TN Department of Education | College, Career and Technical Education

May 2023

Digital Arts & Design I

Primary Career Cluster:	Arts, A/V Technology, & Communications
Course Contact:	CTE.Standards@tn.gov
Course Code(s):	C11H06
Prerequisite(s):	None
Credit:	1
Grade Level:	9
Focus Elective Graduation Requirements:	This course satisfies one of three credits required for an elective focus when taken in conjunction with other *Arts, A/V Technology, & Communications* courses. In addition, this course satisfies one fine arts credit required for graduation.
Program of Study (POS) Concentrator:	This course satisfies one out of two required courses that meet the Perkins V concentrator definition, when taken in sequence in the approved program of study.
Programs of Study and Sequence:	This is the first course in the *Digital Arts & Design* program of study.
Aligned Student Organization(s):	SkillsUSA: http://www.skillsusatn.org/ Technology Student Association (TSA): http://www.tntsa.org
Coordinating Work-Based Learning:	Teachers are encouraged to use embedded WBL activities such as informational interviewing, job shadowing, and career mentoring. For information, visit https://www.tn.gov/education/educators/career-and-technical-education/work-based-learning.html.
Promoted Tennessee Student Industry Credentials:	Credentials are aligned with post-secondary and employment opportunities and with the competencies and skills that students acquire through their selected program of study. For a listing of promoted student industry credentials, visit https://www.tn.gov/content/tn/education/educators/career-and-technical-education/student-industry-certification.html.
Teacher Endorsement(s):	153, 230, 311, 435, 436, 475, 476, 516, 519, 520, 521, 537, 538, 543, 576, 583, 597, 710, 711, 953
Required Teacher Certifications/Training:	ADDA Certified Digital Designer or NOCTI Advertising & Design or Adobe Certified Expert
Teacher Resources:	https://www.tn.gov/education/educators/career-and-technical-education/career-clusters/cte-cluster-arts-av-tech.html Best For All Central: https://bestforall.tnedu.gov/

Course at a Glance

CTE courses provide students with an opportunity to develop specific academic, technical, and 21st century skills necessary to be successful in career and in life. In pursuit of ensuring every student in Tennessee achieves this level of success, we begin with rigorous course standards which feed into intentionally designed programs of study.

Students engage in industry relevant content through general education integration and experiences such as career and technical student organizations (CTSO) and work-based learning (WBL). Through these experiences, students are immersed with industry standard content and technology, solve industry-based problems, meaningfully interact with industry professionals, and use/produce industry specific, informational texts.

Using a Career and Technical Student Organization (CTSO) in Your Classroom

CTSOs are a great resource to put classroom learning into real-life experiences for your students through classroom, regional, state, and national competitions, and leadership opportunities. Below are CTSO connections for this course, note this is not an exhaustive list.

- Participate in CTSO Fall Leadership Conference to engage with peers by demonstrating logical thought processes and developing industry specific skills that involve teamwork and project management.
- Participate in contests that highlight job skill demonstration, interviewing skills, community service activities, extemporaneous speaking, and job interview.
- Participate in leadership activities such as Student2Student Mentoring, National Week of Service, Officer Training, and Community Action Project.

For more ideas and information, visit Tennessee SkillsUSA at http://www.skillsusatn.org/.

Using Work-Based Learning (WBL) in Your Classroom

Sustained and coordinated activities that relate to the course content are the key to successful work-based learning. Possible activities for this course include the following. This is not an exhaustive list.

- **Standards 1.1-3.2** | Industry guest speaker who explains safety protocol and current job market.
- **Standards 4.1-4.7** | Job shadow a graphic designer.
- **Standards 5.1-7.2** | Spend the day at an art institute being introduced to the field basics.
- **Standards 8.1-9.1** | Virtual exchange with a software company on digital design.
- **Standards 10.1-10.2** | Have students do a project with industry student organizations.
- **Standards 11.1-12.2** | Have a business professor guest speak.
- **Standards 13.1-13.2** | Have an industry professional evaluate the students' portfolios.

For more ideas and information, visit https://www.tn.gov/education/educators/career-and-technical-education/work-based-learning.html

Course Description

Digital Arts & Design I is a foundational course in the Arts, A/V Technology, & Communications cluster for students interested in art and design professions. The primary aim of this course is to build a strong understanding of the principles and elements of design and the design process. Upon completion of this course, proficient students will be able to utilize industry tools to conceptualize and create communications solutions which effectively reach targeted audiences. Students will acquire basic skills in illustration, typography, and photography. Standards in this course include career exploration, an overview of the history of design, basic business management, and legal issues. In addition, students will begin compiling artifacts for inclusion in a digital portfolio, which they will carry with them throughout the full sequence of courses in this program of study.

