

Instructional Framework

Graphic Design

50.0409.00



This Instructional Framework identifies, explains, and expands the content of the standards/measurement criteria, and, as well, guides the development of multiple-choice items for the Technical Skills Assessment. This document corresponds with the Technical Standards endorsed on May 1, 2019.

Domain 1: Creative Process	
Instructional Time: 55-65%	
STANDARD 6.0 APPLY GRAPHIC DESIGN CONCEPTS TO PRODUCE VISUAL SOLUTIONS	
6.1 Identify elements of design (e.g., line, shape, form, texture, pattern, color, value, space, and size)	<ul style="list-style-type: none">• Basic elements
6.2 Identify principles of design (e.g., contrast, repetition, alignment, proximity, hierarchy, balance, movement, emphasis, harmony, and unity)	<ul style="list-style-type: none">• Basic Principles
6.3 Identify anatomical components and qualities of type (i.e., x-height, ascenders, descenders, etc.)	<ul style="list-style-type: none">• X-height• Baseline• Cap height• Ascender• Descender• Counter• Crossbar• Ligature
6.4 Identify categories of type (i.e., serif, san serif, script, display, old style, modern, slab serif, etc.)	<ul style="list-style-type: none">• Basic typography categories• Structure• Appropriate usage - when and how
6.5 Explain how typography impacts design	<ul style="list-style-type: none">• Choice of typography is essential<ul style="list-style-type: none">○ Density of type○ Hierarchy○ Emotion/personality○ Size○ Contrast

<p>6.6 Identify additive colors (RGB – red, green, and blue) and subtractive colors (CMYK – cyan, magenta, yellow, and black/key)</p>	<ul style="list-style-type: none"> • CMY vs. RGB <ul style="list-style-type: none"> ◦ Additive vs. Subtractive • Color Schemes <ul style="list-style-type: none"> ◦ Monochromatic ◦ Analogous ◦ Complimentary
<p>6.7 Identify basic color schemes (e.g., complementary, analogous, triadic, tetradic, split complementary, and monochromatic)</p>	<ul style="list-style-type: none"> • Color schemes <ul style="list-style-type: none"> ◦ Monochromatic ◦ Analogous ◦ Complimentary
<p>6.8 Explain the psychology of color and how color can impact the effectiveness of a design</p>	<ul style="list-style-type: none"> • Effects of perceiving color <ul style="list-style-type: none"> ◦ Color influence ◦ Color perception ◦ Psychology properties of color
<p>STANDARD 7.0 APPLY GRAPHIC DESIGN WORKFLOW TO INCREASE SUCCESS AND PRODUCTIVITY</p>	
<p>7.1 Generate project ideas using stakeholder communication, research, brainstorming, thumbnails, roughs, mock-ups, and wireframes</p>	<ul style="list-style-type: none"> • Graphic design process <ul style="list-style-type: none"> ◦ Research (interview) ◦ Brainstorming ◦ Thumbnails ◦ Roughs ◦ Mock-ups ◦ Wireframes (web, UX) ◦ Focus groups
<p>7.2 Identify demographic components for a target audience (e.g., gender, age, income, education, socioeconomic, ethnicity, and location)</p>	<ul style="list-style-type: none"> • Target audience <ul style="list-style-type: none"> ◦ Gender ◦ Age ◦ Income ◦ Education ◦ Socioeconomic ◦ Ethnicity ◦ Location
<p>7.3 Develop a project workflow from initiation to completion</p>	<ul style="list-style-type: none"> • Workflow outline
<p>7.4 Consider user experience (UX) when designing for the target audience (e.g., motivation, functionality, and accessibility)</p>	<ul style="list-style-type: none"> • (UX) User Experience <ul style="list-style-type: none"> ◦ Motivation

