

Career & Technical Education | Arts & Communication

Photography Production

Subject Code: 340155

Outcome & Competency Descriptions

Course Description:

Students advance their digital photographic knowledge and skill using camera raw files with a focus on commercial use and knowledge of production software. Emphasis is on creative expression and client communications to increase marketability of product. Topics include white balance, saturation, contrast, and color correcting. Students apply copyright and fair use guidelines.

Strand 1. Business Operations / 21st Century Skills

Learners apply principles of economics, business management, marketing, and employability in an entrepreneur, manager, and employee role to the leadership, planning, developing, and analyzing of business enterprises related to the career field.

Outcome: 1.1. Employability Skills

Develop career awareness and employability skills (e.g., face-to-face, online) needed for gaining and maintaining employment in diverse business settings.

Competencies

- 1.1.4. Describe the role and function of professional organizations, industry associations, and organized labor and use networking techniques to develop and maintain professional relationships.

Outcome: 1.2. Leadership and Communications

Process, maintain, evaluate, and disseminate information in a business.
Develop leadership and team building to promote collaboration.

Competencies

- 1.2.1. Extract relevant, valid information from materials and cite sources of information.
- 1.2.2. Deliver formal and informal presentations.
- 1.2.4. Use negotiation and conflict-resolution skills to reach solutions.
- 1.2.7. Use problem-solving and consensus-building techniques to draw conclusions and determine next steps.
- 1.2.9. Identify advantages and disadvantages involving digital and/or electronic communications (e.g., common content for large audience, control of tone, speed, cost, lack of non-verbal cues, potential for forwarding information, longevity).
- 1.2.12. Use technical writing skills to complete forms and create reports.

Outcome: 1.3. Business Ethics and Law

Analyze how professional, ethical, and legal behavior contributes to continuous improvement in organizational performance and regulatory compliance.

Competencies

- 1.3.2. Follow protocols and practices necessary to maintain a clean, safe, and healthy work environment.
- 1.3.5. Access and implement safety compliance measures (e.g., quality assurance information, safety data sheets [SDSs], product safety data sheets [PSDSs], United States Environmental Protection Agency [EPA], United States Occupational Safety and Health Administration [OSHA]) that contribute to the continuous improvement of the organization.
- 1.3.7. Identify the labor laws that affect employment and the consequences of noncompliance for both employee and employer (e.g., harassment, labor, employment, employment interview, testing, minor labor laws, Americans with Disabilities Act, Fair Labor Standards Acts, Equal Employment Opportunity Commission [EEOC]).
- 1.3.8. Verify compliance with computer and intellectual property laws and regulations.

Outcome: 1.4. Knowledge Management and Information Technology

Demonstrate current and emerging strategies and technologies used to collect, analyze, record, and share information in business operations.

Competencies

- 1.4.6. Use an electronic database to access and create business and technical information.
- 1.4.7. Use personal information management and productivity applications to optimize assigned tasks (e.g., lists, calendars, address books).

Outcome: 1.5. Global Environment

Evaluate how beliefs, values, attitudes, and behaviors influence organizational strategies and goals.

Competencies

- 1.5.3. Use cultural intelligence to interact with individuals from diverse cultural settings.
- 1.5.4. Recognize barriers in cross-cultural relationships and implement behavioral adjustments.
- 1.5.5. Recognize the ways in which bias and discrimination may influence productivity and profitability.
- 1.5.6. Analyze work tasks for understanding and interpretation from a different cultural perspective.
- 1.5.7. Use intercultural communication skills to exchange ideas and create meaning.

Outcome: 1.7. Entrepreneurship/Entrepreneurs

Analyze the environment in which a business operates, and the economic factors and opportunities associated with self-employment.

Competencies

- 1.7.13. Protect intellectual property and knowledge (e.g., copyright, patent, trademark, trade secrets, processes).

Outcome: 1.8. Operations Management

Plan, organize, and monitor an organization or department to maximize contribution to organizational goals and objectives.

Competencies

- 1.8.4. Identify alternative actions to take when goals are not met (e.g., changing goals, changing strategies, efficiencies).

Outcome: 1.11. Principles of Business Economics

Examine and employ economic principles, concepts, and policies to accomplish organizational goals and objectives.

Competencies

- 1.11.8. Identify the relationships between economy, society, and environment that lead to sustainability.

