Florida CTE

# Arts, A/V Technology & Communications (2021): Commercial Art Technology

**Demonstrate proficiency in the elements and principles of design. The student will be able to:** 1.CAT.1.0

- **1.01** Explain proper use and care of tools and equipment. 1.CAT.1.01
- **1.02** Discuss the legal and ethical issues related to graphic design. 1.CAT.1.02
- **1.03** Apply the principles and elements of design. 1.CAT.1.03
- **1.04** Demonstrate a basic understanding of vector drawing programs. 1.CAT.1.04
- **1.05** Demonstrate a basic understanding of photo-editing / photo-manipulation programs. 1.CAT.1.05
- **1.06** Apply color theory (pigment versus light). 1.CAT.1.06
- **1.07** Utilize tones, hues, and values. 1.CAT.1.07
- **1.08** Sketch designs using pencil and ink. 1.CAT.1.08
- **1.09** Mix and apply colors to produce desired hues, tints, and shades. 1.CAT.1.09
- **1.10** Apply color for impact (color psychology) and demonstrate an understanding of color theory. 1.CAT.1.10
- **1.11** Differentiate between line, halftone, duotone, spot, RGB, four-color process, and web-safe colors. 1.CAT.1.11
- **1.12** Demonstrate 2-D design capabilities. 1.CAT.1.12
- **1.13** Demonstrate designs with symmetry and asymmetry. 1.CAT.1.13
- **1.14** Develop grids for traditional and digital layouts for print and web media. 1.CAT.1.14
- **1.15** Create freehand designs and objects for visualization and presentation. 1.CAT.1.15
- **1.16** Demonstrate harmony and contrast of line and shape. 1.CAT.1.16

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| | **1.17** Demonstrate harmony and contrast of color and tone. 1.CAT.1.17 |
| | **1.18** Demonstrate harmony and contrast of proportion. 1.CAT.1.18 |
| | **1.19** Demonstrate harmony and contrast of texture pattern. 1.CAT.1.19 |
| | **1.20** Demonstrate harmony and contrast of motion. 1.CAT.1.20 |
| | **1.21** Indicate style of layout design appropriate to the target audience. 1.CAT.1.121 |
| | **1.22** Make a collage. 1.CAT.1.22 |
| | **1.23** Begin developing a professional portfolio (to be updated as the student progresses through the program). 1.CAT.1.23 |
| | **1.24** (Optional) Create a sign on poster board. 1.CAT.1.24 |
| **Demonstrate proficiency in art and design skills. The student will be able to:** 2.CAT.2.0 | **02.01** Explain proper use and care of tools. 2.CAT.2.01 |
| | **02.02** Make computations for centering, spacing, and scaling drawings. 2.CAT.2.02 |
| | **02.03** Draw on various types of media. 2.CAT.2.03 |
| | **02.04** Illustrate using ink, pencil, washes, markers, tempera, watercolor, and paints. 2.CAT.2.04 |
| | **02.05** Demonstrate renderings of different textures using the above listed media. 2.CAT.2.05 |
| | **02.06** Make illustrations using various objects. 2.CAT.2.06 |
| | **02.07** Make a montage illustration. 2.CAT.2.07 |
| | **02.08** Draw a cartoon. 2.CAT.2.08 |
| | **02.09** Interpret information from drawings, prints, and sketches. 2.CAT.2.09 |
| | **02.10** Draw freehand sketches. 2.CAT.2.10 |
| | **02.11** Draw a one-point perspective and a two-point perspective. 2.CAT.2.11 |
| | **02.12** Make corrections to a drawing. 2.CAT.2.12 |
| | **02.13** Develop a glossary of technical terms. 2.CAT.2.13 |
| | **02.14** Analyze an object to determine size, shape, and proportion. 2.CAT.2.14 |
| | **02.15** Draw an oblique drawing. 2.CAT.2.15 |
| | **16** Draw an isometric drawing. 2.CAT.2.16 |

