**Course Description:**

This course focuses on manipulating images for final output through print and Web-based production. Students obtain a brief perspective on analog image editing and delve into the world of editing digital photos, illustrations and other artwork. They learn to adjust resolution and exposure, modify color, compress data and format and manage files. Students will use problem-solving strategies and work collaboratively to complete the creative process with artists, printers and Web developers.

**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**

1.1.1. Identify the knowledge, skills and abilities necessary to succeed in careers.

1.1.2. Identify the scope of career opportunities and the requirements for education, training, certification, licensure and experience (e.g., interdependence of technical and artistic elements).

1.1.3. Develop a career plan that reflects career interests, pathways and secondary and postsecondary options.

1.1.6. Explain the importance of work ethic, accountability and responsibility and demonstrate associated behaviors in fulfilling personal, community and workplace roles.

1.1.7. Apply problem-solving and critical-thinking skills to work-related issues when making decisions and formulating solutions.

1.1.8. Identify the correlation between emotions, behavior and appearance and manage those to establish and maintain professionalism.

1.1.9. Give and receive constructive feedback to improve work habits.

1.1.10. Adapt personal coping skills to adjust to taxing workplace demands.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**Outcome 1.2. Leadership and Communications**

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

**Competencies**

1.2.3. Identify and use verbal, nonverbal and active listening skills to communicate effectively.

1.2.6. Use proper grammar and expression in all aspects of communication.

1.2.10. Use interpersonal skills to provide group leadership, promote collaboration and work in a team (e.g., writer, reporter, designer, director, actor, conductor, technical crew).

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**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**

1.3.3. Use ethical character traits consistent with workplace standards (e.g., honesty, personal integrity, compassion, justice).

1.3.8. Verify compliance with computer and intellectual property laws and regulations.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**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**

1.4.1. Use office equipment to communicate (e.g., phone, radio equipment, fax machine, scanner, public address systems).

1.4.2. Select and use software applications to locate, record, analyze and present information (e.g., word processing, e-mail, spreadsheet, databases, presentation, Internet search engines).

1.4.3. Verify compliance with security rules, regulations and codes (e.g., property, privacy, access, accuracy issues, client and patient record confidentiality) pertaining to technology specific to the industry pathway.

1.4.4. Use system hardware to support software applications (e.g., innovations in imaging and screen printing).

1.4.7. Use personal information management and productivity applications to optimize assigned tasks (e.g., lists, calendars, address books).

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**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.

1.5.8. Identify how multicultural teaming and globalization can foster development of new and improved products and services (e.g., digital) and recognition of new opportunities.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**Outcome 1.6. Business Literacy**

Develop foundational skills and knowledge in entrepreneurship, financial literacy and business operations.

**Competencies**

1.6.1. Identify business opportunities.

1.6.2. Assess the reality of becoming an entrepreneur, including advantages and disadvantages (e.g., risk versus reward, reasons for success and failure).

1.6.5. Describe organizational structure, chain of command, the roles and responsibilities of the organizational departments and interdepartmental interactions.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**Outcome 1.7. Entrepreneurship/Entrepreneurs**

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

**Competencies**

1.7.7. Create a list of personal strengths, weaknesses, skills and abilities needed to be successful as an entrepreneur.

1.7.8. Explain pathways used to become an entrepreneur.

1.7.10. Describe techniques for obtaining experience (e.g., apprenticeship, co-operative [co-op] education, work placement, internship, job shadowing) related to an entrepreneurial objective.

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

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**Outcome 1.8. Operations Management**

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

**Competencies**

1.8.2. Select and organize resources to develop a product or a service.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**Outcome 1.10. Sales and Marketing**

Manage pricing, place, promotion, packaging, positioning and public relations to improve quality customer service.

**Competencies**

1.10.2. Determine the customer's needs and identify solutions.

1.10.3. Communicate features, benefits and warranties of a product or service to the customer.

1.10.5. Monitor customer expectations and determine product/service satisfaction by using measurement tools.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**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. Art 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.

2.1.3. Determine how and when to apply the principles of design, including unity, variety, balance, movement, emphasis, visual hierarchy and proportion/scale, to communicate ideas.