Outcome: 1.12. Cyber Hygiene

Apply digital information security principles to keep information secure.

Competencies

- 1.12.1. Identify the purpose and practices of Cyber Hygiene.
1.12.2. Differentiate between appropriate and inappropriate information.
1.12.3. Interpret security policies through job specific training and training updates.
1.12.4. Apply secure password behavior.

Strand 2.

Design

Learners apply the elements and principles of design and compositional techniques to create works of art and visual layouts for both tactile and digital art forms.

Outcome: 2.1.

Arts Elements and Design Principles

Analyze works of art for the art elements and the design principles needed to create professional products.

Competencies

- 2.1.1. Describe art elements of line, value, color, shape, space, form, and texture in various media that are used individually or in combination.
- 2.1.2. Identify specific characteristics (i.e., positive and negative, organic, geometric, quality, weight, direction, variety, unity, balance, symmetry) of art elements that communicate and express ideas.
- 2.1.3. Determine how and when to apply the principles of design, including unity, variety, balance, movement, emphasis, visual hierarchy, and proportion/scale to communicate ideas.
- 2.1.4. Identify, compare, and contrast unity and variety within a design (e.g., formal/symmetrical, informal/asymmetrical, and radial balance).
- 2.1.6. Interpret emphasis through contrast, isolation, size, and placement.
- 2.1.7. Identify visual hierarchy used to establish dominance.
- 2.1.8. Recognize the use of proportion/scale.

Outcome: 2.2.

Color Theory

Assess the use of color for commercial design.

Competencies

- 2.2.1. Explain the science of color perception using the electromagnetic spectrum.
- 2.2.2. Choose color pairings with regard to ADA compliance, color visibility, readability, and accessibility.
- 2.2.3. Describe how changes to tint, shade, hue, value, intensity, and saturation relate to color theory.
- 2.2.5. Select color profiles for different mediums (e.g., Red Green Blue [RGB], Cyan Magenta Yellow Key [CMYK], Pantone®, Reference Output Medium Metric [ROMM] RGB, CIE-L*a*B* color space).
- 2.2.6. Replicate color across multiple media accommodating how color changes from the monitor to the final product (e.g., coated and uncoated papers, metallic, color-calibrated monitors).
- 2.2.7. Compare and contrast additive and subtractive color theory (e.g., RGB, CMYK).
- 2.2.8. Compare and contrast choices using the psychology of color.

- 2.2.9. Critique the use of color schemes (e.g., primary, secondary, tertiary, analogous, complementary, triads, monochromatic) in various media.

Outcome: 2.4. Visual Layouts

Create layouts for pre-production and analyze the communicative effects on the commercial product.

Competencies

- 2.4.1. Create thumbnail and rough sketches.
- 2.4.2. Apply the proper color profile for the final output.
- 2.4.3. Create single and multi-color layouts using images and formats.
- 2.4.6. Apply the components of a comprehensive layout (e.g., color scheme, font, white space, text graphics, frames, headings) according to an overall theme for the product.
- 2.4.7. Determine composition, formal qualities, scale, and use of space.
- 2.4.8. Apply compositional techniques, including rule of thirds, use of a grid system, 180-degree rule, framing, fill frame, pyramid, strong center of interest, and aspect ratio.
- 2.4.9. Create visual continuity among a variety of products.

Outcome: 2.5. Typography

Apply typographical elements for a commercial presentation.

Competencies

- 2.5.1. Select typefaces for relevant applications.
- 2.5.3. Use typographic measurements in terms of picas, points, pixels and ems.
- 2.5.4. Apply multiple families of type within a project.
- 2.5.7. Assess typography's effects on message delivery and aesthetics (e.g., limit families, readability).

Strand 3. Written Content Creation

Learners apply content creation knowledge and skills to use the intended message for entertainment, journalism, or marketing purposes.

Outcome: 3.1. Career-Based Writing

Develop basic skills and knowledge related to fact-, entertainment-, and marketing-based copy.

Competencies

3.1.10. Select visual imagery to support or enhance copy.

Outcome: 3.5. Social Media

Develop content for social media.

Competencies

3.5.5. Create content tailored to a specific social media platform.

Strand 4. Audio, Video, and Photo Imaging

Learners apply knowledge and skills of photography and videography to capture, engineer, and manipulate audio, images, and video for media production.

