

**Arts and Communication Career Field**  
**Digital Print Design**  
Subject Code: 340320  
Outcome & Competency Descriptions

**Course Description:**

Starting with understanding target audiences, demographics, product shelf life and sustainability students create designs for two- or three-dimensional products. Using workflow processes, they lay out newsletters, posters, business cards and other products. They create logo and package designs for corporate branding, marketing and advertising. Critical thinking is engaged in multiple-level critiques.

**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.
- 1.1.4. Describe the role and function of professional organizations, industry associations and organized labor and use networking techniques to develop and maintain professional relationships.
- 1.1.5. Develop strategies for self-promotion in the hiring process (e.g., filling out job applications, resumé writing, interviewing skills, portfolio development).
- 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.
- 1.1.11. Recognize different cultural beliefs and practices in the workplace and demonstrate respect for them.
- 1.1.12. Identify healthy lifestyles that reduce the risk of chronic disease, unsafe habits and abusive behavior.

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**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 (e.g., First Amendment, Freedom of Information Act).
- 1.2.2. Deliver formal and informal presentations.
- 1.2.3. Identify and use verbal, nonverbal and active listening skills to communicate effectively.
- 1.2.4. Use negotiation and conflict-resolution skills to reach solutions.
- 1.2.5. Communicate information (e.g., directions, ideas, vision, workplace expectations) for an intended audience and purpose.
- 1.2.6. Use proper grammar and expression in all aspects of communication.
- 1.2.7. Use problem-solving and consensus-building techniques to draw conclusions and determine next steps.
- 1.2.8. Identify the strengths, weaknesses and characteristics of leadership styles that influence internal and external workplace relationships.
- 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).
- 1.2.10. Use interpersonal skills to provide group leadership, promote collaboration and work in a team (e.g., writer, reporter, designer, director, actor, conductor, technical crew).
- 1.2.11. Write professional correspondence, documents, job applications and resumés.
- 1.2.12. Use technical writing skills to complete forms and create reports.
- 1.2.13. Identify stakeholders and solicit their opinions.
- 1.2.14. Use motivational strategies to accomplish goals.

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**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.
- 1.3.3. Use ethical character traits consistent with workplace standards (e.g., honesty, personal integrity, compassion, justice).
- 1.3.4. Identify how federal and state consumer protection laws affect products and services.
- 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.
- 1.3.6. Identify deceptive practices (e.g., bait and switch, identity theft, unlawful door-to-door sales, deceptive service estimates, fraudulent misrepresentations) and their overall impact on organizational performance.
- 1.3.8. Verify compliance with computer and intellectual property laws and regulations.

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**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).
- 1.4.6. Use an electronic database to access and create business and technical information.

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- 1.4.7. Use personal information management and productivity applications to optimize assigned tasks (e.g., lists, calendars, address books).
- 1.4.8. Use electronic media (e.g., social media) to communicate and follow network etiquette guidelines.

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**Outcome 1.5. Global Environment**

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

**Competencies**

- 1.5.2. Describe how cultural intelligence skills influence the overall success and survival of an organization.
- 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.
- 1.5.8. 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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**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).

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- 1.6.5. Describe organizational structure, chain of command, the roles and responsibilities of the organizational departments and interdepartmental interactions.
- 1.6.6. Identify the target market served by the organization, the niche that the organization fills and an outlook of the industry.
- 1.6.8. Identify the features and benefits that make an organization’s product or service competitive.
- 1.6.9. Explain how the performance of an employee, a department and an organization is assessed.

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**Outcome 1.7. Entrepreneurship/Entrepreneurs**

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

**Competencies**

- 1.7.1. Compare and contrast the four types of business ownership (i.e., individual proprietorships, partnerships, corporations, cooperatives).
- 1.7.4. Assess the roles of nonprofit and for-profit businesses.
- 1.7.5. Develop a business plan.
- 1.7.7. Create a list of personal strengths, weaknesses, skills and abilities needed to be successful as 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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**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.
- 1.8.4. Identify alternative actions to take when goals are not met (e.g., changing goals, changing strategies, efficiencies).

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**Outcome 1.10. Sales and Marketing**

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

**Competencies**

- 1.10.1. Identify how the roles of sales, advertising and public relations contribute to a company's brand.
- 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.
- 1.10.8. Use promotional techniques to maximize sales revenues (e.g., advertising, sales promotions, publicity, public relations).
- 1.10.10. Demonstrate sales techniques.