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| **Demonstrate an understanding of type design. The student will be able to:** 3.CAT.3.0 | **03.01** | **Define typographic terms (e.g., leading, kerning).** 3.CAT.3.01 |
| | **03.02** | **Identify and select typographic applications.** 3.CAT.3.02 |
| | **03.03** | **Demonstrate the ability to proofread, to use proofreader's marks, and to run a spell check.** 3.CAT.3.03 |
| | **03.04** | **Explain picas, points, and conversion to inches.** 3.CAT.3.04 |
| | **03.05** | **Explain specification of type and copy fitting.** 3.CAT.3.05 |
| | **03.06** | **Identify and select typographic styles.** 3.CAT.3.06 |
| | **03.07** | **Define basic letter structures.** 3.CAT.3.07 |
| | **03.08** | **Demonstrate mixing of families of type.** 3.CAT.3.08 |
| | **03.09** | **Identify and select lettering styles.** 3.CAT.3.09 |
| | **03.10** | **Determine and select lettering styles for layout sketches.** 3.CAT.3.10 |
| **Demonstrate proficiency in layout. The student will be able to:** 4.CAT.4.0 | **04.01** | **Identify the parts of a layout.** 4.CAT.4.01 |
| | **04.02** | **Create thumbnail sketches.** 4.CAT.4.02 |
| | **04.03** | **04.03 Create roughs and comprehensives from thumbnail sketches.** 4.CAT.4.03 |
| | **04.04** | **Prepare computer roughs from pencil layouts.** 4.CAT.4.04 |
| | **04.05** | **Prepare digital-ready artwork from comprehensives; prepare files that are print-ready and presentation-ready.** 4.CAT.4.05 |
| | **04.06** | **Crop and scale artwork and/or photos for layouts.** 4.CAT.4.06 |
| | **04.07** | **Use adhesives.** 4.CAT.4.07 |
| | **04.08** | **Demonstrate the use of effects or styles.** 4.CAT.4.08 |
| | **04.09** | **Explain layout and color trends.** 4.CAT.4.09 |
| **Demonstrate proficiency in applied design. The student will be able to:** 5.CAT.5.0 | **05.01** | **Locate and identify resource materials for inspiration; develop a file or idea bank.** 5.CAT.5.01 |
| | **05.02** | **Design logos.** 5.CAT.5.02 |
| | **05.03** | **Design stationery layouts.** 5.CAT.5.03 |
| | **04** | **Design a magazine, book cover, album artwork, and CD cover.** 5.CAT.5.04 |

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| | 05.05 | Design an ad campaign that includes newspapers, magazines, billboards, and television; demonstrate continuity. 5.CAT.5.05 |
| | 05.06 | Design a greeting card. 5.CAT.5.06 |
| | 05.07 | Design a business card. 5.CAT.5.07 |
| | 05.08 | Apply advertising psychology. 5.CAT.5.08 |
| | 05.09 | Produce an industrial brochure and/or consumer brochure. 5.CAT.5.09 |
| | 05.10 | Design a consumer brochure. 5.CAT.5.10 |
| | 05.11 | Construct a package design. 5.CAT.5.11 |
| | 05.12 | Produce computer-assisted artwork. 5.CAT.5.12 |
| | 05.13 | Continue developing a professional portfolio. 5.CAT.5.13 |
| **Demonstrate proficiency in graphic art computer skills. The student will be able to:** 6.CAT.6.0 | 06.01 | Demonstrate graphic art computer skills using appropriate graphic art programs and hardware. 6.CAT.6.01 |
| | 06.02 | Use software and hardware to manipulate and adjust various drawings, photos, and graphic material by computer. 6.CAT.6.02 |
| | 06.03 | Produce finished computer projects that reflect current and/or emergent trends in graphic art technology. 6.CAT.6.03 |
| | 06.04 | Operate various input devices for computer graphics, such as scanners and cameras. 6.CAT.6.04 |
| | 06.05 | Demonstrate proficiency in vector and raster programs. 6.CAT.6.05 |
| | 06.06 | (Optional) Make an orthographic drawing using digital software. 6.CAT.6.06 |
| | 06.07 | Continue developing a professional portfolio. 6.CAT.6.07 |
| **Demonstrate proficiency in graphic production. The student will be able to:** 7.CAT.7.0 | 07.01 | Define the differences in production processes and estimate relative costs. 7.CAT.7.01 |
| | 07.02 | Recognize the limitations for printing and dissemination on the Internet. 7.CAT.7.02 |
| | 07.03 | Identify and select different printing surfaces (e.g., embossing/debossing, silk lamination, varnish, foil, thermography, die cut, letterpress, and silkscreen). 7.CAT.7.03 |
| | 07.04 | Identify and select appropriate printing inks. 7.CAT.7.04 |