Outcome: 4.4. Lighting

Measure and manipulate lighting based on the characteristics and properties of light.

Competencies

- 4.4.1. Measure light levels in camera and using hand-held devices.
- 4.4.2. Determine the color temperature that is appropriate for the environment.
- 4.4.3. Manipulate and direct light using ratios, gels, filters, diffusion, and gobos.
- 4.4.4. Implement lighting techniques (e.g., four-point, bounce, high-key, low-key, cross-key, mixed) to produce specific effects.

Outcome: 4.5. Photography

Capture and edit still images for commercial purposes.

Competencies

- 4.5.1. Analyze the capabilities of different image capturing devices.
- 4.5.2. Clean and maintain camera equipment.
- 4.5.3. Identify the effects of ISO settings on image quality.
- 4.5.4. Achieve proper exposure through light, shutter speed, and aperture.
- 4.5.5. Affect apparent motion through shutter speed.
- 4.5.6. Manipulate aperture settings to alter depth of field.
- 4.5.7. Alter image through focus, white balance, exposure modes, and camera lens filters.
- 4.5.8. Capture images through various lenses.
- 4.5.9. Modify images through sizing, cropping, and output resolution.
- 4.5.10. Modify an image through color-management and special effects.
- 4.5.11. Enhance an image with tone, contrast, filters, composites, and sharpening techniques.
- 4.5.12. Retouch an image by cloning, healing, patching, and rebuilding.
- 4.5.13. Integrate image capture with post-production processes.
- 4.5.14. Capture multiple images and render them in high dynamic range.
- 4.5.15. Understand the fundamentals of composition.

- 4.5.16. Capture images using various camera shots.
- 4.5.17. Produce or modify story elements such as mood, tone, and theme to tell a coherent story through images.

Strand 5. Print Production Process

Learners apply knowledge and skills to produce print or digital products.

Outcome: 5.1. File Preflight

Preflight files before printing.

Competencies

- 5.1.2. Compare the on-screen layout to the customer proof.

Outcome: 5.2. File Output

Output files for print production.

Competencies

- 5.2.1. Determine the resolution of the output device.
- 5.2.2. Using additive and subtractive color theories, explain the difference of RGB, Grayscale, LAB, and CMYK color spaces.
- 5.2.3. Manage output factors, including file management and raster image processing.

Outcome: 5.4. Printed Images

Create printed images according to the client's approved proof.

Competencies

- 5.4.5. Analyze and maintain print quality controls for offset wide-format inkjet and laser formats.
- 5.4.6. Produce copies following project specifications.

Strand 6. Digital Design

Learners apply knowledge and skills of digital design to manipulate and animate new and existing audio, video, or photo images to create graphics for internet, broadcast, mobile, and other multimedia applications.

Outcome: 6.1. Content Management

Import, store, export, and manage digital assets.

Competencies

- 6.1.3. Select an application according to its capabilities in meeting the purpose and budget.
- 6.1.4. Import media into the selected application.
- 6.1.5. Identify the hardware capabilities of various devices and how processor speed, Random Access Memory (RAM), monitor resolution, and media storage affect the development and use of digital projects.
- 6.1.6. Convert file formats for use in editing software and other applications.
- 6.1.7. Export media in the appropriate format for delivery.
- 6.1.8. Manage and archive digital assets through organizational techniques (e.g., metadata, keywords, file/folder structure, name conventions).

Outcome: 6.2. Scanning

Apply scanning techniques and procedures to capture images for design.

Competencies

- 6.2.1. Describe the relationship between lines per inch (LPI) and dots per inch (DPI).
- 6.2.2. Describe the relationship between resolution and file size.
- 6.2.3. Manipulate input functions, calibrate scanning equipment, save images in various formats, and scale, size, and adjust file resolution to scan images.

Outcome: 6.3. Graphics

Create and manipulate two-dimensional (2D) and three-dimensional (3D) digital graphics.

Competencies

- 6.3.2. Manipulate the attributes of graphics (e.g., color, shape, size, texture, typography).
- 6.3.3. Arrange and manage graphics using layers.
- 6.3.4. Select a graphic file format based on compression, resolution, and file size.

Outcome: 6.5. Web Page Design

Design and create webpages to appeal to the end user.

Competencies

- 6.5.4. Select a web page template based on website characteristics.