

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	0650040206
Grade Level	9-12
Standard Length	10 credits
Teacher Certification	Refer to the Program Structure section.
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1014 -- Multimedia Artists and Animators 27-1029 -- Designers All Others 27-1024 -- Graphic Designers
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

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

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

The content includes, but is not limited to, basic art skills, lettering skills, preparation of layouts and illustrations, preparation of camera ready paste-up, and development of specialized skills.

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

Program Structure

This program is a planned sequence of instruction consisting of ten (10) credits.

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

The following table illustrates the secondary program structure:

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

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

Common Career Technical Core – Career Ready Practices

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

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

Standards

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

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

Florida Department of Education
Student Performance Standards

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

Course Description:

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

CTE Standards and Benchmarks	
01.0	Demonstrate proficiency in the elements and principles of design. The student will be able to:
01.01	Explain proper use and care of tools and equipment.
01.02	Discuss the legal and ethical issues related to graphic design.
01.03	Apply the principles and elements of design.
01.04	Demonstrate a basic understanding of vector drawing programs.
01.05	Demonstrate a basic understanding of photo-editing / photo-manipulation programs.
01.06	Apply color theory (pigment versus light).
01.07	Utilize tones, hues, and values.
01.08	Sketch designs using pencil and ink.
01.09	Mix and apply colors to produce desired hues, tints, and shades.
01.10	Apply color for impact (color psychology) and demonstrate an understanding of color theory.
01.11	Differentiate between line, halftone, duotone, spot, RGB, four-color process, and web-safe colors.
01.12	Demonstrate 2-D design capabilities.
01.13	Demonstrate designs with symmetry and asymmetry.
01.14	Develop grids for traditional and digital layouts for print and web media.

CTE Standards and Benchmarks

01.15 Create freehand designs and objects for visualization and presentation.

01.16 Demonstrate harmony and contrast of line and shape.

01.17 Demonstrate harmony and contrast of color and tone.

01.18 Demonstrate harmony and contrast of proportion.

01.19 Demonstrate harmony and contrast of texture pattern.

01.20 Demonstrate harmony and contrast of motion.

01.21 Indicate style of layout design appropriate to the target audience.

01.22 Make a collage.

01.23 Begin developing a professional portfolio (to be updated as the student progresses through the program).

01.24 (Optional) Create a sign on poster board.

Florida Department of Education
Student Performance Standards

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

Course Description:

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

CTE Standards and Benchmarks	
02.0	Demonstrate proficiency in art and design skills. The student will be able to:
02.01	Explain proper use and care of tools.
02.02	Make computations for centering, spacing, and scaling drawings.
02.03	Draw on various types of media.
02.04	Illustrate using ink, pencil, washes, markers, tempera, watercolor, and paints.
02.05	Demonstrate renderings of different textures using the above listed media.
02.06	Make illustrations using various objects.
02.07	Make a montage illustration.
02.08	Draw a cartoon.
02.09	Interpret information from drawings, prints, and sketches.
02.10	Draw freehand sketches.
02.11	Draw a one-point perspective and a two-point perspective.
02.12	Make corrections to a drawing.
02.13	Develop a glossary of technical terms.
02.14	Analyze an object to determine size, shape, and proportion.

CTE Standards and Benchmarks

02.15 Draw an oblique drawing.

02.16 Draw an isometric drawing.

Florida Department of Education
Student Performance Standards

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

Course Description:

This course is designed to provide instruction in type design.

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

Florida Department of Education
Student Performance Standards

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

Course Description:

This course is designed to provide instruction in layout.

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

Florida Department of Education
Student Performance Standards

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

Course Description:

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

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

Florida Department of Education
Student Performance Standards

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

Course Description:

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

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

Florida Department of Education
Student Performance Standards

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

Course Description:

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

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

CTE Standards and Benchmarks

08.05 Make project presentations.

08.06 Explain appropriate interactions with an employer, fellow employees, and customers.

08.07 Identify potential career pathways.

08.08 Understand the importance of networking with other people in the profession.

08.09 Conduct a job search.

08.10 Develop a professional digital portfolio.

Florida Department of Education
Student Performance Standards

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

Course Description:

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

CTE Standards and Benchmarks	
09.0	Demonstrate an understanding of entrepreneurship. The student will be able to:
09.01	Define entrepreneurship.
09.02	Describe the importance of entrepreneurship to the American economy.
09.03	List the advantages and disadvantages of business ownership.
09.04	Identify the risks involved in ownership of a business.
09.05	Identify the necessary personal characteristics of a successful entrepreneur.
09.06	Identify the business skills needed to operate a small business efficiently and effectively.
09.07	Create a business plan.
10.0	Demonstrate proficiency in website planning and the design process. The student will be able to:
10.01	Discuss the importance of information architecture to web design and development.
10.02	Conduct a client interview to determine the purpose and needs of the business.
10.03	Conduct a competitive analysis of similar industry sites.
10.04	Identify stages in the web design process and describe the activities comprising each stage.
10.05	Define the site structure by creating a content map, storyboard, and associated wireframes.
10.06	Discuss the legal and ethical issues related to web design and web content.

