**Course Description:**

Students will learn techniques for transforming photographic images, through use of digital cameras, computers, and mobile devices. To accomplish this, they will learn software photo editing techniques including layering, color correction, masking, and special effects using current commercial and open source programs and applications.

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### Strand 2. IT Fundamentals

###### Learners apply fundamental principles of IT, including the history of IT and its impact on society, common industry terms, systems theory, information storage and retrieval, database management, and computer hardware, software, and peripheral device configuration and installation. This base of knowledge and skills may be applied across the career field.

**Outcome 2.4. Emerging Technologies**

Identify trending technologies, their fundamental architecture, and their value in the marketplace.

**Competencies**

2.4.1. Investigate the scope and the impact of mobile computing environments on society.

2.4.2. Describe the differences, advantages, and limitations of cloud computing (e.g., public cloud, private cloud, hybrid cloud) and on premises computing.

2.4.3. Utilize cloud computing applications (e.g., services, applications, virtual environments).

**Outcome: 2.9. Project Concept Proposal**

Develop a project concept proposal.

**Competencies**

2.9.1. Identify and incorporate branding strategies.

2.9.2. Determine the scope and purpose of the project.

2.9.3. Determine the target audience, client needs, expected outcomes, objectives, and budget.

2.9.4. Develop a conceptual model and design brief for the project.

2.9.5. Develop a timeline, a communication plan, a task breakdown, costs (e.g., equipment, labor), deliverables, and responsibilities for completion.

2.9.6. Develop and present a comprehensive proposal to stakeholders.

**Outcome: 2.10. Equipment**

Select, operate, and maintain equipment.

**Competencies**

2.10.2. Identify processor, memory, storage, power and environmental requirements.

2.10.4. Identify software application requirements.

2.10.7. Backup, restore, test, archive, and manage data.

**Outcome: 2.12. Performance Tests and Acceptance Plans**

Develop performance tests and acceptance plans.

**Competencies**

2.12.1. Create a written procedure agreed by the stakeholders and project team for determining the acceptability of the project deliverables.

2.12.6. Seek stakeholder acceptance upon successful completion of the test plan.

**Outcome: 2.13. Rollout and Handoff**

Plan rollout and facilitate handoff to customer.

**Competencies**

2.13.1. Include overall project goals and timelines in the rollout plan.

2.13.2. Communicate rollout plans to key stakeholders in a timely manner.

2.12.3. Conduct final review and approvals according to company standards.

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**Strand 7. Digital Media**

Learners apply principles of digital media to produce interactive media; develop and produce multimedia applications; integrate typography into media; create 3D models and 2D and 3D animation; and create digital video, audio, and photographs.

**Outcome: 7.1. Interactive Media**

Describe and explain interactive media and interactive media production.

**Competencies**

7.1.1. Identify the types and uses of interactive media environments (e.g., web-based, kiosks, games, mobile devices, video, print).

7.1.2. Describe the components of interactive media.

7.1.7. Identify the intellectual property rights, responsibilities, and controls related to interactive media.

7.1.8. Analyze the social and cultural implications of interactive media.

7.1.9. Identify major applications for interactive media (e.g., sales and marketing, interactive advertising, education, corporate training, corporate communications, distance learning, news, entertainment).

7.1.10. Identify specific uses for interactive media in each potential market.

**Outcome: 7.2. Multimedia Tools**

Develop navigational structures, scripts, storyboards, and flowcharts for multimedia applications.

**Competencies**

7.2.4. Determine uses and needs for site maps, multimedia scripts, storyboards, and flowcharts.

7.2.5. Make preliminary sketches showing placement of images and text on screen.

7.2.7. Select colors based on color theory and psychology.

7.2.10. Select and create visual design elements appropriate for the intended audience and use.

**Outcome: 7.3. Production**

Produce interactive media.

**Competencies**

7.3.1. Select the media elements to be used (e.g., sound, video, graphics, text, animation).

7.3.2. Generate text for multi-image presentations (e.g., title graphics, charts, graphs).

7.3.3. Incorporate graphics (e.g., digital, hand-drawn, photographic).

7.3.4. Incorporate computer animation.

7.3.5. Prepare and integrate photographic images and special effects with graphic images.

7.3.6. Incorporate video footage.

7.3.10. Produce, test, debug, and archive a final product.

**Outcome: 7.4. Graphics**

Construct and manipulate digital graphics.

**Competencies**

7.4.1. Identify the purpose and intended audience of graphics

7.4.2. Select color, shape, size, and texture of objects.

7.4.3. Create or acquire graphics.

7.4.4. Manipulate and layer objects.

7.4.5. Differentiate between vector and raster graphics.

7.4.6. Select an appropriate graphic file format and resolution.

7.4.7. Optimize and export graphics files for intended use.

7.4.8. Select graphic software applications.

7.4.9. Manipulate graphic objects.

7.4.10. Compress and decompress graphic files.

7.4.11. Describe and select color profiles (e.g., Red Green Blue [RGB], Cyan Magenta Yellow Key [CMYK], Pantone).

**Outcome: 7.5. Typography**

Integrate typography in media.

**Competencies**

7.5.1. Identify typographic measurements (e.g., picas, points, pixels, ems).

7.5.2. Mix families of type within a project.

7.5.3. Select appropriate kerning, leading, tracking, and other related formatting.

7.5.4. Identify appropriate typefaces (e.g., serif, sans serif, Web Safe, screen, print).

7.5.5. Prepare a type style guide.

**Outcome: 7.9. Photographs**

Create photographs.

**Competencies**

7.9.1. Select and set up lighting needed (e.g., electronic flash units, reflectors, bounce, spot, daylight).

7.9.2. Select a digital file format or film format and camera.

7.9.3. Select and attach lenses (e.g., wide-angle, telephoto, zoom) and filters (e.g., color-compensating, polarizing, special effects).

7.9.4. Determine composition, formal qualities, scale, and use of space.

7.9.5. Use International Standards Organization (ISO), shutter speed, aperture, and white balance settings to shoot manual photographs.

7.9.6. Edit photographs (e.g., color corrections, cropping, enhancements)..