STRANDS AND STANDARDS
GRAPHIC PRINT DESIGN 2

Learning that works for Utah
CTE®

Course Description

This course builds upon the students' knowledge and skills learned and practiced in Graphic Print Design 1. You will notice the Strands & Standards are closely aligned and continue to build. Students will create, produce, and reproduce visual graphics that communicate to an audience. They will develop knowledge and skills relative to the graphic design & printing industries. Students will apply effective principles and techniques to project designs, print various projects for themselves and/or customers, and receive an over-view of the publishing and print industries on a commercial level

Intended Grade Level	10-12
Units of Credit	0.5
Core Code	40.10.00.00.044
Concurrent Enrollment Core Code	40.10.00.13.044
Prerequisite	Graphic Print Design 1
Skill Certification Test Number	564 Optional Industry Certifications: 996 - Adobe Photoshop 997 - Adobe Illustrator
Test Weight	0.5
License Area of Concentration	CTE and/or Secondary Education 6-12
Required Endorsement(s)	
Endorsement 1	Production Graphics
Endorsement 2	N/A
Endorsement 3	N/A

STRAND 1
Overview
Students will be able to understand the history and current state of the graphics/printing industry.

Standard 1
- Define design and its role in graphic communications.
- Identify print markets and types of print businesses.
- Explore printing technologies.
- Define substrate and select the appropriate substrate for a project.

STRAND 2
Safe Practices
Students will be able to understand and demonstrate safe practices that are applicable to lab/studio and production equipment at your school.

Standard 1
- 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 and safety equipment (e.g. first aid kit, eye wash station, MSDS, flammables cabinet)
- Follow proper safety procedures and dress code when operating equipment.
- Demonstrate common sense when working with others.

Performance Skills
- Pass a general lab safety test.

STRAND 3
Design Process
Graphic Design provides a place for students to explore new ideas, take appropriate risks, creatively problem solve, collaborate, develop aesthetic awareness, explore the world, and to express oneself.

Standard 1
- **Create** – conceptualize, generate, develop and organize artistic ideas. Refine through persistence, reflection, and evaluation.
- **Present/Produce** – analyze, interpret, and select artistic work. Develop techniques and concepts to refine work and express meaning through presentation.
- **Respond** – perceive, analyze, interpret, articulate, and evaluate work and process.
- **Connect** – synthesize and relate knowledge with personal meaning relating to societal, cultural, and historical context to deepen understanding.

Standard 2
Students will understand the design process.
- Understand the process of planning a document.
- Research your project (audience, purpose, timeline, page arrangement, and production method)
- Brainstorming / Differential thinking
- Creating thumbnail / sketches
- Use feedback to inform revisions and changes to work.

Standard 3
Students will understand the elements of art.
- Identify and utilize the following elements of art: line, shape, value, texture, color, space (incl. positive and negative), and form.

Standard 4
Students will understand the principles of design.
- Identify and utilize the following principles of design: balance (formal/symmetrical, informal/ asymmetrical), contrast, emphasis, movement, and unity.

Standard 5
- Define layout elements (body text, display text, illustration and white space).
- Understand Visual Hierarchy – the organization of design assets (color/contrast, scale, & grouping) on the page through which the viewer's eye is guided in the order of intended importance.
- Demonstrate proper use of rulers, guides, margins, columns, gutters, and rows, bleeds.
- Know basic paper sizes and orientations (i.e. letter, tabloid and legal) and understand document output specifications for custom size documents.
- Measure linear dimensions in inches (to 1/16" accuracy), points, and millimeters, using both fraction and decimal formats appropriately.
- Understand difference between output size and finished size when setting up your document.

Standard 6
Students will understand and demonstrate principles of pre-media (pre-press).
- Collect project information from client (client brief).
- Create mock-up/comp(s) based on client specifications.
- Review mockup(s) with client (hard-proof).
- Perform proofing, revision, approval process (soft-proof/PDF).

Performance Skills
- Students will be able to use planning, elements of art, and principles of design to compose a print design.

STRAND 4
Color Theory
Students will know and apply color theory.

Standard 1
- Understand the proper use of color in publications.
- Recognize and apply the appropriate color modes for web-based graphics and printed graphics. (RGB and CMYK)
- Create variations of color using tint, patterns, gradients, and opacity
- Understand how Bit Depth affects color availability (i.e. 8-bit, 16-bit, 32-bit).