CTE Standards and Benchmarks

10.07 Describe accessibility and its implications on web design.

10.08 Create a website mock-up for client approval.

10.09 Continue developing a professional traditional and digital portfolio.

Florida Department of Education
Student Performance Standards

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

Course Description:

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

CTE Standards and Benchmarks	
11.0	Develop markup language structures. The student will be able to:
11.01	Define common markup languages and understand the usage of these languages.
11.02	Identify common devices.
11.03	Determine device and browser support and the appropriate usage of markup languages (existing and emerging).
12.0	Create basic webpages. The student will be able to:
12.01	Create basic webpage structures using common markup elements and attributes.
12.02	Incorporate list structures in a webpage (ordered, unordered, definition, nested).
12.03	Incorporate link structures in a webpage (external, internal, email).
12.04	Research web color usage principles and incorporate in a webpage.
13.0	Incorporate images and graphical formatting on a webpage. The student will be able to:
13.01	Describe usage guidelines (e.g., format types, size, relevance) for integrating images and graphics into a webpage.
13.02	Compare and contrast standard image formats used in webpage design.
13.03	Incorporate graphics into a webpage design.
13.04	Create and incorporate image maps in a webpage.
13.05	Optimize images and graphics for use in a webpage.

CTE Standards and Benchmarks	
13.06	Incorporate bootstrap layout.
14.0	Incorporate form structures in a webpage. The student will be able to:
14.01	Create an accessible form using common elements; include form, fieldset, legend, text area, select, option, button, and input (radio, checkbox, submit, reset, image, password, hidden).
14.02	Describe and diagram the relationship between XHTML forms and server-side technologies.
14.03	Compare and contrast the GET and POST methods for forms handling.
14.04	Define form validation and describe how it is accomplished.
14.05	List popular server-side technologies used to process content sent from XHTML forms.
14.06	Use labels with form elements.
14.07	Connect an XHTML form to a server-side script for processing.

Florida Department of Education
Student Performance Standards

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

Course Description:

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

CTE Standards and Benchmarks	
15.0	Describe frame structures and the usage of these structures. The student will be able to:
15.01	Explore frame and iframe structures and support issues.
15.02	Describe appropriate uses of iframes.
15.03	Incorporate frame structure in a webpage.
16.0	Use Cascading Style Sheets (CSS). The student will be able to:
16.01	Define CSS and describe its importance in web design.
16.02	Compare and contrast existing and emerging CSS versions.
16.03	Determine browser support and the appropriate usage of CSS (existing and emerging versions).
16.04	Explain “document flow” and describe its implications on web design.
16.05	Recognize and use element selectors, ID selectors, class selectors, pseudo-class selectors, and descendant selectors.
16.06	Explain how inheritance and specificity affect CSS rule conflicts.
16.07	Use inline styles, embedded style sheets, and external style sheets.
16.08	Use the link and import methods to connect to an external style sheet.
16.09	Use CSS shorthand techniques to create efficient and concise style sheets.
16.10	Apply basic CSS properties (background, border, clear color, float, font, height, line-height, list-style, margin, overflow, padding position, text-align, text-indent, width, z-index, padding).

CTE Standards and Benchmarks	
16.11	Use CSS to style tables (e.g., borders, width, spacing, alignment, background).
16.12	Use CSS to enhance the appearance and usability of an XHTML form.
17.0	Examine web design technologies and techniques. The student will be able to:
17.01	Compare and contrast common authoring tools.
17.02	Compare and contrast client-side and server-side technologies.
17.03	Define e-commerce types and usages.
17.04	Describe database connectivity relative to websites.
17.05	Identify technologies to enhance user experiences.
18.0	Describe the process for publishing a website. The student will be able to:
18.01	Explore domain name selection principles.
18.02	Identify the process for registering a domain name.
18.03	Compare and contrast hosting providers, features, and selection criteria.
18.04	Describe the various means for uploading website files (e.g., FTP, web-based tools).
19.0	Describe how website performance is monitored and analyzed. The student will be able to:
19.01	Identify issues related to website maintenance.
19.02	Use webpage validation tools.
19.03	Describe website performance metrics (e.g., visits, time-on-page, time-on-site) and discuss the implication of performance metrics on design.
19.04	Demonstrate knowledge of accessibility problems and solutions.
19.05	Examine indexing, page ranking, and basic Search Engine Optimization (SEO) techniques.
19.06	Explore common website analytic tools.
20.0	Create an informational website. The student will be able to:
20.01	Use Content Management System (CMS) web authoring software to create a multipage informational website.

CTE Standards and Benchmarks

20.02 Use image-editing software to enhance website designs with simple graphics.

20.03 Use animation software to enhance website designs.

20.04 Enhance the website using client-side technologies (e.g., rollovers, plug-ins, pop-up windows).

20.05 Demonstrate efficient and consistent website development practices (e.g., the use of templates, snippets).

Additional Information

Laboratory Activities

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

Florida Standards for English Language Development (ELD)

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

English Language Development (ELD) Standards Special Notes:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: <http://www.cpalms.org/uploads/docs/standards/eld/SI.pdf>. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org.

Special Notes

The 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.

Cooperative Training – OJT

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

Accommodations

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

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

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

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>