2.1.7. Interpret emphasis through contrast, isolation, size and placement.

2.1.8. Identify visual hierarchy used to establish dominance.

2.1.9. Recognize the use of proportion/scale.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**Outcome 2.2. Color Theory**

Assess the use of color for commercial design.

**Competencies**

2.2.2. Analyze position in color theory models (e.g., color wheel; Munsell’s design relationship among chroma/intensity, value/lightness and hue).

2.2.4. Identify gamut output issues and calibrate color.

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 mediums 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.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**Outcome 2.3. Art Forms**

Apply art elements and design principles to create two-dimensional (2D) and three-dimensional (3D) commercial products using various media to communicate the message and evoke the desired audience response.

**Competencies**

2.3.3. Apply color using pencil, marker, dry media, wet media and digital media.

2.3.6. Select the material based on its characteristics (e.g., design, construction, maintenance, care of product) for the intended use.

2.3.7. Create a 3D design according to specific measurements using drawing, cutting, scoring and bonding techniques.

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| Pathways |  | Media Arts |  | Performing Arts | X | Visual Design |

**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.

2.4.4. Use process color and spot color separations.

2.4.5. Differentiate between raster- and vector-based layouts.

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.

2.4.10. Determine how the technical characteristics of the print medium affect content and style.

2.4.11. Calculate finishing requirements in a layout (e.g., registration marks, bleed, slugs).

2.4.12. Evaluate the product in terms of the message or meaning for the targeted audience.

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| Pathways |  | Media Arts |  | Performing Arts | X | Visual Design |

**Outcome 2.5. Typography**

Apply typographical elements for a commercial presentation.

**Competencies**

2.5.1. Select typefaces (e.g., serif, sans serif).

2.5.2. Apply typography kerning and leading to typefaces for readability.

2.5.3. Use typographic measurements in terms of picas, points, pixels and ems.

2.5.4. Mix families of type within a project.

2.5.5. Use typography as a primary component of logo design.

2.5.6. Determine the effect of various font types on operating systems.

2.5.7. Assess typography’s effects on message delivery and aesthetics (e.g., limit families, readability).

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| Pathways |  | Media Arts |  | Performing Arts | X | Visual Design |

**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.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**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**

5.1.6. Troubleshoot files coded with computer programming language.

5.1.7. Confirm file accuracy through test printing.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**Outcome 5.5. Digital Print Methods**

Analyze digital print technologies for digital and offset production.

**Competencies**

5.5.4. Identify the types of file formats that can be sent to a RIP.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**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**

6.1.1. Identify the characteristics that make media interactive.

6.1.2. Compare how digital and interactive media are used in different environments (e.g., kiosks, electronic billboards, Digital Out of Home [DOoH] signage, games).

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.

6.1.6. 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 digital assets through organizational techniques (e.g., metadata, keywords, file/folder structure, name conventions).

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**Outcome 6.2. Scanning**

Apply scanning techniques and procedures to capture images for design.

**Competencies**

6.2.4. Scan images.

6.2.5. Save images in various modes, resolutions and formats.

6.2.6. Scale, size and adjust file resolution for multiple uses.

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| Pathways | X | Media Arts |  | Performing Arts | X | Visual Design |

**Outcome 6.3. Graphics**

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

**Competencies**

6.3.4. Select a graphic file format based on compression, resolution and file size.

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| Pathways | X | Media Arts |  | Performing Arts | X | Visual Design |

**Outcome 6.4. Animation**

Create digital animation.

**Competencies**

6.4.6. Render and export animations.

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| Pathways | X | Media Arts |  | Performing Arts | X | Visual Design |

**Outcome 6.5. Web Page Design**

Design and create webpages to appeal to the end user.

**Competencies**

6.5.1. Identify how different devices, browsers and operating systems affect the look of a web page.

6.5.18. Transfer files using file compression for transfer or storage.

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| Pathways | X | Media Arts |  | Performing Arts | X | Visual Design |

**Strand 7. Performance**

Learners apply knowledge and skills for performance, including roles, processes, procedures and production design.

**Outcome 7.14. Performance Demands**

Meet the physical, vocal and psychological demands of a performance.

**Competencies**

7.14.7. Manage and relieve anxieties.

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