	<ul style="list-style-type: none"> ○ Functionality ○ Accessibility
7.5 Collaborate with others to plan and execute a graphic work	<ul style="list-style-type: none"> ● Use defined roles ● Work towards goals established by the group and each position <ul style="list-style-type: none"> ○ Creative process steps <ul style="list-style-type: none"> ▪ Research ▪ Brainstorm ▪ Create ▪ Revise ▪ Edits based on client feedback ▪ Present
7.6 Describe project evaluation and review techniques (e.g., compare final product to original needs and specifications; give and receive feedback on a project)	<ul style="list-style-type: none"> ● Steps to revision process <ul style="list-style-type: none"> ○ Revise <ul style="list-style-type: none"> ▪ Edit based on client feedback ○ Present
STANDARD 8.0 CREATE PROBLEM-SOLVING GRAPHIC WORKS USING INDUSTRY STANDARD SOFTWARE	
8.1 Differentiate among the color spaces (e.g., RGB, CMYK, Spot Color, L*a*b*, HSB, HSL, grayscale, and hex color) and how they relate to graphic design	<ul style="list-style-type: none"> ● Color gamut usage and purposes
8.2 Analyze the applications of vector-based and raster images	<ul style="list-style-type: none"> ● Vector vs. Raster <ul style="list-style-type: none"> ○ Pixels vs. Anchor points ○ Scaling vs. Pixelation ○ Applications of each
8.3 Create vector illustrations using industry standard software	<ul style="list-style-type: none"> ● Vector illustration <ul style="list-style-type: none"> ○ Use industry standard software
8.4 Use a digital camera to demonstrate composition techniques (i.e., rule of thirds, diagonals, framing, balance, leading lines, repeating patterns/texture, symmetry, etc.)	<ul style="list-style-type: none"> ● Composition Techniques <ul style="list-style-type: none"> ○ Rule of thirds ○ Diagonals ○ Framing ○ Balance ○ Depth of field ○ Viewpoint ○ Leading lines

	<ul style="list-style-type: none"> ○ Color ○ Repeating patterns/texture ○ Symmetry
8.5 Execute a photo shoot according to client's needs	<ul style="list-style-type: none"> ● Client interview ● Equipment needs ● Location needs
8.6 Apply non-destructive image editing techniques	<ul style="list-style-type: none"> ● Camera raw ● Layer masking ● Adjustment layers ● Smart objects
8.7 Composite raster images using a combination of layers, transparency, masking, selection tools, blending modes, filters, and special effects	<ul style="list-style-type: none"> ● Editing tools to enhance and edit a raster image <ul style="list-style-type: none"> ○ Use industry standard software
8.8 Manipulate digital images using industry standard software	<ul style="list-style-type: none"> ● Editing tools to enhance and edit a raster image <ul style="list-style-type: none"> ○ Use industry standard software
8.9 Construct graphic works utilizing and manipulating type using industry standard software	<ul style="list-style-type: none"> ● Appropriate text tools to format type <ul style="list-style-type: none"> ○ Use industry standard software ○ Tracking ○ Kerning ○ Leading ○ Alignment ○ Size
8.10 Produce single- and multi-color graphic works using industry standard software	<ul style="list-style-type: none"> ● Single and multi-color projects <ul style="list-style-type: none"> ○ Use industry standard software
8.11 Create single- and multi-page graphic works utilizing margins, columns, grids, and bleeds	<ul style="list-style-type: none"> ● Appropriate page formatting tools to alter page layouts <ul style="list-style-type: none"> ○ Use industry standard software ● Appropriate text tools to format type <ul style="list-style-type: none"> ○ Use industry standard software
8.12 Demonstrate layout skills for digital media using industry standard software	<ul style="list-style-type: none"> ● Appropriate layout skills <ul style="list-style-type: none"> ○ Use industry standard software

Domain 2: Technology Production

Instructional Time: 15-25%

STANDARD 5.0 MANAGE COMPUTER HARDWARE AND SOFTWARE

5.1 Demonstrate proper use and care of equipment (i.e., computers, storage devices, printers, peripherals, cameras, input devices, etc.)	<ul style="list-style-type: none">• Appropriate use and care of equipment and available accessories
5.2 Identify threats to technological devices and computer system networks (i.e., viruses, data breaches, phishing, pirating, etc.)	<ul style="list-style-type: none">• Potential threats<ul style="list-style-type: none">○ Viruses○ Data Breaches○ Phishing○ Pirating○ Malware• Methods of protection<ul style="list-style-type: none">○ Anti-virus software○ Password protections
5.3 Utilize correct software for the final product (i.e., page layout, photo manipulation, illustration, etc.)	<ul style="list-style-type: none">• Output devices for industry standard software
5.4 Apply effective computer file management techniques (e.g., file naming, organization, storage, and backup)	<ul style="list-style-type: none">• Filing<ul style="list-style-type: none">○ Folders and subfolders○ File naming○ File formatting○ File placement-hardware, networks, cloud
5.5 Differentiate among graphic file formats based on compatibility, file size, resolution, color gamut, and medium (i.e., JPG, TIFF, RAW, PSD, PDF, INDD, AI, GIF, PNG, etc.)	<ul style="list-style-type: none">• Resolution and how it affects image size• Advantages and disadvantages of each file type<ul style="list-style-type: none">○ JPG, TIFF, RAW, PSD, PDF, INDD, AI, GIF, PNG, EPS, SVG
5.6 Identify file transfer options for security, compatibility, and control (i.e., physical media, cloud-based, network, peer to peer, etc.)	<ul style="list-style-type: none">• Advantages and disadvantage of file transfer options<ul style="list-style-type: none">○ Physical media○ Cloud based○ Network○ Peer to peer
5.7 Identify methods of data capture (i.e., digital camera, video input device, graphics tablet, scanner, keyboard, etc.)	<ul style="list-style-type: none">• Appropriate resolutions for data capture based on end product

