

Graphic Print Design 1

Exam Information	Description																						
Exam number 562	<p>The Graphic Print Design 1 industry certification exam assesses for technical knowledge in design and layout, related computer and software, safety, printing processes, finishing and binding, and professional skills. It covers printing, printing equipment and operation, computer hardware and software, digital imaging, print preparation, and electronic prepress.</p>																						
Items 40																							
Points 50	Exam Blueprint																						
Prerequisites None	<table> <tr> <th>Standard</th><th>Percentage of exam</th></tr> <tr> <td>1. History of Graphics and Printing</td><td>6%</td></tr> <tr> <td>2. Safe Practices</td><td>0%</td></tr> <tr> <td>3. Design Process</td><td>10%</td></tr> <tr> <td>4. Color Theory</td><td>10%</td></tr> <tr> <td>5. Typography</td><td>14%</td></tr> <tr> <td>6. Vector Graphics</td><td>20%</td></tr> <tr> <td>7. Raster Graphics</td><td>22%</td></tr> <tr> <td>8. Project Management</td><td>8%</td></tr> <tr> <td>9. Print Production</td><td>6%</td></tr> <tr> <td>10. Career Readiness Skills</td><td>4%</td></tr> </table>	Standard	Percentage of exam	1. History of Graphics and Printing	6%	2. Safe Practices	0%	3. Design Process	10%	4. Color Theory	10%	5. Typography	14%	6. Vector Graphics	20%	7. Raster Graphics	22%	8. Project Management	8%	9. Print Production	6%	10. Career Readiness Skills	4%
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Recommended course length One semester																							
National Career Cluster Arts, A/V Technology & Communications																							
Performance standards Included (Optional)																							
Certificate available Yes																							

Standard 1

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

Objective 1 Define design and its role in graphic communications.

1. Identify print markets and types of print businesses.
2. Explore printing technologies.
3. Understand the role and range of substrates available.

Standard 2

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

Objective 1 List safety rules involving chemicals and flammable liquids.

1. Read, comprehend, and follow instructions on warning labels.
2. List the steps to be taken in case of injury in the lab.
3. Identify locations and safety equipment (e.g. first aid kit, eye wash station, MSDS, flammables cabinet)
4. Follow proper safety procedures and dress code when operating equipment.
5. Demonstrate common sense when working with others.

Standard 2 Performance Evaluation included below (Optional)

Standard 3

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 express themselves.

Objective 1 Students will learn to create, present, respond, and connect with their ideas and work.

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

Objective 2 Students will understand the design process.

1. Understand the process of planning a document.
2. Research your project (audience, purpose, timeline, page arrangement, and production method)
3. Brainstorming / Differential thinking
4. Creating thumbnail/sketches
5. Use feedback to inform revisions and changes to work.

Objective 3 Students will understand the elements of art.

1. Identify and utilize the following elements of art: line, shape, value, texture, color, space (incl. positive and negative), and form.

Objective 4 Students will understand the principles of design.

1. Identify and utilize the following principles of design: balance (formal/symmetrical, informal/asymmetrical), contrast, emphasis, movement, and unity.

Standard 3 Performance Evaluation included below (Optional)

Standard 4

Students will understand color theory.

Objective 1 Students will understand the use of color, color modes, and variations.

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

Objective 2 Students will understand the color wheel, schemes, meanings, and communication with color.

1. Develop a basic understanding of the color wheel
2. Recognize and apply the following color properties: hue, saturation, and value (tint and shade)
3. Recognize color schemes (complementary, analogous, monochromatic (grayscale), and triadic, tetradic)
4. Understand that colors are used to communicate a mood or message using different colors that are associated with different meanings
5. Recognize and apply symbolism/emotions in color (i.e. warm and cool colors).

Standard 4 Performance Evaluation included below (Optional)

Standard 5

Students will understand the principles of typography.

Objective 1 Identify typeface classifications and their uses. (Serif, Sans-serif, Script, Decorative - see <https://fonts.adobe.com/fonts>)

Objective 2 Students will understand font, styles, design, and point size.

1. Fonts are grouped together in families and given a family name (i.e. Arial, Garamond)
2. Utilize the three basic categories of type styles (normal, bold, italic)
3. Apply typeface design (serif, sans-serif, script, decorative)
4. Install fonts using Adobe fonts and fonts downloaded from other websites
5. Describe the anatomy of type (baseline, ascenders, descenders, serifs, x-height, etc.).
6. Understand point size.

Standard 5 Performance Evaluation included below (Optional)

Standard 6

Students will understand and create vector graphics.

Objective 1 Students will understand the basic operations of Illustration applications.

1. Know basic operations of tools, panels, and menus in a drawing/illustration application (i.e. Adobe Illustrator, Corel Draw, Inkscape, Affinity Designer, etc.).
2. Become familiar with the user interface, preferences, and settings in an illustration program.
3. Understanding basic keystrokes and shortcut keys for illustration applications.
4. Understand the advantages and disadvantages of vector images.

Objective 2 Students will understand, create, and manipulate vector graphics.

1. Operate drawing tools to create and manipulate paths (lines and bezier curves) using anchor points, direction handles
2. Identify vector graphic formats and their appropriate use (e.g., PDF, AI, EPS, SVG, etc.)
3. Understand the different selection tools (i.e. selection, direct selection, magic wand, etc.).
4. Understand and apply stroke, fill (solid and gradient), and opacity
5. Understand and create layers.
6. Perform grouping and ungrouping of objects.
7. Transform objects while constraining proportions
8. Use type tools
9. Use basic shape tools to create a design.
10. Understand final output formats when exporting images for project requirements (compression, resolution) outside a vector illustration program.

