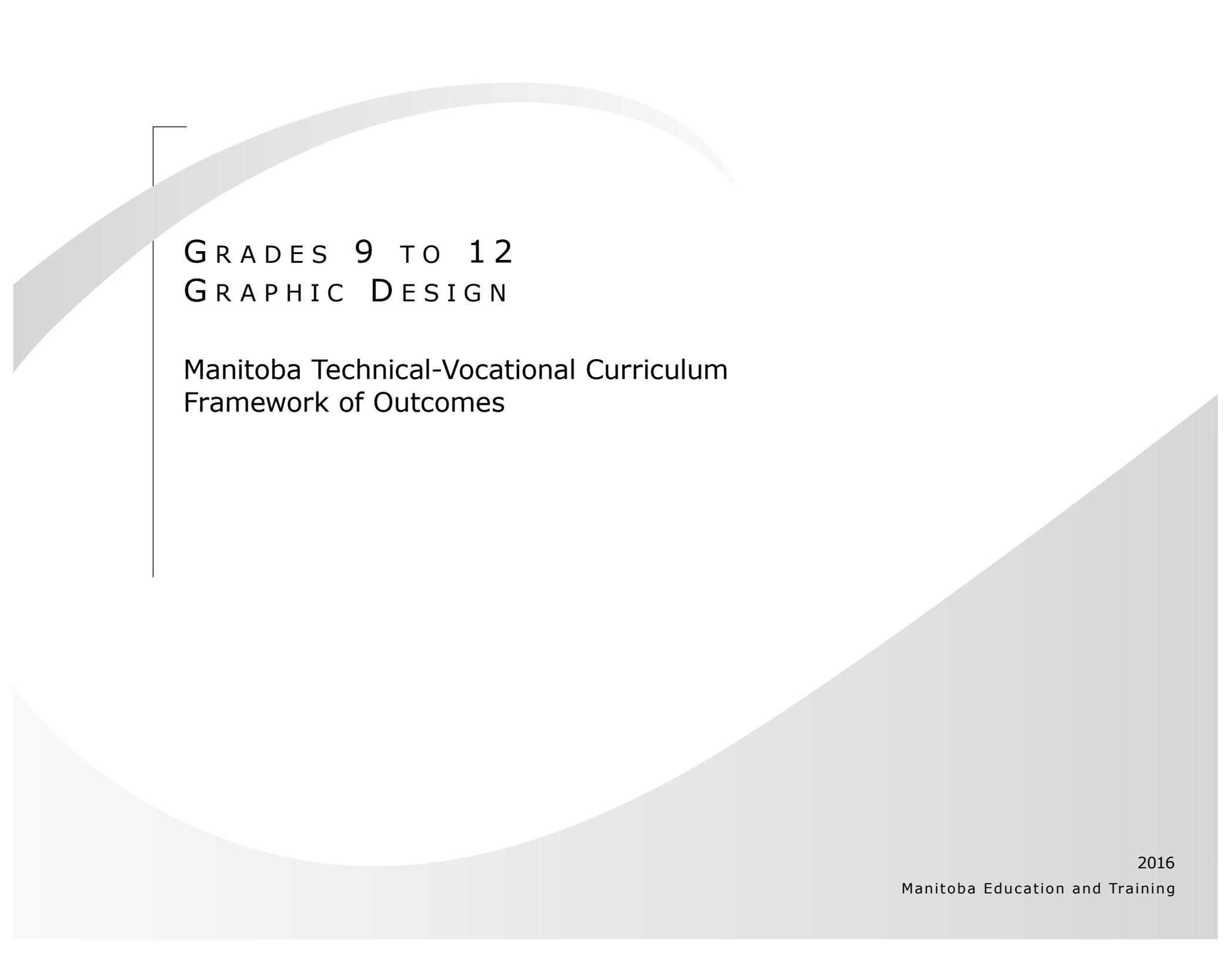




Grades 9 to 12 Graphic Design

Manitoba Technical-Vocational
Curriculum Framework
of Outcomes



GRADES 9 TO 12
GRAPHIC DESIGN

Manitoba Technical-Vocational Curriculum
Framework of Outcomes

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This resource is available on the Manitoba Education and Training website
at <www.edu.gov.mb.ca/k12/cur/teched/sy_tech_program.html>.

Available in alternate formats upon request.

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TECHNICAL-VOCATIONAL EDUCATION OVERVIEW

In 2013, Manitoba Education released the document [Technical-Vocational Education Overview](#) to provide the philosophical and pedagogical underpinnings for curriculum development and the teaching of courses in the Senior Years Technology Education Program. This overview presents educators with the vision and goals of technical-vocational education (TVE) in Manitoba. Topics include the following:

- curriculum revitalization and renewal
- curriculum framework and implementation
- articulation of programming
- assessment and reporting
- safety
- employability/essential skills and career development
- sustainable development

The TVE curriculum includes Grades 9 to 12 courses in a variety of areas, including graphic design.

GRAPHIC DESIGN OVERVIEW

Introduction

Grades 9 to 12 Graphic Design: Manitoba Technical-Vocational Curriculum Framework of Outcomes identifies the goals, general learning outcomes (GLOs), and specific learning outcomes (SLOs) for the nine interactive digital media courses. This framework is intended for use in all Manitoba schools teaching graphic design as part of the Senior Years Technology Education Program.

Curriculum Description

This curriculum is intended for students pursuing a career in the graphic design profession. This graphic design curriculum gives students the opportunity to learn the skills and knowledge required to function within the graphic design industry. Students use industry standard software and traditional media to visually express their ideas. By the end of the program, they will be able to produce graphic design and layout, illustration, and interactive graphic design to gain entry-level industry employment. Students also have the opportunity to work as self-employed graphic designers, or to continue their studies in graphic design at the post-secondary level.

Implementation of the Graphic Design Courses

To receive a Senior Years Technical Education diploma, a student must complete eight departmentally developed courses from an approved technical-vocational cluster, together with 16 compulsory credits and six optional credits. The grade level in which the courses are offered are a local, school-based decision, but it is highly recommended that the sequencing of credits follow the schedule set out at the end of this introduction.

Cross-curricular learning outcomes include essential skills from subject areas including, but not limited to, English language arts, mathematics, and the sciences. These essential skills are to be integrated into the authentic activities of the course.

Learning outcomes dealing with the following topics are also integrated into most courses:

- health and safety
- sustainability
- ethical and legal standards
- employability skills
- the IT industry
- evolution, technological progression, and emerging trends

In most courses, the emphasis is on applied activities. For instructional purposes, the sequence of learning outcomes can vary based on the activities within the course. When teachers are selecting the activities that are best suited to teach the learning outcomes, they are advised to base their decisions on a variety of factors, including access to resources or regional needs.

The curriculum is not sequential. In other words, learning outcomes might be taught in an order different from how they appear in the document. In light of rapid changes in technology, teachers are encouraged to update their activities in order to meet the needs of students.

The Graphic Design Profession

Graphic design is the creative practice of conveying an idea or communicating a message aesthetically with images, graphics, and type. Graphic design often refers to both the process (designing) by which the communication is created and the products (designs) that are generated. Graphic designers work in a variety of areas, producing visual identities (logos and branding), publications (magazines, newspapers, and books), print media (posters, billboards, signs, and product packaging), and illustration and interactive design (animation, websites, apps, games, and emerging technologies).