<p>5.8 Differentiate among types and uses of digital cameras and accessories (i.e., point-and-shoot, DSLR, lenses, filters, lighting equipment, etc.)</p>	<ul style="list-style-type: none"> • Camera types <ul style="list-style-type: none"> ◦ DSLR ◦ Point and shoot • Accessories <ul style="list-style-type: none"> ◦ Tripod ◦ Memory cards • Lighting <ul style="list-style-type: none"> ◦ Flash ◦ Natural light
<p>5.9 Select appropriate resolution, compression, and format for data capture</p>	<ul style="list-style-type: none"> • Appropriate resolutions for data capture based on end product <ul style="list-style-type: none"> ◦ Lossy vs. lossless ◦ DPI, PPI
<p>5.10 Differentiate among PPI, DPI, and LPI (e.g., resolution, machine pixels, and screen frequency)</p>	<ul style="list-style-type: none"> • PPI - Pixels per inch <ul style="list-style-type: none"> ◦ Resolution • DPI - Dots per inch <ul style="list-style-type: none"> ◦ Machine pixels • LPI - Lines per inch <ul style="list-style-type: none"> ◦ Screen Frequency
<p>5.11 Explain the importance of an industry standard color management system to improve outcomes</p>	<ul style="list-style-type: none"> • Prepress <ul style="list-style-type: none"> ◦ Correlate color rendering ◦ Input devices/color monitors/output devices
<p>STANDARD 9.0 DEMONSTRATE APPLICATION OF MEDIA OUTPUT</p>	
<p>9.1 Preflight digital file for industry standard output (i.e., check for overset text, errors, missing elements, color issues, fonts, etc.)</p>	<ul style="list-style-type: none"> • Preflighting and its purpose <ul style="list-style-type: none"> ◦ Check for overset text ◦ Errors ◦ Missing elements ◦ Color issues ◦ Fonts
<p>9.2 Package a digital file for delivery, including PDF creation</p>	<ul style="list-style-type: none"> • Appropriate formats for different forms of digital delivery • Package a file for printing
<p>9.3 Compare common printing processes, their market segments, and the advantages/disadvantages of each (e.g., offset, digital, screen printing, and flexography)</p>	<ul style="list-style-type: none"> • Offset lithography • Screen printing • Flexography • Digital printing

	<ul style="list-style-type: none"> • Advantages and disadvantages
9.4 Select paper options for a job, including environmental concerns, grades and classes, and specialty substrates (i.e., canvas, vinyl, metal, coroplast, etc.)	<ul style="list-style-type: none"> • Paper size • Paper weights • Specialty substrates
9.5 Apply binding and finishing options, including imposition	<ul style="list-style-type: none"> • Appropriate uses of different binding and finishing options and how it relates to end usage
9.6 Print, trim, and mount projects for professional presentation	<ul style="list-style-type: none"> • Appropriate printing, trimming, and mounting process for different forms of professional presentations

Domain 3: Communication Skills Instructional Time: 10-15%	
STANDARD 3.0 ANALYZE FACTORS THAT CONTRIBUTE TO PERSONAL SUCCESS IN THE COMMUNICATION MEDIA TECHNOLOGIES INDUSTRY	
3.1 Employ written, verbal, and non-verbal communications that are appropriate to the target audience and situation)	<ul style="list-style-type: none"> • Various media communication <ul style="list-style-type: none"> ◦ Email ◦ Memo/letter ◦ Social media/Internet ◦ Presentation ◦ Digital presentation
3.2 Apply formatting, editing, and proofreading skills to all forms of writing	<ul style="list-style-type: none"> • Proofreading • Peer review • Conventions for various written communications
3.3 Prepare and deliver a presentation using terminology standard to the Communication Media Technologies industry	<ul style="list-style-type: none"> • Industry terminology for graphic design • Speak clearly • Body posture appropriate for presenting • Eye contact • Limit distractions • Practice social norms appropriate for audience • Rehearse presentation
3.4 Use interpersonal skills when communicating with colleagues, clients, and vendors (i.e., active listening, empathy, body language,	<ul style="list-style-type: none"> • Active listening techniques <ul style="list-style-type: none"> ◦ Body language ◦ Eye contact