Standard 2
- Demonstrate understanding of the color wheel
- Recognize and apply the following color properties: hue, saturation, and value (tint and shade)
- Recognize and apply color schemes (complementary, analogous, monochromatic (grayscale), and triadic, tetradic)
- Effectively use color to communicate a mood or message that is associated with different meanings.

• Recognize and apply symbolism/emotions in color (i.e. warm and cool colors).

Performance Skills
• Students will use color to communicate a mood or message in a print project.

STRAND 5
Typography
Students will know and apply principles of typography.

Standard 1
• Identify typeface classifications and their uses. (Serif, Sans-serif, Script, Decorative - see https://fonts.adobe.com/fonts

Standard 2
• 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)
• Install fonts using Adobe fonts and fonts downloaded from other websites
• Describe the anatomy of type (baseline, capline, midline, ascenders, descenders, serifs, x-height, etc.).
• Understand the measurement of type using points.
• Demonstrate correct conversion of point to inches.

Standard 3
• Apply copyfitting techniques (leading, kerning, tracking, alignment, point size)
• Apply basic text alignment (left, right, centered, and justified)
• Describe why it would be necessary to create outlines on fonts within a project file.

Performance Skills
• Students will create a print design using proper typography concepts.

STRAND 6
Vector Graphics
Students will know and apply the correct uses of vector graphics.

Standard 1
• Know basic operations of tools, panels, and menus in a drawing/illustration application (i.e. Adobe Illustrator, Corel Draw, Inkscape, Affinity Designer, etc.).
• Become familiar with user interface, preferences, and settings in an illustration program. Change illustration software defaults for project needs.
• Utilize basic keystroke and shortcut keys for illustration application.
• Know and apply the correct uses of vector images in design and production projects.

Standard 2
• Create or trace a drawing/photograph with use of the pen tool.
• Operate drawing tools to create and manipulate paths (lines and bezier curves) using anchor points, direction handles
• Know and apply the proper use of vector graphic formats and save to the appropriate forms. (e.g., PDF, AI, EPS, SVG, etc.)
• Utilize appropriate selection tools (i.e. selection, direct selection, magic wand, etc.).

- Define and apply stroke, fill (solid and gradient), and opacity
- Create and manage layers, sublayers, and groups.
- Perform grouping and ungrouping of objects using shortcuts and sublayers.
- Transform objects while constraining proportions, solve ratio and percent equations when resizing images.
- Explore different tools to manipulate type (rotated, type on a path, expanded, effects, tints, and fills, etc.).
- Create a design using basic shapes and use of transforming tools (i.e. shape tool, shapebuilder, pathfinder, transform, etc.).
- Know and apply final output formats when exporting images for project requirements (compression, resolution) outside a vector illustration program.
- Comprehend process and spot colors.

Performance Skills
- Students will create a vector image to be used in a production project.

STRAND 7
Raster Graphics
Students will understand and edit raster images.

Standard 1
- Know basic operations of tools, panels, and menus in a painting/photo editing application (i.e. Adobe Photoshop, GIMP, Affinity Photo, etc.)
- Become familiar with user interface, preferences, and settings in an illustration program. Change painting/photo editing application defaults for project needs.
- Utilize basic keystroke and shortcut keys for painting/photo editing application.
- Know and apply correct uses of raster images in design and production projects.

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, TIFF, BMP, PSD, PNG, RAW, etc.)
- Acquire image assets (i.e. scan, digital camera, internet search, stock sources, etc.)
- Import/export images for project requirements (i.e.: compression, 72 ppi (web) vs. 300 ppi (print) resolution)
- Know and apply the following concepts: image resolution, size, and resampling.
- Know and apply different destructive vs. non-destructive editing techniques in a painting/photo editing application.
- Crop, resize, straighten, and transform an image. Scale a raster image using the proper settings in order to maintain the appropriate resolution for print or digital media.
- Know and apply selection tools (i.e. marquee, magic wand, lasso, etc.).
- Understand the use of layers, layer masks, adjustment layers. Use adjustment layers to color correct an image.
- Know and apply transparent image backgrounds and appropriate formats that support transparency (i.e., PNG, GIF).
- Identify line artwork, continuous tone in both grayscale and color, and halftone.
- Know and apply filters and effects.
- Know and apply tools for photo repairs and retouching (i.e. healing brush, clone stamp, content-aware,

etc.).
- Operate painting and drawing tools. Create color and gradient swatches.
- Know and apply the use of type tool and type effects within a painting/photo editing application.