Graphic Design Goals and General Learning Outcomes (GLOs)

Grades 9 to 12 Graphic Design: Manitoba Technical-Vocational Curriculum Framework of Outcomes identifies specific learning outcomes (SLOs) for use in all Manitoba schools teaching Grades 9 to 12 Graphic Design as part of the Senior Years Technology Education Program. SLO statements define what students are expected to achieve by the end of a course.

It is essential for students to learn and to demonstrate safety practices and employability skills; therefore, some SLOs related to health and safety, as well as to employability skills, are repeated in several courses.

Please note that SLOs are not identified for the goals and GLOs that are not addressed in a given course.

Goal 1: Describe and apply **health and safety** practices.

GLO 1.1: Describe and apply appropriate **health and safety** practices.

Goal 2: Demonstrate an awareness of the **evolution, technological progression, and emerging trends** in graphic design.

GLO 2.1: Understand the **evolution, technological progression, and emerging trends** in graphic design.

Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges.

GLO 3.1: Demonstrate a theoretical understanding of **creativity**.

GLO 3.2: Demonstrate a theoretical understanding of the **elements and principles of design**.

GLO 3.3: Demonstrate a theoretical understanding of **colour**.

GLO 3.4: Demonstrate a theoretical understanding of **layout and composition**.

GLO 3.5: Demonstrate a theoretical understanding of **typography**.

GLO 3.6: Demonstrate a theoretical understanding of **drawing and illustration**.

GLO 3.7: Demonstrate a theoretical understanding of the use of **photographic images**.

GLO 3.8: Demonstrate a theoretical understanding of **interactive design**.

GLO 3.9: Demonstrate a theoretical understanding of **file preparation for intended media**.

GLO 3.10: Demonstrate a theoretical understanding of the **design process**.

Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.

GLO 4.1: Demonstrate the practical application of **creativity**.

GLO 4.2: Demonstrate the practical application of **elements and principles of design**.

GLO 4.3: Demonstrate the practical application of **colour**.

GLO 4.4: Demonstrate the practical application of **layout and composition**.

GLO 4.5: Demonstrate the practical application of **typography**.

GLO 4.6: Demonstrate the practical application of **drawing and illustration**.

GLO 4.7: Demonstrate the practical application of **photographic images**.

GLO 4.8: Demonstrate the practical application of **interactive design**.

GLO 4.9: Demonstrate the practical application of **file preparation for intended media**.

GLO 4.10: Solve challenges using the **design process**.

Goal 5: Identify, select, use, and manage **tools, equipment, and materials**.

GLO 5.1: Identify, select, use, and manage **tools, including software**.

GLO 5.2: Identify, select, use, and manage **equipment, including hardware**.

GLO 5.3: Identify, select, use, and manage **materials**.

Goal 6: Describe and demonstrate the transferable **cross-curricular** knowledge and skills relevant to graphic design.

GLO 6.1: **Read, interpret, and communicate** information relevant to graphic design.

GLO 6.2: Apply the knowledge and skills from **mathematics** relevant to graphic design.

GLO 6.3: Apply the knowledge and skills from **other subject areas** relevant to graphic design.

Goal 7: Demonstrate an awareness of **sustainability** as it pertains to graphic design.

GLO 7.1: Describe the graphic design industry's **sustainability practices** and impact on the environment.

GLO 7.2: Describe the impact of **human sustainability** on the well-being of those employed in graphic design and the users of their services.

GLO 7.3: Describe **sustainable business practices** within the graphic design industry.

Goal 8: Demonstrate an awareness of the **ethical and legal standards** as they pertain to graphic design.

GLO 8.1: Demonstrate an awareness of the **ethical and legal standards** as they pertain to graphic design.

Goal 9: Demonstrate **employability skills**.

- GLO 9.1:** Demonstrate **fundamental employability skills**.
- GLO 9.2:** Demonstrate **cultural awareness** and an understanding of its importance in the workplace.
- GLO 9.3:** Demonstrate **critical thinking skills**.
- GLO 9.4:** Demonstrate **project management** skills.
- GLO 9.5:** Demonstrate an understanding of the **business operation** of a graphics organization.

Goal 10: Demonstrate an understanding of the **graphic design industry**.

- GLO 10.1:** Demonstrate an understanding of the scope of the **graphic design industry**.
 - GLO 10.2:** Demonstrate an understanding of the **educational and career opportunities** in graphic design, as well as **industry and professional associations**.
 - GLO 10.3:** Demonstrate an understanding of **working conditions** in the graphic design industry.
-

Specific Learning Outcomes (SLOs)

Grades 9 to 12 Graphic Design: Manitoba Technical-Vocational Curriculum Framework of Outcomes identifies specific learning outcomes (SLOs) for use in all Manitoba schools teaching the Grades 9 to 12 Graphic Design courses as part of the Senior Years Technology Education Program. SLO statements define what students are expected to achieve by the end of a course.

It is essential for students to learn and to demonstrate safety practices and employability skills; therefore, some SLOs related to safety and to employability skills are repeated in all the graphic design courses.

Please note that SLOs are not identified for the goals and GLOs that are not addressed in a given course.

Course Descriptions

9135 Exploration of Graphic Design 15S / 15E / 15M
10S / 10E / 10M

This optional course is intended for students wishing to explore graphic design. Students will be encouraged to think creatively as they solve basic design challenges.

9136 Fundamentals of Graphic Design 20S / 20E / 20M

This course introduces students to the field of graphic design. Students will begin to focus on basic design theory, the design process, and their practical application.

9137 Graphic Design and Layout 30S / 30E / 30M

Students will expand the knowledge and skills acquired in *Fundamentals of Graphic Design* and focus on the theory and practical application of graphic design and layout.

9138 Illustration for Graphic Design 30S / 30E / 30M

Students will expand the knowledge and skills acquired in *Fundamentals of Graphic Design* and focus on the theory and practical application of illustration.

9139 Interactive Graphic Design 30S / 30E / 30M

Students will expand the knowledge and skills acquired in *Fundamentals of Graphic Design* and focus on the theory and practical application of interactive graphic design.

9140 Advanced Graphic Design and Layout
40S / 40E / 40M

Students will expand the knowledge and skills acquired in *Graphic Design and Layout* and focus on the theory and practical application of graphic design and layout to solve client-driven design challenges.

9141 Advanced Illustration for Graphic Design
40S / 40E / 40M

Students will expand the knowledge and skills acquired in *Illustration for Graphic Design* and focus on the theory and practical application of illustration to solve client-driven design challenges.

9142 Advanced Interactive Graphic Design
40S / 40E / 40M

Students will expand the knowledge and skills acquired in *Interactive Graphic Design* and focus on the theory and practical application of interactive graphic design to solve client-driven design challenges.

9144 Graphic Design Portfolio 40S / 40E / 40M

In this course, students apply the knowledge and skills learned in previous courses to produce a graphic design portfolio to obtain entry-level employment or self-employment opportunities, or gain admittance to a post-secondary program.

