces, shoulder pads, and sleeve heads following given directions.
  - 25.16 Set in sleeves following given directions.
  - 25.17 Construct and apply upper collar and facings following given directions.
  - 25.18 Catch-stitch all edges using proper method of stitching.
  - 25.19 Fit a garment using the customer’s measurements.
  - 25.20 Construct and apply linings according to fabric requirements.

25.21	Construct hems using proper technique for fabric/garment style.
25.22	Identify steps of and demonstrate tailor pressing.
26.0	Draft, design, or drape garments or patterns and construct garments from these patterns–The student will be able to:
26.01	Demonstrate taking body measurements using the correct measuring method.
26.02	Compare and alter basic patterns according to given instructions.
26.03	Construct a basic muslin shell using customer’s measurements and/or pattern.
26.04	Transfer fitting changes to paper patterns following given directions.
26.05	Construct an oak tag board sloper from muslin following given demonstration.
26.06	Draft pattern bodice, skirt, collar, and neckline using a sloper based upon customer specifications.
26.07	Define draping and demonstrate the draping method of dress design.
26.08	Identify design systems and demonstrate an understanding of design systems (i.e. animated/digital images).
27.0	Participate in a student internship–The student will be able to:
27.01	Perform tailoring and pattern making activities under supervision on the job.

## **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)**

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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

### **Cooperative Training – OJT**

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

### **Basic Skills (if applicable)**

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

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

### **Additional Resources**

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>