8466
PRINT PRODUCTION
FUNDAMENTALS (10)

20S/20E/20M

A Print Media Course

Course Description

This course is intended for students who wish to explore the print media vocation.

Curriculum content focuses on an introduction to the entire discipline of print media. The emphasis will be on project-based activities.

The course includes an introduction to essential skills related to safety and employability. Students will also be introduced to career development, sustainability, and new and emerging technologies in print media.

Cross-curricular learning outcomes, which include essential print media math, the science of print media, and the interpretation of trade documents, are to be integrated into the authentic activities of the course.

The learning outcomes are organized by Technology Fundamentals (F), Technology Skills (S), and Professional Practice (P) strands. For instructional purposes, the sequence of outcomes and the outcomes included in each unit of study can vary based on the projects within the course.

Goal 1: Demonstrate ability to apply the creative process to develop a professional **design** for print.

GLO 1.1: Identify the **design problem**.

SLO 10.F.1.1.1	Demonstrate basic knowledge of the need for design in the print production process.
SLO 10.F.1.1.2	Demonstrate basic knowledge of the design process (i.e., thumbnails, rough layouts, comprehensives, and production layout).
SLO 10.S.1.1.1	Identify the required components (e.g., images, text) for the design problem.

GLO 1.2: Research the **factors that influence design**.

SLO 10.F.1.2.1	Identify purpose, audience, and type of print output required for the problem.
SLO 10.S.1.2.1	Gather visual research for design solutions.
SLO 10.S.1.2.2	Identify the required specifications (e.g., colour, size, font, and images) for the design problem.

GLO 1.3: Recognize and apply the **elements and principles of design**.

SLO 10.F.1.3.1   Describe the use of the principles of design in pre-existing print materials.

SLO 10.F.1.3.2   Demonstrate basic knowledge of how elements and principles of design communicate messages effectively.

SLO 10.S.1.3.1   Arrange elements by applying principles of design to create a basic layout for a variety of printed materials.

GLO 1.4: **Conceptualize** the design solution.

SLO 10.F.1.4.1   Brainstorm design ideas.

SLO 10.F.1.4.2   Demonstrate basic knowledge of the initial stages of the design process (e.g., thumbnails, rough layouts).

SLO 10.S.1.4.1   Draw thumbnails and rough layouts using appropriate symbols (e.g., type, graphic elements).

GLO 1.5: **Communicate** the design solution.

SLO 10.S.1.5.1   Communicate and justify design solution (e.g., rough layouts, explanations and justifications of the design).

SLO 10.S.1.5.2   Identify items for portfolio collection.

GLO 1.6: Describe and apply **appropriate technology** to achieve the design solution.

SLO 10.F.1.6.1   Identify software (e.g., page layout, image manipulation, and illustration) used in the print production industry.

SLO 10.F.1.6.2   Identify the basic differences between vector and raster images.

SLO 10.F.1.6.3   Demonstrate basic knowledge of resolution in relation to output (e.g., ppi, dpi, lpi, screen resolution, and stochastic).

SLO 10.F.1.6.4   Demonstrate basic knowledge of colour management/ colour modes (e.g., subtractive, additive colour, spot, RGB, and CMYK).

SLO 10.F.1.6.5   Demonstrate basic knowledge of file management practices and commonly used file formats for design and print production.

SLO 10.F.1.6.6   Demonstrate basic knowledge of the purpose of a comprehensive proof.

SLO 10.S.1.6.1   Navigate operating system and apply file management practices (e.g., naming, formats, hierarchies, and saving).

SLO 10.S.1.6.2	Use basic tools to create and manipulate raster and vector images for page layout.
SLO 10.S.1.6.3	Use appropriate procedures to acquire digital and continuous tone images (e.g., scanner and digital camera).
SLO 10.S.1.6.4	Convert images between vector and raster formats.
SLO 10.S.1.6.5	Create and print comprehensive proofs.

Goal 2: Describe and apply **graphic print production processes**.

GLO 2.1: Describe and apply appropriate **pre-press techniques**.

SLO 10.F.2.1.1	Demonstrate basic knowledge of the stages of the print production process (e.g., pre-press, printing production, and post-press).
SLO 10.F.2.1.2	Demonstrate basic knowledge of the need for a production proof.
SLO 10.F.2.1.3	Identify basic quality control components (e.g., printer's marks) for a production proof.
SLO 10.F.2.1.4	Explore various methods (e.g., PDFs, text-to-curve, and packing fonts and images) to prepare print file for output.
SLO 10.F.2.1.5	Identify various image carriers.
SLO 10.S.2.1.1	Prepare a print-ready file for output.
SLO 10.S.2.1.2	Verify production proof to job specification.
SLO 10.S.2.1.3	Prepare an image carrier for printing (e.g., plate, screen).

GLO 2.2: Describe and apply commonly used **print production methods**.