Curriculum Implementation Dates

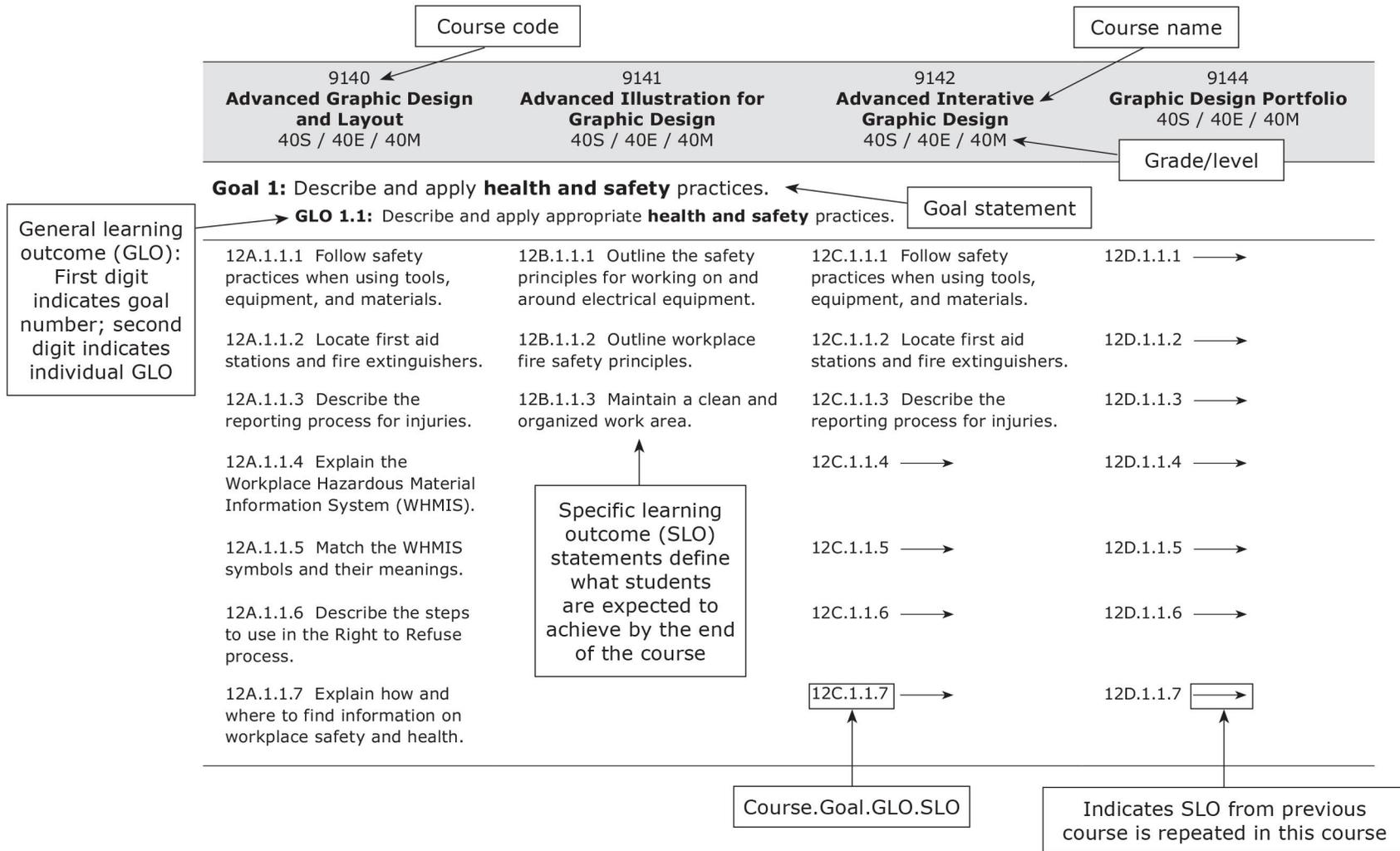
During **voluntary implementation**, teachers have the option of teaching the entire new draft curriculum as soon as Manitoba Education and Training releases it on the [Technology Education](#) website.

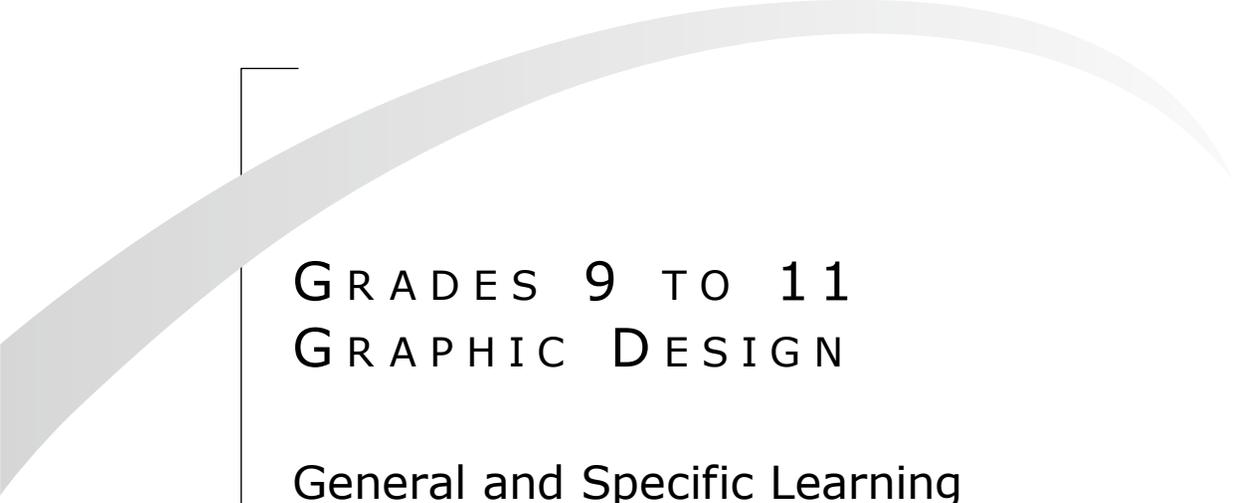
Voluntary implementation of all interactive digital media courses began in the fall of 2015 and will continue until their respective system-wide implementation dates.

Date	System-Wide Implementation
Fall 2016	Grade 9 (optional)
Fall 2017	Grade 10
Fall 2018	Grade 11
Fall 2019	Grade 12

Under **system-wide implementation**, all teachers in Manitoba teach the new curriculum and use the new course codes. Teachers will no longer be able to use the previous course codes. Course codes are found in the [Subject Table Handbook: Technology Education](#).

Guide to Reading Graphic Design Goals and Learning Outcomes





GRADES 9 TO 11
GRAPHIC DESIGN

General and Specific Learning
Outcomes by Goal

GRADES 9 TO 11 GRAPHIC DESIGN: GENERAL AND SPECIFIC LEARNING OUTCOMES BY GOAL

9135 Exploration of Graphic Design 15S / 15E / 15M 10S / 10E / 10M	9136 Fundamentals of Graphic Design 20S / 20E / 20M	9137 Graphic Design and Layout 30S / 30E / 30M	9138 Illustration for Graphic Design 30S / 30E / 30M	9139 Interactive Graphic Design 30S / 30E / 30M
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Goal 1: Describe and apply **health and safety** practices.

GLO 1.1: Describe and apply appropriate **health and safety** practices.