Course Standards

1. Safety

1.1 Safety: Demonstrate the ability to **comply with personal and environmental safety practices** associated with art and design applications: the use of adhesives; hand tools; machines; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations.

a. Inspect, maintain, and employ safe operating procedures with tools and equipment.
b. Adhere to responsibilities, regulations, and Occupational Safety & Health Administration (OSHA) policies regarding reporting of accidents and observed hazards, and regarding emergency response procedures.
c. Complete a safety test with 100 percent accuracy. For equipment used in the course, complete equipment examinations with 100 percent accuracy in which the student performs an operational checkout by the instructor. Maintain a record of safety examinations and equipment examinations.

2. Introduction to Design

2.1 Roles & Development of Design: Investigate the **role of designers in communicating ideas in society, both historically and currently, emphasizing how social, cultural, economic, and political developments are reflected in and influenced by visual messaging**. Synthesize research from informational texts, including design magazines and textbooks, to create an informational artifact that illustrates how visual art and design is used as a communication tool, citing specific examples to illustrate concepts.

a. Research the development of design throughout history, analyzing how advances in technology have impacted design (Gutenberg's invention of movable type, lithography, computers, etc.). Citing resources from informational text, create an annotated timeline or visual graphic emphasizing significant time periods in design (such as Victorian, Arts and Crafts, Modernism, Art Deco, etc.) and the key technological advances impacting design.

3. Career Exploration

3.1 Career Pathways: **Identify** and analyze the **career pathways in art and design professions and the industries in which art and design professionals work**, including but not limited to manufacturing, specialized design services, publishing, and advertising. Cite supporting evidence from multiple sources (such as interviews with design professionals retrieved from industry magazines), summarize the aptitudes and training needed for at least three careers of interest. For example, outline the typical requirements needed to become a graphic designer, including personal aptitudes and secondary and postsecondary training required. Devise a tentative career plan to reach employment goals.

3.2 Labor Market Data: Compile and analyze real-time and **projected labor market data from public sources** such as the U.S. Bureau of Labor Statistics to explore local and regional occupational opportunities and trends in design careers. Synthesize collected data to **develop an informational artifact comparing occupations** by job availability, salaries, and benefits.

4. Elements and Principles of Design

4.1 Principles of Design: Categorize and **describe the principles of design** which affect 1) the internal relationships of a design, and 2) the design as a whole, citing examples of design principles found in art.

a. Unity
b. Contrast/Variety
c. Hierarchy
d. Dominance/Emphasis
e. Proportion/Scale
f. Balance
g. Rhythm/Repetition

4.2 Elements of Design: Analyze the **elements of design** by evaluating their **purposes and applications** in a variety of design applications.

a. Line
b. Shape/Form
c. Space/Size/Stability
d. Value
e. Color
f. Texture
g. Typography

For example, label and explain the elements of design in a given book cover compared with a billboard.

4.3 Rules of Composition: Research **rules of composition** (such as the rule of thirds) and explain **how the rules govern the elements and principles of design**. Write persuasively to describe the properties of a strong composition by providing examples and counterexamples and citing evidence from informational texts.

4.4 Color Wheel Functions: Explain the **function of the color wheel** and identify **techniques that achieve desired hues, values, intensities, and color schemes for use in design**. Compare and contrast additive and subtractive color systems, and relate these principles to color specification systems (such as CMYK and RGB) used in design software.

4.5 Characteristics of Color: Research the **psychological characteristics of colors, comparing and contrasting the differences in warm and cool color palettes.** Illustrate and describe in a written narrative how color is measured in hue, value, and intensity, and how these properties combine to produce specific psychological characteristics and illustrate themes. Produce examples that demonstrate how emotions may be influenced by the use of color in designs.

4.6 Color Theories: Examine color theories such as **color context and contrasts of colors**. Evaluate the **use of various color schemes** (such as complementary, tertiary, and analogous) in designs. Apply the knowledge to demonstrate basic techniques in combining colors to create designs.

4.7 Effectiveness of Design Products: Analyze, assess, and identify t**he effectiveness of design products based on the intended function of the design and the principles and elements of design** used in the composition. Investigate the intent of a given design and evaluate whether the intent was met through the structure of the design. For example, create an evaluation rubric based on the elements and principles of design and use it to evaluate given design products.

5. Introduction to the Design Process

5.1 Design Process: **Research design processes** described in textbooks, designers' professional websites, design magazines, or by interviewing design professionals. (Steps may include problem identification, research, identifying the audience, brainstorming, and idea refinement.) Citing research, create a visual illustration describing the major steps to the design process for digital arts and design.

5.2 Design Goals: Describe the **importance of setting design goals** such as **determining the purpose, message, and audience for given design projects**. Examine the research techniques professionals use to inform design goals and influence design outcomes. For example, describe how designers use market data to identify the audience for advertisement of a given product.