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| | **07.05** Identify and select finishing processes. 7.CAT.7.05 |
| | **07.06** Identify standard industry material sizes. 7.CAT.7.06 |
| | **07.07** Specify types of folds. 7.CAT.7.07 |
| | **07.08** Make a print on a plotter. 7.CAT.7.08 |
| | **07.09** Demonstrate proficiency in preparing files for output via print media and web content (preflight). 7.CAT.7.09 |
| **Demonstrate an understanding of employability in commercial art and graphic media. The student will be able to:** 8.CAT.8.0 | **08.01** Identify and create a résumé, references, cover letter, and a thank you letter. 8.CAT.8.01 |
| | **08.02** Relay instructions to others orally and in writing. 8.CAT.8.02 |
| | **08.03** Define and explain graphic design terms. 8.CAT.8.03 |
| | **08.04** Identify common industry questions. 8.CAT.8.04 |
| | **08.05** Make project presentations. 8.CAT.8.05 |
| | **08.06** Explain appropriate interactions with an employer, fellow employees, and customers. 8.CAT.8.06 |
| | **08.07** Identify potential career pathways. 8.CAT.8.07 |
| | **08.08** Understand the importance of networking with other people in the profession. 8.CAT.8.08 |
| | **08.09** Conduct a job search. 8.CAT.8.09 |
| | **08.10** Develop a professional digital portfolio. 8.CAT.8.10 |
| **Demonstrate an understanding of entrepreneurship. The student will be able to:** 9.CAT.9.0 | **09.01** Define entrepreneurship. 9.CAT.9.01 |
| | **09.02** Describe the importance of entrepreneurship to the American economy. 9.CAT.9.02 |
| | **09.03** List the advantages and disadvantages of business ownership. 9.CAT.9.03 |
| | **09.04** Identify the risks involved in ownership of a business. 9.CAT.9.04 |
| | **09.05** Identify the necessary personal characteristics of a successful entrepreneur. 9.CAT.9.05 |
| | **09.06** Identify the business skills needed to operate a small business efficiently and effectively. 9.CAT.9.06 |

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| | 09.07 | **Create a business plan.** 9.CAT.9.07 |
| **Demonstrate proficiency in website planning and the design process. The student will be able to:** 10.CAT.10.0 | 10.01 | **Discuss the importance of information architecture to web design and development.** 10.CAT.10.01 |
| | 10.02 | **Conduct a client interview to determine the purpose and needs of the business.** 10.CAT.10.02 |
| | 10.03 | **Conduct a competitive analysis of similar industry sites.** 10.CAT.10.03 |
| | 01.01 | **Identify stages in the web design process and describe the activities comprising each stage.** 10.CAT.10.04 |
| | 10.05 | **Define the site structure by creating a content map, storyboard, and associated wireframes.** 10.CAT.10.05 |
| | 10.06 | **Discuss the legal and ethical issues related to web design and web content.** 10.CAT.10.06 |
| | 10.07 | **Describe accessibility and its implications on web design.** 10.CAT.10.07 |
| | 10.08 | **Create a website mock-up for client approval.** 10.CAT.10.08 |
| | 10.09 | **Continue developing a professional traditional and digital portfolio.** 10.CAT.10.09 |
| **Develop markup language structures. The student will be able to:** 11.CAT.11.0 | 11.01 | **Define common markup languages and understand the usage of these languages.** 11.CAT.11.01 |
| | 11.02 | **Identify common devices.** 11.CAT.11.02 |
| | 11.03 | **Determine device and browser support and the appropriate usage of markup languages (existing and emerging).** 11.CAT.11.03 |
| **Create basic webpages. The student will be able to:** 12.CAT.12.0 | 12.01 | **Create basic webpage structures using common markup elements and attributes.** 12.CAT.12.01 |
| | 12.02 | **Incorporate list structures in a webpage (ordered, unordered, definition, nested).** 12.CAT.12.02 |
| | 12.03 | **Incorporate link structures in a webpage (external, internal, email).** 12.CAT.12.03 |
| | 12.04 | **Research web color usage principles and incorporate in a webpage.** 12.CAT.12.04 |
| **Inc gra** | Skip to main content 01 | **Describe usage guidelines (e.g., format types, size, relevance) for integrating images and graphics into a webpage.** 13.CAT.13.01 |