9.1.1.1 Follow safety practices when using tools, equipment, and materials.	10.1.1.1 →	11A.1.1.1 →	11B.1.1.1 →	11C.1.1.1 →
9.1.1.2 Locate first aid stations and fire extinguishers.	10.1.1.2 →	11A.1.1.2 →	11B.1.1.2 →	11C.1.1.2 →
9.1.1.3 Describe the reporting process for injuries.	10.1.1.3 →	11A.1.1.3 →	11B.1.1.3 →	11C.1.1.3 →
9.1.1.4 Explain the Workplace Hazardous Material Information System (WHMIS).	10.1.1.4 →	11A.1.1.4 →	11B.1.1.4 →	11C.1.1.4 →
9.1.1.5 Match the WHMIS hazardous materials symbols and their meanings.	10.1.1.5 →	11A.1.1.5 →	11B.1.1.5 →	11C.1.1.5 →

9135 Exploration of Graphic Design 15S / 15E / 15M 10S / 10E / 10M	9136 Fundamentals of Graphic Design 20S / 20E / 20M	9137 Graphic Design and Layout 30S / 30E / 30M	9138 Illustration for Graphic Design 30S / 30E / 30M	9139 Interactive Graphic Design 30S / 30E / 30M
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Goal 1: Describe and apply **health and safety** practices. *(continued)*

GLO 1.1: Describe and apply appropriate **health and safety** practices. *(continued)*

9.1.1.6 Describe the steps to use in the Right to Refuse process.	10.1.1.6 →	11A.1.1.6 →	11B.1.1.6 →	11C.1.1.6 →
9.1.1.7 Explain how and where to find information on workplace safety and health.	10.1.1.7 →	11A.1.1.7 →	11B.1.1.7 →	11C.1.1.7 →
9.1.1.8 Give examples of safety and health hazards found in a graphic design studio.	10.1.1.8 →	11A.1.1.8 →	11B.1.1.8 →	11C.1.1.8 →
9.1.1.9 Describe the importance of using personal protective equipment (PPE).	10.1.1.9 →	11A.1.1.9 →	11B.1.1.9 →	11C.1.1.9 →
9.1.1.10 Demonstrate the proper selection and use of a variety of PPE and fall protection systems.	10.1.1.10 →	11A.1.1.10 →	11B.1.1.10 →	11C.1.1.10 →
9.1.1.11 Outline the safety principles for working on and around electrical equipment.	10.1.1.11 →	11A.1.1.11 →	11B.1.1.11 →	11C.1.1.11 →

9135 Exploration of Graphic Design 15S / 15E / 15M 10S / 10E / 10M	9136 Fundamentals of Graphic Design 20S / 20E / 20M	9137 Graphic Design and Layout 30S / 30E / 30M	9138 Illustration for Graphic Design 30S / 30E / 30M	9139 Interactive Graphic Design 30S / 30E / 30M
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Goal 1: Describe and apply **health and safety** practices. *(continued)*

GLO 1.1: Describe and apply appropriate **health and safety** practices. *(continued)*

9.1.1.12 Outline workplace fire safety principles.	10.1.1.12 →	11A.1.1.12 →	11B.1.1.12 →	11C.1.1.12 →
9.1.1.13 Maintain a clean and organized work area.	10.1.1.13 →	11A.1.1.13 →	11B.1.1.13 →	11C.1.1.13 →

Goal 2: Demonstrate an awareness of the **evolution, technological progression, and emerging trends** in graphic design.

GLO 2.1: Understand the **evolution, technological progression,** and **emerging trends** in graphic design.

		11A.2.1.1 Discuss the history of graphic design.	11B.2.1.1 Demonstrate an awareness of the history, technological progression, and emerging trends in illustration.	11C.2.1.1 Demonstrate an awareness of the history, technological progression, and emerging trends in interactive graphic design.
		11A.2.1.2 Discuss re-emerging trends in design, including those related to popular culture.		
		11A.2.1.3 Discuss how technology has influenced graphic design.		

9135 Exploration of Graphic Design 15S / 15E / 15M 10S / 10E / 10M	9136 Fundamentals of Graphic Design 20S / 20E / 20M	9137 Graphic Design and Layout 30S / 30E / 30M	9138 Illustration for Graphic Design 30S / 30E / 30M	9139 Interactive Graphic Design 30S / 30E / 30M
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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges.

GLO 3.1: Demonstrate a theoretical understanding of **creativity**.

9.3.1.1 Discuss the role of creativity in the graphic design industry.	10.3.1.1 Discuss and define creativity. 10.3.1.2 Discuss the role of creativity in the graphic design industry.	11A.3.1.1 Research and identify creative solutions to design challenges.	11B.3.1.1 →	11C.3.1.1 →
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GLO 3.2: Demonstrate a theoretical understanding of the **elements and principles of design**.

9.3.2.1 Demonstrate an awareness of the elements of design.	10.3.2.1 Identify the elements of design, including <ul style="list-style-type: none"> ■ line ■ shape ■ colour ■ texture ■ value ■ space 	11A.3.2.1 Demonstrate knowledge of how elements and principles of design are used to communicate messages effectively.	11B.3.2.1 Demonstrate an understanding of the elements and principles of design used in illustrations.	11C.3.2.1 Demonstrate an understanding of the elements and principles of design used in interactive graphic design.
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<p>9135 Exploration of Graphic Design 15S / 15E / 15M 10S / 10E / 10M</p>	<p>9136 Fundamentals of Graphic Design 20S / 20E / 20M</p>	<p>9137 Graphic Design and Layout 30S / 30E / 30M</p>	<p>9138 Illustration for Graphic Design 30S / 30E / 30M</p>	<p>9139 Interactive Graphic Design 30S / 30E / 30M</p>
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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.2: Demonstrate a theoretical understanding of the **elements and principles of design.** *(continued)*

9.3.2.2 Demonstrate an awareness of the principles of design.

10.3.2.2 Identify the principles of design, including

- unity/harmony
- proportion
- balance
- contrast
- emphasis
- direction
- rhythm
- pattern
- repetition
- variety

10.3.2.3 Identify the principles of design found in pre-existing materials.

10.3.2.4 Describe the use of the principles of design found in pre-existing materials.

9135 Exploration of Graphic Design 15S / 15E / 15M 10S / 10E / 10M	9136 Fundamentals of Graphic Design 20S / 20E / 20M	9137 Graphic Design and Layout 30S / 30E / 30M	9138 Illustration for Graphic Design 30S / 30E / 30M	9139 Interactive Graphic Design 30S / 30E / 30M
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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.3: Demonstrate a theoretical understanding of **colour**.

9.3.3.1 Demonstrate an awareness of colour.	10.3.3.1 Demonstrate basic knowledge of colour systems (e.g., primary, secondary, tertiary, complementary).	11A.3.3.1 Demonstrate an understanding of how colour is used in graphic design and layout.	11B.3.3.1 Demonstrate an understanding of how colour is used in illustrations.	11C.3.3.1 Demonstrate an understanding of how colour is used in interactive graphic design.
	10.3.3.2 Demonstrate basic knowledge of colour modes (e.g., subtractive, additive colour, RGB, and CMYK).	11A.3.3.2 Demonstrate an understanding of the psychology of colour.	11B.3.3.2 →	11C.3.3.2 →
		11A.3.3.3 Demonstrate knowledge of colour modes (e.g., subtractive, additive colour, RGB, and CMYK).		11C.3.3.3 Demonstrate knowledge of colour modes (e.g., subtractive, additive colour, RGB, and CMYK).

9135 Exploration of Graphic Design 15S / 15E / 15M 10S / 10E / 10M	9136 Fundamentals of Graphic Design 20S / 20E / 20M	9137 Graphic Design and Layout 30S / 30E / 30M	9138 Illustration for Graphic Design 30S / 30E / 30M	9139 Interactive Graphic Design 30S / 30E / 30M
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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.4: Demonstrate a theoretical understanding of **layout and composition**.

