STRANDS AND STANDARDS
DIGITAL GRAPHIC ARTS INTRO

Learning that works for Utah
CTE®

Course Description

This course is designed to provide students with the basic knowledge and skills related to the graphic design industry. It is intended to serve as a starting point for several pathways including Digital Media, Graphics and Printing, 3D Animation and Game Development. This includes instruction and hands-on assignments in the following areas: creative design & layout, typography, color, related software, and computer and professional skills.

Intended Grade Level	9-12
Units of Credit	0.5 – 1.0
Core Code	40.10.00.00.040
Concurrent Enrollment Core Code	40.10.00.13.040
Prerequisite	None
Skill Certification Test Number	560
Test Weight	0.5
License Type	CTE and/or Secondary Education 6-12
Required Endorsement(s)	
Endorsement 1	Graphics/Printing
Endorsement 2	Bus Mktg (CTE/General) and/or Bus Mktg IT
Endorsement 3	Multimedia

STRAND 1

Students will be able to understand and demonstrate safe practices.

STRAND 2

Students will understand the design process.

Standard 1

Understand the process of planning a document.
- Understand the importance of preplanning a project including creating thumbnail sketches.
- Understand the importance of preplanning a project in terms of audience, purpose, timeline, page arrangement and production method.

Standard 2

Understand the principles and elements of design.
- Identify and utilize the following principles of design: balance (formal/symmetrical, informal/asymmetrical), contrast, emphasis, movement, unity.
- Identify and utilize the following elements of design: line, shape, value, texture, color, space (incl. positive and negative), form.

Standard 3

Understand the proper use of color in publications.
- Understand the difference between the two basic color modes CMYK and RGB.
- Create variations of color using tint, patterns, gradients, and opacity.

STRAND 3

Students will understand principles of typography.

Standard 1

Identify typeface classifications and their uses. (Serif, Sans-serif, Script, Decorative – see https://www.fonts.com/content/learning/fontology/level-1/type-anatomy/type-classifications)

Standard 2

Know and apply the following concepts:
- Understand that fonts are grouped together in families and given a family name (i.e. Arial, Garamond).
- Utilize the three basic categories of type styles (normal, bold, italic).
- Apply typeface design (serif, sans-serif, script, decorative).
- Apply copyfitting techniques (leading, kerning, tracking, alignment, point size).
- Apply basic text alignment (left, right, centered, and justified).

STRAND 4

Students will be able to understand and demonstrate digital illustrations.

Standard 1

Know basic operations of tools, panels, and menus in a drawing/illustration application (i.e. Adobe Illustrator, Inkscape).

Standard 2

Understand, create, and manipulate vector graphics.
- Identify vector graphic formats and their appropriate use (e.g., PDF, AI, EPS, etc.).
- Import/export images for project requirements (compression, resolution).
- Operate drawing tools to create and manipulate paths (lines and bezier curves) using anchor points, direction handles.
- Define and apply stroke, fill (solid and gradient), and opacity.
- Utilize appropriate selection tools.
- Perform grouping and ungrouping of objects.
- Transform objects while constraining proportions.
- Create and manage layers.
- Use text tools.
- Understand final output formats.
- Practice basic keystroke and shortcut keys.

STRAND 5

Students will understand raster images (incl. digital photos).

Standard 1

Know basic operations of tools, panels, and menus in a painting/photo editing application (i.e. Adobe Photoshop, GIMP).

Standard 2

Define, create, manipulate, and appropriately use bitmap (pixel based) raster graphics.
- Identify raster graphic formats and their appropriate use (e.g., JPG/JPEG, GIF, TIF, BMP, PSD, PNG, etc.).
- Acquire image assets (i.e. scan, digital camera, internet search, stock sources, etc.).
- Import/export images for project requirements (compression, resolution-such as 72 points in an inch).
- Crop, resize, straighten, and transform an image.
- Use layers, mask, and selection tools.
- Apply filters and effects.
- Adjust color, contrast, create gradient.
- Apply and maintain transparency or Alpha channels.
- Restore images.
- Utilize color selection techniques.
- Operate painting and drawing tools.
- Practice basic keystroke and shortcut keys.

Standard 3
Color theory
- Recognize and apply color modes for web-based graphics and printed graphics (RGB & CMYK, grayscale).
- Recognize and apply the following color properties: hue, saturation, and value (tint and shade).
- Recognize and apply color schemes (complementary, analogous, monochromatic).
- Develop a basic understanding of the color wheel including complementary, analogous and monochromatic colors.
- Understand that colors are used to communicate a mood or message using different colors that are associated with different meanings.
- Recognize and apply symbolism/emotions in color (i.e. warm and cool colors).

STRAND 6

Students will be able to perform relevant computer functions on any standard platform (Windows, Mac, Linux).

Standard 1
Perform basic computer functions on all platforms.
- Practice asset and file management using folders and naming conventions.
- Define hardware and hardware functions as they apply to the graphics industry (processor, RAM, graphics card, scanner, digital camera).
- Understand and use modifier keys.

Standard 2
Develop an awareness of digital and collaborative technologies.
- Explore and assess emerging share/collaborating technologies (i.e. Google Docs, Dropbox, Windows Live, FTP servers).

STRAND 7

Students will explore career opportunities and demonstrate understanding of employability competencies.

Standard 1
Develop career skills related to working in the digital arts industry, including social media.
- Identify occupations related to digital media careers (i.e., graphic/commercial artist, project manager, programmer, subject matter expert, technical writer, application programmer, A/V specialist, instructions designers, art director, copywriter, 3D animator, etc.).
- Identify knowledge and skills necessary for specific digital arts occupations.
- Identify next levels of education for a given career.

Standard 2
Demonstrate communication and media skills.

- Collaborate within a team.
- Develop employable competencies/characteristics: responsibility, dependability, ethics, respect, and cooperation.
- Analyze how individuals interpret messages differently, how values and points of view are included or excluded, and how media can influence beliefs and behaviors.
- Understand construction and purposes of media messages.
- Evaluate information critically and competently.
- Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of media.
- Understand the difference between royalty-free and copyrighted images and text.
- Understand the process of obtaining and citing permission for copyrighted works.
- See Title 17 United States Code -Section 107 Limitation of exclusive rights: Fair use.

Performance Skill

1. Understand and demonstrate safe practices.
   - List safety rules involving chemicals and flammable liquids.
   - Read, comprehend and follow instructions on warning labels.
   - List the steps to be taken in case of injury in the lab.
   - Identify locations of first aid kit, eye wash station, MSDS, and safety equipment.
   - Follow proper safety procedures and dress code when operating equipment.
   - Demonstrate common sense when working with others.
   - Pass general lab safety test.
2. Use planning, principles and elements of design, and color to compose a project.
3. Create a project demonstrating knowledge of typography.
4. Create a vector image. Modify a vector image by selecting and manipulating anchors and handles.
5. Use colors to communicate a mood or message.
6. Create and finalize a professional portfolio with projects completed during this course. Portfolio should demonstrate a progression of skill.

Skill Certificate Test Points by Strand

Test Name	Test #	Number of Test Points by Strand							Total Points	Total Questions
		1	2	3	4	5	6	7		
Digital Graphic Arts Intro	560		9	8	9	11	3	5	45	40