Performance Skills
- Students will create a raster graphic using multiple layers and a variety of tools to be used in a production project.

STRAND 8
Page Layout (Software)
Students will be able to understand and demonstrate use of page layout software.

Standard 1
- Know basic operations of tools, panels, and menus in a page layout application. (i.e. Adobe InDesign, Quark Express, Affinity Publisher, etc.)
- Become familiar with user interface, preferences, and settings in an page layout program. Change page layout software defaults for project needs.
- Utilize basic keystroke and shortcut keys for page layout application.
- Know and apply correct uses for a page layout application when creating production projects.

Standard 2
- Import a graphic image and/or text from an existing file into an InDesign publication.
- Demonstrate the procedure for cropping and resizing frame for digital images.
- Design and produce a document designating appropriate margins, guides, columns, and gutters.
- Define bleeds marks, crop marks, and registration marks.
- Design and produce a document using the type tool, designating appropriate fonts, styles, indents, tabs.
- Create a single page layout for printing (i.e. poster, flyer, notepad, etc.)
- Create a front-to-back page layout for printing. (i.e. postcard, brochure, announcement, etc.)

Performance Skills
- Students will create a page layout project using skills from the standards above for print production.

STRAND 9
Project Management
Students will understand project management and collaboration.

Standard 1
- Understand and practice project management skills.
- Practice asset and file management using folders and naming conventions.
- Understand file size and storage/back-ups.

Standard 2
- Develop an awareness of digital and collaborative technologies.
- Explore collaborating technologies (i.e.: Google Drive, Dropbox, Zoom, FTP, WeTransfer, etc.)

Standard 3
- Understand links and how to correct broken links in documents
- Describe the reason for packaging a file using graphic design software.

Standard 4

- Export a Portable Document Format (PDF) that can be used for proof and approval.
- Correctly format and send a file electronically to a specified location.
- Understand digital publishing technology.

STRAND 10

Print Production
Students will understand print production concepts.

Standard 1

- Students will be able to understand and demonstrate printing processes.
- Classify the major printing processes (relief, lithography, screen, gravure, and digital).
- Identify products produced by each of the major printing processes.
- Identify other graphics communication processes (i.e. vinyl, engraving, embroidery, etc.).
- Describe major contributions in the history of printing.

Performance Skills

- Students will print a product using a digital printing process.

STRAND 11

SkillsUSA – Level 2
Students will understand the importance of career readiness skills as it relates to the workplace and outlined in the SkillsUSA Framework – Level 2.

Standard 1

- Understand and demonstrate reliability.
- Determine individual time management skills.
- Explore what's ethical in the workplace or school.
- Demonstrate awareness of government.
- Demonstrate awareness of professional organizations and trade unions.

Standard 2

- Understand and demonstrate responsiveness.
- Define the customer.
- Recognize benefits of doing a community service project.
- Demonstrate social etiquette.
- Identify customer expectations.

Standard 3

- Understand resiliency.
- Discover self-motivation techniques and establish short-term goals. • Select characters
- of a positive image.
- Identify a mentor.

Standard 4

- Understand and demonstrate workplace habits.
- Participate in a shadowing activity.
- Explore workplace ethics: codes of conduct. Recognize safety issues.

- Perform a skill demonstration. Exercise your right to know.

Standard 5

- Understand and develop initiative.
- Develop personal financial skills.
- Develop a business plan.
- Investigate entrepreneurship opportunities.

Standard 6

- Understand and demonstrate continuous improvement.
- Conduct a worker interview.
- Demonstrate evaluation skills.
- Examine ethics and values in the workplace.
- Develop a working relationship with a mentor.
- Construct a job search network.

Performance Skills

- Join SkillsUSA (or other CTSO) chapter at your school.

Workplace Skills

- Communication
- Teamwork
- Customer service
- Dependability
- Legal requirements / expectations
- Digital citizenship (i.e., file management including standard file naming conventions, storage sizes (kb, mb, gb, tb, etc.), saving documents when not to the cloud, exporting files to portable/permanent storage, responsible/work-appropriate use of computer resources, etc.)
- Media literacy
- 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

Skill Certification Test Points by Strand

Test Name	Test #	Number of Test Points by Strand										Total Points	Total Questions
		1	2	3	4	5	6	7	8	9	10		