9.3.4.1 Demonstrate an awareness of layout and composition.	10.3.4.1 Demonstrate an understanding of the place of layout and composition in the graphic design process.	11A.3.4.1 Discuss how the principles of design are applied in layout and composition (e.g., negative space, hierarchy, scale, contrast, proximity, repetition).	11B.3.4.1 →	11C.3.4.1 →
	10.3.4.2 Discuss how the principles of design are applied in layout and composition.	11A.3.4.2 Demonstrate an understanding of composition methods (i.e., the rule of thirds, the golden section, etc.).	11B.3.4.2 →	11C.3.4.2 →
		11A.3.4.3 Demonstrate an awareness of culture as it relates to graphic design.	11B.3.4.3 Demonstrate an awareness of illustration styles as they relate to various cultures.	11C.3.4.3 Demonstrate an understanding of the use of grid systems in layout and composition.
		11A.3.4.4 Demonstrate an understanding of the use of grid systems in layout and composition.		

9135 Exploration of Graphic Design 15S / 15E / 15M 10S / 10E / 10M	9136 Fundamentals of Graphic Design 20S / 20E / 20M	9137 Graphic Design and Layout 30S / 30E / 30M	9138 Illustration for Graphic Design 30S / 30E / 30M	9139 Interactive Graphic Design 30S / 30E / 30M
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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.5: Demonstrate a theoretical understanding of **typography**.

9.3.5.1 Demonstrate an awareness of typography.	10.3.5.1 Describe the anatomy of type and their applications.	11A.3.5.1 Identify the fundamentals (e.g., classifications, style, and structure) of typography.	11B.3.5.1 Describe the anatomy of type as it relates to hand lettering.	11C.3.5.1 Identify the fundamentals (e.g., classifications, style, and structure) of typography.
	10.3.5.2 Describe type classifications and their applications.	11A.3.5.2 Identify type formatting (e.g., kerning, leading, justification, readability, and legibility) techniques.	11B.3.5.2 Demonstrate an understanding of the role of illustration in typeface design.	11C.3.5.2 Identify type formatting (e.g., kerning, leading, justification, readability, and legibility) techniques.
	10.3.5.3 Discuss typographical solutions.	11A.3.5.3 Identify the rules of typography, and describe how they are used in graphic design and layout.	11B.3.5.3 Demonstrate an awareness of hand lettering.	11C.3.5.3 Describe how the rules of typography are used in interactive graphic design.
		11A.3.5.4 Evaluate specific typographical solutions.		11C.3.5.4 Evaluate specific typographical solutions.
				11C.3.5.5 Demonstrate an understanding of the use of pixel fonts.
				11C.3.5.6 Demonstrate an understanding of the use of kinetic/ interactive typography.

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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.6: Demonstrate a theoretical understanding of **drawing and illustration**.

9.3.6.1 Demonstrate an awareness of drawing and illustration.	10.3.6.1 Describe the differences between raster and vector formats.	11A.3.6.1 Demonstrate an understanding of the use of raster and vector formats.	11B.3.6.1 →	11C.3.6.1 →
	10.3.6.2 Discuss the relationship between seeing and drawing.	11B.3.6.2 Demonstrate an understanding of the use of drawings and illustrations to solve design challenges.	11B.3.6.2 Discuss the theory behind perspective drawing.	11C.3.6.2 Demonstrate an understanding of the use of drawings and illustrations to solve design challenges.
			11B.3.6.3 Demonstrate an awareness of the theory behind traditional and digital media.	
			11B.3.6.4 Discuss the theory behind various drawing techniques.	
			11B.3.6.5 Demonstrate an awareness of various substrates use in illustration.	

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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.7: Demonstrate a theoretical understanding of the use of **photographic images**.

9.3.7.1 Demonstrate an awareness of the use of photographic images.	10.3.7.1 Discuss the importance of photography in graphic design.	11A.3.7.1 Discuss the use of photos to solve design challenges.	11B.3.7.1 Demonstrate an understanding of the use of photography in illustration.	11C.3.7.1 Discuss the use of photos to solve design challenges.
9.3.7.2 Discuss photographic manipulation.	10.3.7.2 —→	11A.3.7.2 Demonstrate an understanding of photographic manipulation terms.	11B.3.7.2 —→	11C.3.7.2 —→
9.3.7.3 Demonstrate an awareness of the use of basic photographic manipulation techniques.	10.3.7.3 —→	11A.3.7.3 Demonstrate an understanding of the use of photographic manipulation techniques.	11B.3.7.3 —→	11C.3.7.3 —→

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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.8: Demonstrate a theoretical understanding of **interactive design**.

<p>9.3.8.1 Demonstrate an awareness of interactive design.</p>	<p>10.3.8.1 Define interactive design.</p> <p>10.3.8.2 Define static and dynamic interactive design.</p> <p>10.3.8.3 Demonstrate an awareness of interactive design (i.e., interactive web page, app, game, e-publication, etc.).</p>	<p>11A.3.8.1 Discuss how the end product (i.e., print, web, device, etc.) affects graphic design and layout decisions.</p>	<p>11B.3.8.1 Discuss how the end product (i.e., print, web, device, etc.) affects illustration.</p>	<p>11C.3.8.1 Demonstrate an understanding of how user experience has an impact on interactive graphic design.</p> <p>11C.3.8.2 Discuss how the end product (i.e., print, web, device, etc.) affects interactive graphic design.</p> <p>11C.3.8.3 Demonstrate knowledge of different factors influencing interactivity (i.e., user expectation, media, resources available for development, coding, etc.)</p> <p>11C.3.8.4 Demonstrate an awareness of various types of animation and motion graphics techniques.</p>
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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.9: Demonstrate a theoretical understanding of **file preparation for intended media**.

9.3.9.1 Demonstrate an understanding of the need to manage (name, organize) files.	10.3.9.1 →	11A.3.9.1 →	11B.3.9.1 →	11C.3.9.1 →
	10.3.9.2 Demonstrate an awareness of the importance of file preparation.	11A.3.9.2 Demonstrate knowledge of colour management in relation to output.	11B.3.9.2 →	11C.3.9.2 →
	10.3.9.3 Demonstrate an awareness of different digital file types (i.e., jpeg, EPS, TIFF).	11A.3.9.3 Demonstrate knowledge of colour mode in relation to output (e.g., CMYK, RGB, spot colour).	11B.3.9.3 →	11C.3.9.3 →
	10.3.9.4 Describe different media.	11A.3.9.4 Demonstrate knowledge of resolution in relation to output (e.g., ppi, dpi, lpi, screen resolution, and stochastic).	11B.3.9.4 →	11C.3.9.4 →
		11A.3.9.5 Demonstrate an awareness of pre-press (i.e., pre-flight, packaging, etc.) procedures.	11B.3.9.5 →	11C.3.9.5 Demonstrate an awareness of pre-release procedures.

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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.10: Demonstrate a theoretical understanding of the **design process**.