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| **a webpage. The student will be able to:** 13.CAT.13.0 | **13.02** | **Compare and contrast standard image formats used in webpage design.** 13.CAT.13.02 |
| | **13.03** | **Incorporate graphics into a webpage design.** 13.CAT.13.03 |
| | **13.04** | **Create and incorporate image maps in a webpage.** 13.CAT.13.04 |
| | **13.05** | **Optimize images and graphics for use in a webpage.** 13.CAT.13.05 |
| | **13.06** | **Incorporate bootstrap layout.** 13.CAT.13.06 |
| **Incorporate form structures in a webpage. The student will be able to:** 14.CAT.14.0 | **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.CAT.14.01 |
| | **14.02** | **Describe and diagram the relationship between XHTML forms and server-side technologies.** 14.CAT.14.02 |
| | **14.03** | **Compare and contrast the GET and POST methods for forms handling.** 14.CAT.14.03 |
| | **14.04** | **Define form validation and describe how it is accomplished.** 14.CAT.14.04 |
| | **14.05** | **List popular server-side technologies used to process content sent from XHTML forms.** 14.CAT.14.05 |
| | **14.06** | **Use labels with form elements.** 14.CAT.14.06 |
| | **14.07** | **Connect an XHTML form to a server-side script for processing.** 14.CAT.14.07 |
| **Describe frame structures and the usage of these structures. The student will be able to:** 15.CAT.15.0 | **15.01** | **Explore frame and iframe structures and support issues.** 15.CAT.15.01 |
| | **15.02** | **Describe appropriate uses of iframes.** 15.CAT.15.02 |
| | **15.03** | **Incorporate frame structure in a webpage.** 15.CAT.15.03 |
| **Use Cascading Style Sheets (CSS). The student will be able to:** 16.CAT.16.0 | **16.01** | **Define CSS and describe its importance in web design.** 16.CAT.16.01 |
| | **16.02** | **Compare and contrast existing and emerging CSS versions.** 16.CAT.16.02 |
| | **16.03** | **Determine browser support and the appropriate usage of CSS (existing and emerging versions).** 16.CAT.16.03 |
| | **16.04** | **Explain “document flow” and describe its implications on web design.** 16.CAT.16.04 |
| | **05** | **Recognize and use element selectors, ID selectors, class selectors, pseudo-class selectors, and descendant selectors.** 16.CAT.16.05 |

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| | **16.06** | **Explain how inheritance and specificity affect CSS rule conflicts.** 16.CAT.16.06 |
| | **16.07** | **Use inline styles, embedded style sheets, and external style sheets.** 16.CAT.16.07 |
| | **16.08** | **Use the link and import methods to connect to an external style sheet.** 16.CAT.16.08 |
| | **16.09** | **Use CSS shorthand techniques to create efficient and concise style sheets.** 16.CAT.16.09 |
| | **16.10** | **Apply basic CSS properties (background, border, clear color, float, font, height, line-height, list-style, margin, overflow, padding position, text-align, text-indent, width, z-index, padding).** 16.CAT.16.10 |
| | **16.11** | **Use CSS to style tables (e.g., borders, width, spacing, alignment, background).** 16.CAT.16.11 |
| | **16.12** | **Use CSS to enhance the appearance and usability of an XHTML form.** 16.CAT.16.12 |
| **Examine web design technologies and techniques. The student will be able to:** 17.CAT.17.0 | **17.01** | **Compare and contrast common authoring tools.** 17.CAT.17.01 |
| | **17.02** | **Compare and contrast client-side and server-side technologies.** 17.CAT.17.02 |
| | **17.03** | **Define e-commerce types and usages.** 17.CAT.17.03 |
| | **17.04** | **Describe database connectivity relative to websites.** 17.CAT.17.04 |
| | **17.05** | **Identify technologies to enhance user experiences.** 17.CAT.17.05 |
| **Describe the process for publishing a website. The student will be able to:** 18.CAT.18.0 | **01.01** | **Explore domain name selection principles.** 18.CAT.18.01 |
| | **18.02** | **Identify the process for registering a domain name.** 18.CAT.18.02 |
| | **18.03** | **Compare and contrast hosting providers, features, and selection criteria.** 18.CAT.18.03 |
| | **18.04** | **Describe the various means for uploading website files (e.g., FTP, web-based tools).** 18.CAT.18.04 |
| **Describe how website performance is monitored and analyzed. The student will be able to:** | **19.01** | **Identify issues related to website maintenance.** 19.CAT.19.01 |
| | **19.01** | **Identify issues related to website maintenance.** 19.CAT.19.02 |
| | **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.CAT.19.03 |

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| | **19.04** Demonstrate knowledge of accessibility problems and solutions. 19.CAT.19.04 |
| | **19.05** Examine indexing, page ranking, and basic Search Engine Optimization (SEO) techniques. 19.CAT.19.05 |
| | **19.06** Explore common website analytic tools. 19.CAT.19.06 |
| **Create an informational website. The student will be able to:** 20.CAT.20.0 | **20.01** Use Content Management System (CMS) web authoring software to create a multipage informational website. 20.CAT.20.01 |
| | **20.02** Use image-editing software to enhance website designs with simple graphics. 20.CAT.20.02 |
| | **20.03** Use animation software to enhance website designs. 20.CAT.20.03 |
| | **20.04** Enhance the website using client-side technologies (e.g., rollovers, plug-ins, pop-up windows). 20.CAT.20.04 |
| | **20.05** Demonstrate efficient and consistent website development practices (e.g., the use of templates, snippets). 20.CAT.20.05 |