

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](#)

-
- 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

 - 02.16 Draw an isometric drawing.** 2.CAT.2.16
-

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
- 05.04 Design a magazine, book cover, album artwork, and CD cover. 5.CAT.5.04

-
- 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
-

-
- 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

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

Incorporate images and graphical formatting on

13.01 Describe usage guidelines (e.g., format types, size, relevance) for integrating images and graphics into a webpage. 13.CAT.13.01

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

16.05 Recognize and use element selectors, ID selectors, class selectors, pseudo-class selectors, and descendant selectors. 16.CAT.16.05

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.CAT.19.0

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

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