9.3.10.1 Identify the steps in the design process: 1. Identify the design challenge. 2. Research design solutions. 3. Conceptualize design solutions. 4. Refine design concepts. 5. Create design solutions. 6. Present design solutions. 7. Implement design solutions. 8. Evaluate design solutions.	10.3.10.1 →	11A.3.10.1 Demonstrate a theoretical understanding of the design process in graphic design and layout, as well as the importance of each step in the design process: 1. Identify the design challenge. 2. Research design solutions. 3. Conceptualize design solutions. 4. Refine design concepts. 5. Create design solutions. 6. Present design solutions. 7. Implement design solutions. 8. Evaluate design solutions.	11B.3.10.1 Demonstrate a theoretical understanding of the design process in illustration, as well as the importance of each step in the design process: 1. Identify the design challenge. 2. Research design solutions. 3. Conceptualize design solutions. 4. Refine design concepts. 5. Create design solutions. 6. Present design solutions. 7. Implement design solutions. 8. Evaluate design solutions.	11C.3.10.1 Demonstrate a theoretical understanding of the design process in interactive graphic design, as well as the importance of each step in the design process. 1. Identify the design challenge. 2. Research design solutions. 3. Conceptualize design solutions. 4. Refine design concepts. 5. Create design solutions. 6. Present design solutions. 7. Implement design solutions. 8. Evaluate design solutions.
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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.

GLO 4.1: Demonstrate the practical application of **creativity**.

9.4.1.1 Demonstrate creativity.	10.4.1.1 →	11A.4.1.1 Demonstrate creativity in solving a design challenge.	11B.4.1.1 Demonstrate creativity in using illustrations to solve a design challenge.	11C.4.1.1 Demonstrate creativity in solving design challenges in interactive graphic design.
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GLO 4.2: Demonstrate the practical application of **elements and principles of design**.

9.4.2.1 Incorporate elements of design.	10.4.2.1 Incorporate the elements of design, including <ul style="list-style-type: none"> ■ line ■ shape ■ colour ■ texture ■ value ■ space 	11A.4.2.1 Utilize the steps in the design process to solve design challenges: <ol style="list-style-type: none"> 1. Identify the design challenge. 2. Research design solutions. 3. Conceptualize design solutions. 4. Refine design concepts. 5. Create design solutions. 6. Present design solutions. 7. Implement design solutions. 8. Evaluate design solutions. 	11B.4.2.1 →	11C.4.2.1 →
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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.2: Demonstrate the practical application of **elements and principles of design.** *(continued)*

9.4.2.2 Incorporate principles of design.	10.4.2.2 Apply the principles of design, including <ul style="list-style-type: none"> ■ unity/harmony ■ proportion ■ balance ■ contrast ■ emphasis ■ direction ■ rhythm ■ pattern ■ repetition ■ variety 	11A.4.2.2 Apply the elements and principles of design to solve design challenges.	11B.4.2.2 →	11C.4.2.2 →
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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.3: Demonstrate the practical application of **colour**.

9.4.3.1 Demonstrate the application of colour.	10.4.3.1 Apply basic knowledge of colour systems (e.g., primary, secondary, tertiary, complementary).	11A.4.3.1 Apply colour systems to solve graphic design challenges.	11B.4.3.1 Apply knowledge of the application of colour in illustrations.	11C.4.3.1 Apply knowledge of the application of colour in interactive graphic designs.
	10.4.3.2 Apply an understanding of the psychology of colour.	11A.4.3.2 Apply knowledge of the psychology of colour to solve graphic design challenges.	11B.4.3.2 Apply knowledge of the psychology of colour to solve graphic design challenges involving illustration.	11C.4.3.2 Apply knowledge of the psychology of colour to solve interactive graphic design challenges.
	10.4.3.3 Apply basic knowledge of colour modes (e.g., subtractive, additive colour, RGB, and CMYK).	11A.4.3.3 Apply knowledge of colour modes to solve graphic design challenges.		

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.4: Demonstrate the practical application of **layout and composition**.

9.4.4.1 Demonstrate the application of layout and composition.	10.4.4.1 Apply the principles of design in the creation of a layout.	11A.4.4.1 Apply measurement to the document set-up and creation (e.g., points, margins, gutters, column widths, point size, line size, and line gauge).	11B.4.4.1 Demonstrate the application of the principles of design in layout and composition (e.g., negative space, hierarchy, scale, contrast, proximity, repetition).	11C.4.4.1 Demonstrate the application of grid systems in interactive graphic design.
		11A.4.4.2 Demonstrate the application of composition methods (i.e., the rule of thirds, the golden section, etc.).	11B.4.4.2 →	11C.4.4.2 →
	10.4.4.3 Set up page or image size using appropriate measuring units.	11A.4.4.3 Arrange elements by applying principles of design to create a basic layout for a variety of materials.		11C.4.4.3 Demonstrate the application of the principles of design in interactive graphic design (e.g., negative space, hierarchy, scale, contrast, proximity, repetition).

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.5: Demonstrate the practical application of **typography**.

9.4.5.1 Demonstrate the application of typography.	10.4.5.1 Use typography to effectively communicate a message.	11A.4.5.1 Use typographic techniques to convey the intended message.	11B.4.5.1 Demonstrate the application of the anatomy of type in hand lettering.	11C.4.5.1 Demonstrate the application of the fundamentals (e.g., classifications, style, and structure) of typography in interactive graphic design.
		11A.4.5.2 Demonstrate the application of the fundamentals (e.g., classifications, style, and structure) of typography.	11B.4.5.2 Demonstrate the application of illustrative techniques in typeface design.	11C.4.5.2 Demonstrate the application of type formatting (e.g., kerning, leading, justification, readability, and legibility) techniques in interactive graphic design.
		11A.4.5.3 Demonstrate the application of the rules of typography, and describe how they are used in graphic design and layout.	11B.4.5.3 Demonstrate the ability to hand letter.	11C.4.5.3 Demonstrate the application of the rules of typography in interactive graphic design.

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.5: Demonstrate the practical application of **typography**. (continued)

		11A.4.5.4 Demonstrate the application of type formatting techniques (e.g., kerning, leading, justification, readability, and legibility) to solve design challenges.		11C.4.5.4 Demonstrate the application of specific typographical solutions.
				11C.4.5.5 Demonstrate the application of the use of pixel fonts.
				11C.4.5.6 Demonstrate the application of the use of kinetic/ interactive typography.

GLO 4.6: Demonstrate the practical application of **drawing and illustration**.

9.4.6.1 Demonstrate the application of drawing and illustration.	10.4.6.1 Apply introductory drawing techniques.	11A.4.6.1 Demonstrate the use of drawings and illustrations to convey the intended message.	11B.4.6.1 Create drawings and illustrations to convey the intended message.	11C.4.6.1 Demonstrate the ability to create drawings and illustrations in raster and vector formats.
	10.4.6.2 Demonstrate a basic ability to draw from observation.	11A.4.6.2 Demonstrate the use of thumbnails and rough sketches to solve design challenges.	11B.4.6.2 Demonstrate the ability to create drawings and illustrations in raster and vector formats.	11C.4.6.2 Demonstrate the use of thumbnails and/or storyboards and rough sketches to solve design challenges.

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.6: Demonstrate the practical application of **drawing and illustration.** (continued)

11B.4.6.3 Demonstrate the use of thumbnails and rough sketches to solve design challenges.

11B.4.6.4 Demonstrate the application of the theory behind perspective drawing.

11B.4.6.5 Demonstrate the application of the theory behind traditional and digital media.

11B.4.6.6 Demonstrate the application of the theory behind various drawing techniques.