<p>openness, negotiation, problem-solving, conflict resolution, assertiveness, positive attitude, etc.)</p>	<ul style="list-style-type: none"> ○ Repeat understanding of statements (summarize) ○ Ask questions ○ Limit distractions ● Negotiations ● Conflict resolution scenarios ● Benefits of a positive attitude
<p>3.5 Identify professional “dress for success” standards and practices for the Communication Media Technologies industry</p>	<ul style="list-style-type: none"> ● Impact of professional dress <ul style="list-style-type: none"> ○ Formal ○ Business casual
<p>3.6 Explain basic types of résumés and their use (e.g., chronological, functional, combination, targeted, and creative)</p>	<ul style="list-style-type: none"> ● Types of resumes <ul style="list-style-type: none"> ○ Chronological ○ Functional ○ Combination ○ Targeted ○ Creative
<p>3.7 Identify the basic parts of a résumé (e.g., contact/address section, objective, profile, career summary, experience section, education section, and reference section)</p>	<ul style="list-style-type: none"> ● Resume components <ul style="list-style-type: none"> ○ Contacts ○ Objectives ○ Profile ○ Career Summary/Experience ○ Education ○ References
<p>3.8 Explain considerations for résumé format (i.e., simple font; plenty of white space; personalize and customize to reflect your skills and abilities, etc.)</p>	<ul style="list-style-type: none"> ● Resume creation
<p>3.9 Define a professional portfolio (e.g., organized collection of relevant writing, graphics, and projects; artifacts showcasing talents and relevant skills; and summary of professional growth)</p>	<ul style="list-style-type: none"> ● Components <ul style="list-style-type: none"> ○ Organized collection of relevant writing ○ Graphics and projects ○ Artifacts showcasing talents and relevant skills ○ Summary of professional growth
<p>3.10 Describe portfolio types serving different purposes (i.e., working portfolios, display portfolios, assessment portfolios, etc.)</p>	<ul style="list-style-type: none"> ● Web vs. print ● Assessment portfolio ● Working portfolio

3.11 Describe ways to build a professional portfolio [i.e., binder, digital (iPad), online portfolio, etc.]	<ul style="list-style-type: none"> • Web vs. print • Use industry standard software to create professional portfolio
STANDARD 4.0 ANALYZE THE GRAPHIC DESIGN PROFESSION	
4.1 Differentiate between art and design	<ul style="list-style-type: none"> • Art vs. design • Purpose of art vs. design
4.2 Identify art movements that have impacted the Graphic Design profession	<ul style="list-style-type: none"> • Cubism • Art Deco • Bauhaus • Swiss/Minimalism • Pop Art
4.3 Research technologies that have impacted the Graphic Design profession	<ul style="list-style-type: none"> • Printing press • Computer • Design software • Printing technologies • Mobile technologies • Internet technologies
4.4 Describe graphic design's influence on society	<ul style="list-style-type: none"> • Propaganda posters • Advertising • Brand development
4.5 Examine the role and cultural significance of graphic designers	<ul style="list-style-type: none"> • Inform • Educate or entertain • Influence
4.6 Describe past and present graphic design styles and trends	<ul style="list-style-type: none"> • Art Nouveau • Modernism • Art Deco • Advertisement Boom • Pop Art • Swiss Style
4.7 Describe how diversity (i.e., cultural, ethnic, generational, etc.) influences design decisions	<ul style="list-style-type: none"> • Target audience demographics

4.8 Identify components required in establishing a freelance business (i.e., taxes, contracts, expenses, billing, licenses, etc.)	<ul style="list-style-type: none"> • Budget/billing • Taxes/expenses • Contracts/licenses
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Domain 4: Media Industries/Practices and Ethics
Instructional Time: 5-10%