6. Basic Illustration

6.1 Types of Sketches: Create **two-dimensional and three-dimensional sketches**, including **rough and refined sketches**, demonstrating shape, volume, depth, and dimension. **Distinguish among common illustration techniques used in design composition** such as one-point, two-point, and multi-point perspective drawings. Develop conceptual design ideas using freehand sketching. For a given design problem, generate, analyze, and refine sketches to develop design solutions. Use the sketches to create refined drawings utilizing design software. For example, create thumbnail sketches to generate ideas for a logo or advertisement.

6.2 Symbols: Describe **how symbols have been used and have been developed** throughout history. Explain **how symbols communicate visual information in design**. Analyze the use of symbols in pictograms, ideograms, and logos, explaining and providing examples of each.

6.3 Logos: Examine a variety of well-known company logos to create a list of **key characteristics that influence a logo's effectiveness**. Compare the list with other resources such as textbooks and design journals, evaluating the credibility of each source. Drawing on research, plan and create an effective logo for a given mock company. Appraise the effectiveness of the resulting logo design as well as the designs of peers based on the criteria generated from the prior research.

7. Basic Photography

7.1 Photography Techniques: Demonstrate **basic techniques to adjust camera settings and operate a camera to capture digital images**. Define and explain white balance, depth of field, and shutter speed; demonstrate procedures for properly adjusting each for a particular scene. Apply the principles of design and the rules of composition to capture photographs.

7.2 Editing: Read and interpret instructional narratives, such as manuals or tutorials, to **perform basic edits and enhancements to photographs using software**, including but not limited to cropping, resizing, retouching, making selections, and using layers. Assess the extent to which each text addresses the given editing task. Demonstrate the procedures for editing raster-based imagery, both high resolution and low resolution, in CMYK and RGB, and preparing files for both print and web media.

8. Introduction to Design Software

8.1 Digital Files: Demonstrate **basic procedures to manage digital files**. Describe **file storage in memory cards** and estimate the number of photographs a memory card can hold based on the resolution of the photographs and other factors. Use a scanner to create digital files. Determine **appropriate resolutions for various applications such as printed and web media**. Use file system folders to organize files. Utilize online file management services to backup files.

8.2 Design Software: Distinguish between the **various software used for visual design**, including page layout software, illustration software, photo editing software, and web publishing software. Describe and illustrate the difference between raster and vector graphics. Create a chart or infographic explaining the major types and uses of design software. Employ the appropriate software to complete assigned tasks.

9. Basic Typography

9.1 Typography: **Categorize varieties of type**, including but not limited to serif, sans serif, script, and decorative. Employ the units of measurement used to **describe line spacing (leading), type size, tracking, and kerning**. Apply appropriate typography to given projects, emphasizing readability and the impact on design goals.

10. Design Projects

10.1 Design Projects: **Apply the design process to complete projects** of increasing complexity and of varying applications **such as print, web, film, and marketing communications**. Demonstrate the ability to select and **use the appropriate tools and procedures** to accomplish project goals. Prepare an informative narrative to explain a design to a peer, **emphasizing how the design process and the design elements and principles were applied**.

10.2 Design Evaluation: Utilize the **critique and refinement strategy** as part of the design process to achieve project goals. As part of a design project, present preliminary design ideas in a way that is understandable to an audience using both visual and verbal explanations. Note constructive criticism received and use it to influence design refinement. Similarly, evaluate the work of others, drawing on design principles and project goals, to provide clear, specific, and constructive feedback.

11. Ethical & Legal Issues

11.1 Ethical & Legal Issues: Research and **interpret laws and regulations protecting intellectual property as they relate to the design industry, such as copyright laws**. Explain ethical and legal conduct that provides proper credit to those whose ideas and content have been used in creating new works. Distinguish between copyrights, trademarks, infringement, and fair use. Summarize and explain guiding principles in a written or oral presentation, as though leading a training or tutorial for fellow employees.

12. Business Management

12.1 Profit: Explore **how design professionals and companies calculate profit**. Relate the profitability of a business to pricing and cost. For example, create a list of expenses incurred by a freelance designer and calculate the price and amount of work that must be accomplished in order to earn profit.

12.2 Contracts: Describe the **components of a basic contract document for design work** by analyzing an example contract. Drawing on textbooks, news articles, and other resources, explain the benefits of utilizing written contracts as opposed to oral agreements.

13. Portfolio

13.1 Portfolio Components: Gather examples of professional portfolios from contemporary designers and photographers. List the **items that are often included in a professional portfolio**. In a written, visual, or oral presentation, describe the components of a professional portfolio and the benefits of maintaining one.

13.2 Digital Portfolio: Compile important **artifacts to create a digital student portfolio that connects personal career preparation to concepts learned** in this course, including written descriptions of project processes and reflections on learning outcomes.

Standards Alignment Notes

References to other standards include:

- P21: Partnership for 21st Century Skills Framework for 21st Century Learning
    - Note: While not all standards are specifically aligned, teachers will find the framework helpful for setting expectations for student behavior in their classroom and practicing specific career readiness skills.