11B.4.6.7 Demonstrate the ability to select and utilize various substrates used in illustration.

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.7: Demonstrate the practical application of **photographic images**.

9.4.7.1 Demonstrate the application of photographic images.	10.4.7.1 Select photographs based on design criteria.	11A.4.7.1 Demonstrate the use of photos to solve design challenges.	11B.4.7.1 Demonstrate the use of photography in illustration.	11C.4.7.1 Demonstrate the use of photos to solve design challenges.
	10.4.7.2 Demonstrate the ability to manipulate photographs.	11A.4.7.2 →	11B.4.7.2 →	11C.4.7.2 →

GLO 4.8: Demonstrate the practical application of **interactive design**.

9.4.8.1 Demonstrate the application of interactive design.	10.4.8.1 Create a basic interactive design (i.e., interactive web page, app, game, e-publication, etc.).		11B.4.8.1 Demonstrate the ability to create digital assets to solve a design challenge.	11C.4.8.1 →
				11C.4.8.2 Demonstrate an understanding of how user experience has an impact on interactive graphic design.

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.8: Demonstrate the practical application of **interactive design**. (continued)

11C.4.8.3 Demonstrate the ability to create interactive graphic designs suitable for specific end products (i.e., print, web, device, etc.).

11C.4.8.4 Demonstrate the application of different factors influencing interactivity (i.e., user expectation, media, resources available for development, etc.).

11C.4.8.5 Demonstrate the application of various types of animation and motion graphics techniques.

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.9: Demonstrate the practical application of **file preparation for intended media.**

9.4.9.1 Demonstrate the ability to manage (name, organize) files.	10.4.9.1 Select file types based on intended media.	11A.4.9.1 Demonstrate the application of colour profiles/colour modes in relation to output (e.g., subtractive, additive colour, spot, RGB, and CMYK).	11B.4.9.1 →	11C.4.9.1 →
	10.4.9.2 Create or save files in different formats, colour modes, and resolutions.	11A.4.9.2 Demonstrate the application of resolution in relation to output (e.g., ppi, dpi, lpi, screen resolution, and stochastic).	11B.4.9.2 →	11C.4.9.2 →
	10.4.9.3 Select media based on criteria.	11A.4.9.3 Demonstrate the application of pre-press procedures.		11C.4.9.3 Demonstrate the application of pre-release procedures.
	10.4.9.4 Prepare a file for output.			

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.10: Solve challenges using the **design process**.

<p>9.4.10.1 Demonstrate a basic ability to apply the steps in the design process:</p> <ol style="list-style-type: none"> 1. Identify the design challenge. 2. Research design solutions. 3. Conceptualize design solutions. 4. Refine design concepts. 5. Create design solutions. 6. Present design solutions. 7. Implement design solutions. 8. Evaluate design solutions. 	<p>10.4.10.1 Demonstrate the ability to apply the steps in the design process:</p> <ol style="list-style-type: none"> 1. Identify the design challenge. 2. Research design solutions. 3. Conceptualize design solutions. 4. Refine design concepts. 5. Create design solutions. 6. Present design solutions. 7. Implement design solutions. 8. Evaluate design solutions. 	<p>11A.4.10.1 Demonstrate the ability to apply the design process in graphic design and layout:</p> <ol style="list-style-type: none"> 1. Identify the design challenge. 2. Research design solutions. 3. Conceptualize design solutions. 4. Refine design concepts. 5. Create design solutions. 6. Present design solutions. 7. Implement design solutions. 8. Evaluate design solutions. 	<p>11B.4.10.1 Demonstrate the ability to apply the design process in illustration:</p> <ol style="list-style-type: none"> 1. Identify the design challenge. 2. Research design solutions. 3. Conceptualize design solutions. 4. Refine design concepts. 5. Create design solutions. 6. Present design solutions. 7. Implement design solutions. 8. Evaluate design solutions. 	<p>11C.4.10.1 Demonstrate the ability to apply the design process in interactive graphic design:</p> <ol style="list-style-type: none"> 1. Identify the design challenge. 2. Research design solutions. 3. Conceptualize design solutions. 4. Refine design concepts. 5. Create design solutions. 6. Present design solutions. 7. Implement design solutions. 8. Evaluate design solutions.
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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.10: Solve challenges using the **design process.** (continued)

Step 1: Identify the design challenge.

10.4.10.S1.1 Demonstrate an awareness of design challenges.	11A.4.10.S1.1 Identify options (e.g., billboard, packaging, advertisement, and environmental exposure) based on the end use of the product.	11B.4.10.S1.1 →	11C.4.10.S1.1 →
10.4.10.S1.2 Discuss the relationship between the clients' needs and the design solution.	11A.4.10.S1.2 Identify the purpose of the design solution.	11B.4.10.S1.2 →	11C.4.10.S1.2 →
	11A.4.10.S1.3 Identify the target market for the design solution.	11B.4.10.S1.3 →	11C.4.10.S1.3 →
	11A.4.10.S1.4 Identify the specifications for the design solution.	11B.4.10.S1.4 →	11C.4.10.S1.4 →

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.10: Solve challenges using the **design process**. (continued)

Step 2: Research design solutions.

10.4.10.S2.1 Consider the required specifications (e.g., colour, size, font, images) for the design problem.	11A.4.10.S2.1 →	11B.4.10.S2.1 →	11C.4.10.S2.1 →
10.4.10.S2.2 Research, gather, and document examples for design solutions.	11A.4.10.S2.2 →	11B.4.10.S2.2 →	11C.4.10.S2.2 →
	11A.4.10.S2.3 Identify the impact that demographics, target market, and client preferences have on the design solution.	11B.4.10.S2.3 →	11B.4.10.S2.3 →

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.10: Solve challenges using the **design process.** (continued)

Step 3: Conceptualize design solutions.

10.4.10.S3.1 Brainstorm possible design solutions.	11A.4.10.S3.1 →	11B.4.10.S3.1 →	11C.4.10.S3.1 →
10.4.10.S3.2 Explore potential concepts by rendering thumbnail sketches.	11A.4.10.S3.2 →	11B.4.10.S3.2 →	11C.4.10.S3.2 →

Step 4: Refine design concepts.

10.4.10.S4.1 Select potential design solutions.	11A.4.10.S4.1 →	11B.4.10.S4.1 →	11C.4.10.S4.1 →
10.4.10.S4.2 Refine design concepts.	11A.4.10.S4.2 →		

Step 5: Create design solutions.

10.4.10.S5.1 Incorporate the required specifications (e.g., colour, size, font, images).	11A.4.10.S5.1 →	11B.4.10.S5.1 →	11C.4.10.S5.1 →
10.4.10.S5.2 Create a design solution suitable for presentation.	11A.4.10.S5.2 →	11B.4.10.S5.2 →	11C.4.10.S5.2 →

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.10: Solve challenges using the **design process**. (continued)

Step 6: Present design solutions.

10.4.10.S6.1 Demonstrate the ability to present the design solution.	11A.4.10.S6.1 →	11B.4.10.S6.1 →	11C.4.10.S5.1 →
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Step 7: Implement final design solutions.

11A.4.10.S7.1 Produce the end product for the design solution.	11B.4.10.S7.1 →	11C.4.10.S7.1 →
11A.4.10.S7.2 Demonstrate the ability to complete the design process.	11B.4.10.S7.2 →	11C.4.10.S7.2 →

Step 8: Evaluate design solutions.