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**Outcome 1.11. Principles of Business Economics**

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

**Competencies**

- 1.11.2. Identify the difference between monetary and nonmonetary incentives and explain how changes in incentives cause changes in behavior.
- 1.11.8. Identify the relationships between economy, society and environment that lead to sustainability (e.g., evolution and impact of the arts).

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**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.
- 2.1.2. Identify specific characteristics (i.e., positive and negative, organic, geometric, quality, weight, direction) 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.

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- 2.1.4. Compare and contrast unity and variety within a design.
- 2.1.5. Contrast formal/symmetrical, informal/asymmetrical and radial balance.
- 2.1.6. Observe movement shown through repetition, pattern and rhythm.
- 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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**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. Analyze position in color theory models (e.g., color wheel, Munsell’s design relationship among chroma/intensity, value/lightness and hue).
- 2.2.3. Describe how changes to tint, shade, hue, value, intensity and saturation relate to color theory.
- 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).



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

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**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**

- 2.3.4. Demonstrate shape, volume, depth and dimension.
- 2.3.5. Employ techniques that produce actual and implied texture (e.g., filters, embroidery, embossing, clay, wax, wood, metal).
- 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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**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.

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- 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.
- 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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**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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**Strand 3. Written Content Creation**

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

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**Outcome 3.1. Career-based Writing**

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

**Competencies**

- 3.1.5. Create copy that emphasizes the central theme through supporting ideas or facts.
- 3.1.10. Select visual imagery to support or enhance copy.
- 3.1.11. Review, re-write and edit to prepare the final copy for client and artistic approval.
- 3.1.12. Critique the impact of your writing and incorporate feedback in a revision.

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**Outcome 3.3. Fact-based Writing**

Write concise and focused copy for journalism.

**Competencies**

- 3.3.3. Identify positions from research and resources while remaining objective.
- 3.3.10. Apply direct, indirect and partial quotes.

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**Outcome 3.4. Market-based Writing**

Write concise, creative, memorable, sellable copy for advertising, public relations and proposals.

**Competencies**

- 3.4.2. Determine the wants and needs of the target audience.
- 3.4.3. Communicate brand image and product value.
- 3.4.7. Implement the voice of the customer in branding.
- 3.4.9. Critique advertisements to ensure the achievement of goals and objectives.

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**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 a media production.

**Outcome 4.5. Photography**

Capture and edit still images for commercial purposes.

**Competencies**

- 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.

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**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**

- 5.1.1. Load customer files on a prepress system and open in a design application.
- 5.1.2. Compare the on-screen layout to the customer proof.
- 5.1.3. Examine the page format for production or output issues, including pagination, bleeds, folds, imposition, total ink coverage and color separations.
- 5.1.4. Examine font and picture usage for mapping, alignment, linking and resolution issues.
- 5.1.5. Identify color correction factors, including assignment, gamut, dot gain, screen angles, trapping, gray balance and rich black.
- 5.1.7. Confirm file accuracy through test printing.

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**Outcome 5.5. Digital Print Methods**

Analyze digital print technologies for digital and offset production.

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- 5.5.1. Identify digital printing technologies and uses, including laser, toner-based xerography, ink-based digital and wide-format inkjet.
- 5.5.5. Compare digital printing to offset printing.
- 5.5.6. Compare and contrast proofing techniques used in digital and offset printing technologies.

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**Outcome 5.6. Digital Production Printing**

Produce digital print jobs on digital print systems.

**Competencies**

- 5.6.1. Use database software and text/graphics to create a variable data printing job.
- 5.6.2. Plan and execute a digital job, including reading and interpreting production information on a job docket/ticket, maintaining a checklist and queuing a job.
- 5.6.4. Select finishing methods within the output software, including stitching, folding, booklet-making and hole-punching.
- 5.6.7. Analyze the capabilities of three-dimensional (3D) printing.

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**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.
- 6.1.6. 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**

- 6.2.2. Describe the relationship between resolution and file size.
- 6.2.3. Manipulate input functions and calibrate scanning equipment (e.g., descreening, gamma, resolution).
- 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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**Outcome 6.3. Graphics**

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

**Competencies**

- 6.3.1. Draw digital graphics.
- 6.3.2. Manipulate the attributes of graphics (e.g., color, shape, size, texture).
- 6.3.3. Arrange graphics using layers.
- 6.3.4. Select a graphic file format based on compression, resolution and file size.
- 6.3.5. Optimize and export graphic files for intended use.

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