Standard 6 Performance Evaluation included below (Optional)

Standard 7

Students will understand and edit raster images.

Objective 1 Know the basic operations of tools, panels, and menus in a painting/photo editing application (i.e. Adobe Photoshop, GIMP, Affinity Photo, etc.)

1. Become familiar with user interface, preferences, and settings in a painting/photo editing application.
2. Understanding basic keystrokes and shortcut keys for painting/photo editing applications.
3. Understand the advantages and disadvantages of raster images.

Objective 2 Define, create, manipulate, and appropriately use bitmap (pixel-based) raster graphics.

1. Identify raster graphic formats and their appropriate use (e.g., JPG/JPEG, GIF, TIFF, BMP, PSD, PNG, RAW, etc.)
2. Acquire image assets (i.e. scan, digital camera, internet search, stock sources, etc.)
3. Import/export images for project requirements (i.e.: compression, 72 ppi (web) vs. 300 ppi (print) resolution).
4. Understand the following concepts: image resolution, size, and resampling.
5. Understand destructive vs. non-destructive editing in a painting/photo editing application.
6. 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.
7. Understand the use of selection tools (i.e. marquee, magic wand, lasso, etc.).
8. Understand the use of layers, layer masks, and adjustment layers. Use adjustment layers to color-correct an image.
9. Understand transparent image backgrounds and formats that support transparency (i.e., PNG, GIF).
10. Identify line artwork, the continuous tone in both grayscale and color and halftone.
11. Understand filters and effects.
12. Understand how to perform photo repairs and retouching (i.e. healing brush, clone stamp, content-aware, etc.).
13. Operate painting and drawing tools.
14. Understand the use of type tool in painting/photo editing applications.

Standard 7 Performance Evaluation included below (Optional)

Standard 8

Students will understand project management and collaboration.

Objective 1 Understand and practice project management skills.

1. Practice asset and file management using folders and naming conventions.
2. Understand file size and storage/back-ups.

Objective 2 Develop an awareness of digital and collaborative technologies.

1. Explore collaborating technologies (i.e.: Google Drive, Dropbox, Zoom, FTP, WeTransfer, etc.)

Objective 3 Understand links and how to correct broken links in documents

Standard 9

Students will understand print production concepts.

Objective 1 Understand the digital printing process and printing media.

1. Classify the digital printing processes (inkjet, laser, large format, dye sublimation, direct-to-garment, etc.)
2. Understand the benefits of digital printing.
3. Identify digital printing media.

Standard 9 Performance Evaluation included below (Optional)

Standard 10

Students will understand the importance of career readiness skills as it relates to the workplace as outlined in the SkillsUSA Framework – Level 1.

Objective 1 Demonstrate skills of teamwork, communication, and conflict resolution skills.

1. Understand and demonstrate the attitude of cooperation.
2. Develop awareness of cultural diversity and equality issues.
3. Demonstrate effective communication with others.
4. Apply team skills to a group project.
5. Identify and apply conflict resolution skills.

Objective 2 Demonstrate goal-setting skills and resourcefulness.

1. Understand and demonstrate the ability to be resourceful and innovative.
2. Discover self-motivation techniques and establish short-term goals.
3. Measure/modify short-term goals.
4. Review a professional journal and develop a three- to five-minute presentation.

Objective 3 Plan for your future career.

1. Complete a self-assessment and identify individual learning styles.
2. Define future occupations.
3. Identify the components of an employment portfolio. List proficiency in program competencies.
4. Complete a survey for employment opportunities.
5. Create a job application.
6. Assemble your employment portfolio.
7. Employability skills: evaluate program comprehension.

Objective 4 Understand and demonstrate the ability to manage a project.

1. Apply team skills to a group project.

2. Observe and critique a meeting.
3. Demonstrate business meeting skills.
4. Explore supervisory and management roles in an organization.
5. Identify and apply conflict resolution skills.
6. Demonstrate evaluation skills.
7. Manage a project and evaluate others.

Standard 10 Performance Evaluation included below (Optional)

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 the 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

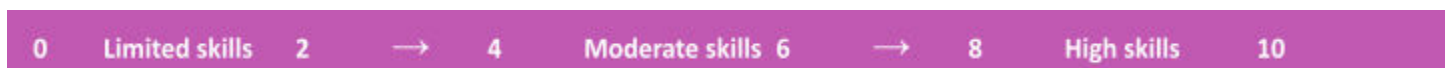
Graphic Print Design 1

Performance assessments may be completed and evaluated at any time during the course. The following performance skills are to be used in connection with the associated standards and exam. To pass the performance standard the student must attain a performance standard average of 8 or higher on the rating scale. Students may be encouraged to repeat the objectives until they average 8 or higher.

Student's Name: _____

Class: _____

Performance standards rating scale



Standard 2 – Safety Practices**Score:**

- Pass a general lab safety test.

Standard 3 – Design Process**Score:**

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

Standard 4 – Color Theory**Score:**

- Students will use color to communicate a mood or message in a print project.

Standard 5 – Typography**Score:**

- Students will create a print project demonstrating knowledge of typography.

Standard 6 – Vector Graphics**Score:**

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

Standard 7 – Raster Graphics**Score:**

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

Standard 9 – Print Production**Score:**

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

Standard 10 – SkillsUSA**Score:**

- Attend a SkillsUSA (or other CTSO) meeting at your school.

Performance standard average score:**Evaluator Name:** _____**Evaluator Title:** _____**Evaluator Signature:** _____**Date:** _____