STANDARD 1.0 ANALYZE THE COMMUNICATION MEDIA TECHNOLOGIES INDUSTRY, ITS BUSINESS PRACTICES, AND ITS ROLE IN THE ECONOMY

1.1 Investigate the history and evolution of the Communication Media Technologies industry (i.e., technology, processes, production, etc.)	<ul style="list-style-type: none"> • History of <ul style="list-style-type: none"> ◦ Technology ◦ Processes ◦ Production ◦ Innovations
1.2 Examine the impact of social media and emerging technologies on the Communication Media Technologies industry	<ul style="list-style-type: none"> • Pros and cons of social media • Emerging technologies: IoT, 4D printing, mobile apps
1.3 Research the societal and economic impact of the Communication Media Technologies industry	<ul style="list-style-type: none"> • Ethical responsibilities • Inform • Educate or entertain • Influence
1.4 Examine the impact of the Communication Media Technologies Industry on marketing practices	<ul style="list-style-type: none"> • Promotion, production and distribution • Advertising • Collaboration
1.5 Explain how diversity and inclusion are managed in the workplace to create a supportive culture	<ul style="list-style-type: none"> • Cultural • Ethical • Multi-generational
1.6 Define cultural diversity and the need for awareness and sensitivity in the workplace	<ul style="list-style-type: none"> • Demographics • Respect of all
1.7 Explain the acceptance of multiculturalism in the workplace (i.e., treating impartially and fairly each ethnic group, etc.)	<ul style="list-style-type: none"> • Cultural • Ethical • Multi-generational • Demographics

	<ul style="list-style-type: none"> • Social norms
1.8 Analyze customer service practices appropriate to the Communication Media Technologies industry	<ul style="list-style-type: none"> • Clear and professional communication • Active listening • Paying attention to all details • Knowledgeable • Follow through • Go above and beyond
1.9 Examine time management practices appropriate to the Communication Media Technologies industry	<ul style="list-style-type: none"> • Deadline management • Organizational skills • Multitasking • Prioritizing • Problem-solving • Flexibility
1.10 Identify professions that comprise the Communication Media Technologies industry (i.e., animation, broadcasting, filmmaking, graphic design, illustration, music and audio productions, photography, printing, publishing, etc.)	<ul style="list-style-type: none"> • Professions in Communication Media <ul style="list-style-type: none"> ◦ Animator ◦ Broadcasting ◦ Filmmaking ◦ Graphic Design ◦ Illustration ◦ Music/Audio ◦ Photography ◦ Printing ◦ Publishing
1.11 Comply with safety standards and regulations specific to OSHA	<ul style="list-style-type: none"> • OSHA safety standards
STANDARD 2.0 ANALYZE ETHICAL AND LEGAL ISSUES RELATED TO THE COMMUNICATION MEDIA TECHNOLOGIES INDUSTRY	
2.1 Distinguish among copyright, intellectual property, and proprietary rights	<ul style="list-style-type: none"> • Copyright vs. intellectual property vs. proprietary rights
2.2 Investigate copyright, intellectual property, proprietary rights, plagiarism, software licensure, and Creative Commons license Communication Media Technologies industry	<ul style="list-style-type: none"> • Copyright (duration, beginning, and expiration) • Intellectual property • Proprietary rights • Plagiarism • Software license • Creative commons license

<p>2.3 Discuss consequences in violating copyright, privacy, and data security laws (i.e., monetary penalties, prison, injunctions, financial restitution, etc.)</p>	<ul style="list-style-type: none"> • Violating- <ul style="list-style-type: none"> ○ Copyright ○ Privacy law ○ Data security laws <ul style="list-style-type: none"> ▪ Civil penalties ▪ Criminal penalties - fines and jail
<p>2.4 Explain fair use (i.e., authorships, credit lines, parody, news reporting, criticism and commentary, etc.)</p>	<ul style="list-style-type: none"> • Fair Use <ul style="list-style-type: none"> ○ Authorships ○ Credit lines ○ Parody ○ News reporting ○ Criticism ○ Commentary • Purpose • Character of copyrighted work • Amount of copyrighted work used • Effect of used work on copyrighted work
<p>2.5 Differentiate between legal and ethical standards as they apply to decision-making in the Communication Media Technologies industry</p>	<ul style="list-style-type: none"> • Legal vs. ethical standards • Business code of ethics
<p>2.6 Explain libel, privacy, censorship, and first amendment rights</p>	<ul style="list-style-type: none"> • Libel • Privacy • Censorship • First amendment rights