SLO 10.F.2.2.1	Identify commonly used printing processes used for different print products.
SLO 10.F.2.2.2	Identify the common systems of a printing press (e.g., paper path, imaging, and delivery system).
SLO 10.S.2.2.1	Apply printing production methods to create simple (e.g., one- or two-colour) projects.

GLO 2.3: Describe and apply **post-press methods**.

| SLO 10.F.2.3.1 | Identify the commonly used post-press methods (e.g., bindery, finishing). |
| SLO 10.S.2.3.1 | Apply basic post-press operations. (e.g., cutting, binding, padding, folding, stitching, and punching). |

Goal 3: Operate and maintain the **tools and equipment** used in the print production industry.

GLO 3.1: Operate computer **hardware and software**.

SLO 10.F.3.1.1	Identify commonly used tools and procedures in print production software.
SLO 10.S.3.1.1	Explore and apply commonly used functions within print production software.
SLO 10.S.3.1.2	Create basic projects using image-manipulation (e.g., raster, vector) and page-layout software related to the print production process.

GLO 3.2: Operate and maintain **print production tools and equipment**.

SLO 10.F.3.2.1	Identify measurement tools and devices used in print production (e.g., line gauge, e-gauge).
SLO 10.S.3.2.1	Use measurement devices and tools required for the print production process.
SLO 10.S.3.2.2	Handle substrates for printing.
SLO 10.S.3.2.3	Perform basic operations of a printing press.
SLO 10.S.3.2.4	Assist in clean-up of the work area and equipment.

GLO 3.3: Operate and maintain **post-press tools and equipment**.

SLO 10.F.3.3.1	Identify post-press equipment.
SLO 10.F.3.3.2	Identify measurement tools and devices used in print production (e.g., line gauge, e-gauge).
SLO 10.S.3.3.1	Use measurement devices and tools required for the print production process.
SLO 10.S.3.3.2	Handle substrates for printing.
SLO 10.S.3.3.3	Perform basic operations of a printing press.
SLO 10.S.3.3.4	Assist in clean-up of the work area and equipment.
SLO 10.S.3.3.5	Apply appropriate post-press techniques as required.

GLO 3.4: Handle and store print production materials.

SLO 10.F.3.4.1	Identify handling and storage procedures for pre-press materials.

Goal 4: Describe and apply the transferable **cross-curricular** (e.g., math, literacy, and scientific) knowledge and skills as they apply to the print industries.

GLO 4.1: Apply **mathematical solutions** to design production problems (e.g., conversion, measurement, estimation, and accuracy).

SLO 10.F.4.1.1	Identify measurement units (e.g., points, picas, metric, and imperial) used in the print production process.
SLO 10.F.4.1.2	Identify common substrate sizes.
SLO 10.S.4.1.1	Set up page or image size using appropriate measuring units.
SLO 10.S.4.1.2	Measure fonts, dimensions, and substrates to appropriate production specifications.

GLO 4.2: Read, write, interpret, and communicate information related to the design and print process (e.g., proofreading, visual, and/or written communication).

SLO 10.F.4.2.1	Read and identify project specifications.
SLO 10.F.4.2.2	Identify proofreading symbols.
SLO 10.S.4.2.1	Apply project specifications.
SLO 10.S.4.2.2	Use appropriate English, grammar, and style to written assignments.
SLO 10.S.4.2.3	Interpret proofreading symbols.

GLO 4.3: Describe the **physical properties of materials** used in the print production process and factors in the physical environment (e.g., conductivity, pH, and viscosity).

SLO 10.F.4.3.1	Recognize various printing materials are used for different print products.
SLO 10.F.4.3.2	Identify the properties and manufacturing process for substrate.

Goal 5: Consider the impact of **sustainability** as it pertains to the print industry.

GLO 5.1: Appreciate the implications of the printing process on the **environment**.

SLO 10.F.5.1.1   Identify the significance of recycling and reusing.

SLO 10.F.5.1.2   Identify the need for proper disposal of used chemicals and cleaning supplies.

SLO 10.S.5.1.1   Recycle paper and materials used in the print process.

SLO 10.S.5.1.2   Follow proper disposal process for used chemicals and cleaning supplies.

GLO 5.2: Describe the interaction between society and the print industry and its impact on **sustainability**.

SLO 10.F.5.2.1   Identify the print industry's social responsibility to human health and well-being, including physical and emotional health.

SLO 10.F.5.2.2   Value diverse perspectives.

SLO 10.S.5.2.1   Recognize that certain content can be potentially harmful to human health and well-being, including physical and emotional health.

GLO 5.3: Recognize the **economic benefits of sustainable practices** in the print industry.

SLO 10.F.5.3.1   Demonstrate awareness that the print industry can experience economic benefits by implementing sustainable practices.

SLO 10.S.5.3.1   Recognize that the print industry can experience economic benefits by implementing sustainable practices.

Goal 6: Explain the **evolution, technological progression, and emerging trends** in the print industry.

GLO 6.1: Appreciate the **historical significance, social impact, and continuing evolution** and development of the print industry (e.g., the evolution and progression of design styles and approaches).

SLO 10.F.6.1.1   Summarize the evolution of printing as a communication medium.

SLO 10.F.6.1.2   Demonstrate awareness of the effect of globalization on the print industry.

SLO 10.F.6.1.3	Identify the impact that style and technology have on the effectiveness of a design.
SLO 10.F.6.1.4	Explore how audience and new materials and techniques are transforming design (e.g., varnishes, 3D printing, and dye cutting).

GLO 6.2: Demonstrate an awareness of the **evolution and progression of design styles and approaches**.

SLO 10.F.6.2.1	Identify the impact that style and technology have on the effectiveness of a design.
SLO 10.F.6.2.2	Explore how audience, new materials, and techniques are transforming design (e.g., varnishes, 3D printing, and die cutting).

GLO 6.3: Demonstrate awareness of the continuing **evolution of the print industry,** as well as its **emerging trends and future technologies**.

No applicable SLOs.

Goal 7: Demonstrate knowledge of appropriate **health and safety** practices and the ability to recognize and apply them to maintain a safe workplace.

GLO 7.1: Describe and apply **health and safety rights, responsibilities, and procedures**.

SLO 10.P.7.1.1	Follow safe practices and procedures for facilities, processes, materials, tools, and equipment used in print production.
SLO 10.P.7.1.2	Identify fire prevention strategies.
SLO 10.P.7.1.3	Identify emergency evacuation procedures.
SLO 10.P.7.1.4	Identify hazards (e.g., electrical safety, ergonomics, material handling, chemical, and sound) related to materials, processes, tools, and equipment used in print production, as well as resources and methods for reducing these hazards (e.g., spill kit).
SLO 10.P.7.1.5	Demonstrate ergonomically correct procedures to avoid injury (e.g., stress, strain).
SLO 10.P.7.1.6	Locate first aid and eyewash station.
SLO 10.P.7.1.7	Identify and use protective clothing, gear, and equipment appropriately.

GLO 7.2: Describe and follow **health and safety laws and regulations** as they relate to graphic print production.

SLO 10.P.7.2.1	Identify WHMIS symbols, labels, and terminology, and follow WHMIS guidelines.
SLO 10.P.7.2.2	Comply with health and safety legislation and practices.
SLO 10.P.7.2.3	Identify personal responsibility for health and safety.
SLO 10.P.7.2.4	Describe the reporting process for injuries.

Goal 8: Describe and follow the **ethical and legal standards** in the print industry.

GLO 8.1: Describe and follow current legal responsibilities and requirements when accessing **intellectual property** (e.g., copyright, trademarks).

SLO 10.P.8.1.1	Identify ownership rights of intellectual property (e.g., plagiarism, copyright violation, and hate literature).

GLO 8.2: Describe and follow **ethical trade practices**.

SLO 10.P.8.2.1	Design and print projects consistent with the local school code of conduct.
SLO 10.P.8.2.2	Understand the value added status of finished printed work (e.g., not stealing valuable printed material such as bank notes, coupons, gift certificates, and tickets for social events).

Goal 9: Demonstrate **employability skills** required in the graphic design and print industries.

GLO 9.1: Demonstrate **fundamental employability skills**.

SLO 10.P.9.1.1	Explain the importance of employability skills.
SLO 10.P.9.1.2	Ask questions to clarify written or verbal communication.
SLO 10.P.9.1.3	Identify sources of information and resources for *trade area*.
SLO 10.P.9.1.4	Demonstrate an understanding of the problem-solving process for *trade area*.

GLO 9.2: Demonstrate **personal management skills**.

SLO 10.P.9.2.1	Actively participate in a positive manner.
SLO 10.P.9.2.2	Complete tasks within stated deadlines.

SLO 10.P.9.2.3	Demonstrate responsibility by being accountable for your actions.
SLO 10.P.9.2.4	Accept feedback, comments, and contributions from others.
SLO 10.P.9.2.5	Listen and respond in order to understand and learn.
SLO 10.P.9.2.6	Identify learning materials, resources, and opportunities.

GLO 9.3: Demonstrate **teamwork skills**.

SLO 10.P.9.3.1	Demonstrate an understanding of the role of members of a group.
SLO 10.P.9.3.2	Actively participate in the work of a group.
SLO 10.P.9.3.3	Participate in the classroom/shop activities.

Goal 10: Describe **career opportunities** in the print production industry.

GLO 10.1: Demonstrate awareness of **employment and post-secondary opportunities** related to print production.

SLO 10.P.10.1.1	Identify career and employment opportunities related to trades and technology.
SLO 10.P.10.1.2	Identify career and employment activities related to print production.
SLO 10.P.10.1.3	Select items from *Print Production Fundamentals* for their Print Media Career Portfolio.