10.4.10.S8.1 Evaluate the design during each step of the process.	11A.4.10.S8.1 →	11B.4.10.S8.1 →	11C.4.10.S8.1 →
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Goal 5: Identify, select, use, and manage **tools, equipment, and materials.**

GLO 5.1: Identify, select, use, and manage **tools, including software.**

9.5.1.1 Demonstrate an awareness of software used in the graphic design industry.	10.5.1.1 Identify various categories of software (e.g., page layout, image manipulation, and illustration) used in the graphic design industry.	11A.5.1.1 Use industry-standard software.	11B.5.1.1 →	11C.5.1.1 →
9.5.1.2 Use industry-standard software at a basic level.	10.5.1.2 →			

GLO 5.2: Identify, select, use, and manage **equipment, including hardware.**

	10.5.2.1 Identify, select, use, and manage equipment, including industry-standard hardware and devices.	11A.5.2.1 →	11B.5.2.1 →	11C.5.2.1 →
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GLO 5.3: Identify, select, use, and manage **materials.**

	10.5.3.1 Identify, select, use, and manage materials.	11A.5.3.1 →	11B.5.3.1 →	11C.5.3.1 →
	10.5.3.2 Identify substrates and their sizes.	11A.5.3.2 →	11B.5.3.2 →	11C.5.3.2 →

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Goal 6: Describe and demonstrate the transferable **cross-curricular** knowledge and skills relevant to graphic design.

GLO 6.1: Read, interpret, and communicate information relevant to graphic design.

9.6.1.1 Read and interpret information.	10.6.1.1 →	11A.6.1.1 Read, interpret, and communicate information.	11B.6.1.1 →	11C.6.1.1 →
	10.6.1.2 Extrapolate information from text to produce visual communication.	11A.6.1.2 →	11B.6.1.2 →	11C.6.1.2 →
	10.6.1.3 Demonstrate an understanding of the terminology associated with graphic design.	11A.6.1.3 →	11B.6.1.3 →	11C.6.1.3 →
	10.6.1.4 Discuss the need for proofreading text and images used in the graphic design solution.	11A.6.1.4 Demonstrate the ability to proofread text.	11B.6.1.4 →	11C.6.1.4 →

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Goal 6: Describe and demonstrate the transferable **cross-curricular** knowledge and skills relevant to graphic design.
(continued)

GLO 6.2: Apply the knowledge and skills from **mathematics** relevant to graphic design.

	10.6.2.1 Identify measurement units (e.g., points, picas, metric, and imperial) used in graphic design.	11A.6.2.1 Identify common sizes for print products (e.g., business cards, envelopes, mailed products, and letterhead).	11B.6.2.1 Demonstrate the ability to calculate fractions, decimals, ratios, and percentages.	11C.6.2.1 →
	10.6.2.2 Demonstrate the ability to calculate fractions, decimals, ratios, and percentages.	11A.6.2.2 →		
		11A.6.2.3 Convert between various units of measurement.		

GLO 6.3: Apply the knowledge and skills from **other subject areas** relevant to graphic design.

			11B.6.3.1 Demonstrate an understanding of the properties of light as they apply to illustration.	
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Goal 7: Demonstrate an awareness of **sustainability** as it pertains to graphic design.

GLO 7.1: Describe the graphic design industry’s **sustainability practices** and impact on the environment.

10.7.1.1 Compare and contrast the effects of digital files versus hard copies on the environment.

11A.7.1.1 Demonstrate an awareness of the recycling and disposal of substrates, materials, and hardware.

11A.7.1.2 Practise recycling.

GLO 7.2: Describe the impact of **human sustainability** on the well-being of those employed in graphic design and the users of their services.

9.7.2.1 Discuss the importance of graphic design to human health and well-being.

10.7.2.1 →

11A.7.2.1 →

11B.7.2.1 →

11C.7.2.1 →

11A.7.2.2 Discuss ergonomically correct procedures to avoid injury (e.g., stress, strain).

11A.7.2.3 Demonstrate an awareness of long-term health concerns found in those employed in the graphic design industry.

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Goal 7: Demonstrate awareness of **sustainability** as it pertains to graphic design. *(continued)*

GLO 7.3: Describe **sustainable business practices** within the graphic design industry.

11A.7.3.1 Define sustainable business practices.

11B.7.3.1 Discuss the importance of graphic designers staying current with industry trends.

Goal 8: Demonstrate an awareness of the **ethical and legal standards** as they pertain to graphic design.

GLO 8.1: Demonstrate an awareness of the **ethical and legal standards** as they pertain to graphic design.

9.8.1.1 Demonstrate an understanding of ethics.

10.8.1.1 →

11A.8.1.1 Demonstrate an awareness of the ethical considerations related to presenting solutions and critiquing work.

10.8.1.2 Discuss ethical and legal considerations related to the use of copyrighted text and graphics.

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Goal 9: Demonstrate employability skills.

GLO 9.1: Demonstrate fundamental employability skills.

9.9.1.1 Demonstrate regular and punctual attendance.	10.9.1.1 →	11A.9.1.1 →	11B.9.1.1 →	11C.9.1.1 →
9.9.1.2 Demonstrate the ability to communicate respectfully and effectively with teachers, supervisors, co-workers, and students.	10.9.1.2 →	11A.9.1.2 →	11B.9.1.2 →	11C.9.1.2 →
9.9.1.3 Demonstrate accountability by taking responsibility for their actions.	10.9.1.3 →	11A.9.1.3 →	11B.9.1.3 →	11C.9.1.3 →
9.9.1.4 Demonstrate adaptability, initiative, and effort.	10.9.1.4 →	11A.9.1.4 →	11B.9.1.4 →	11C.9.1.4 →
9.9.1.5 Demonstrate teamwork skills.	10.9.1.5 →	11A.9.1.5 →	11B.9.1.5 →	11C.9.1.5 →
9.9.1.6 Demonstrate the ability to stay on task and effectively use time in class and work environments.	10.9.1.6 →	11A.9.1.6 →	11B.9.1.6 →	11C.9.1.6 →
9.9.1.7 Demonstrate the responsible use of technology.	10.9.1.7 →	11A.9.1.7 →	11B.9.1.7 →	11C.9.1.7 →

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Goal 9: Demonstrate **employability skills.** *(continued)*

GLO 9.2: Demonstrate **cultural awareness** and an understanding of its importance in the workplace.

10.9.2.1 Define and discuss the meaning of culture.	11A.9.2.1 Discuss the importance of cultural awareness in the workplace.	11B.9.2.1 →	11C.9.2.1 →
10.9.2.2 Discuss the importance of cultural awareness in the workplace.			

GLO 9.3: Demonstrate **critical thinking skills.**

10.9.3.1 Define critical thinking, and discuss the need for it.	11A.9.3.1 Demonstrate the use of critical thinking to solve design challenges.	11B.9.3.1 →	11C.9.3.1 →
10.9.3.2 Discuss the need for problem-solving skills.			

GLO 9.4: Demonstrate **project management** skills.

10.9.4.1 Demonstrate an awareness of project management.	11A.9.4.1 Fulfill their responsibility in the completion of a project, including following timelines and meeting deadlines.	11B.9.4.1 →	11C.9.4.1 →
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Goal 10: Demonstrate an understanding of the **graphic design industry.**

GLO 10.1: Demonstrate an understanding of the scope of the **graphic design industry.**

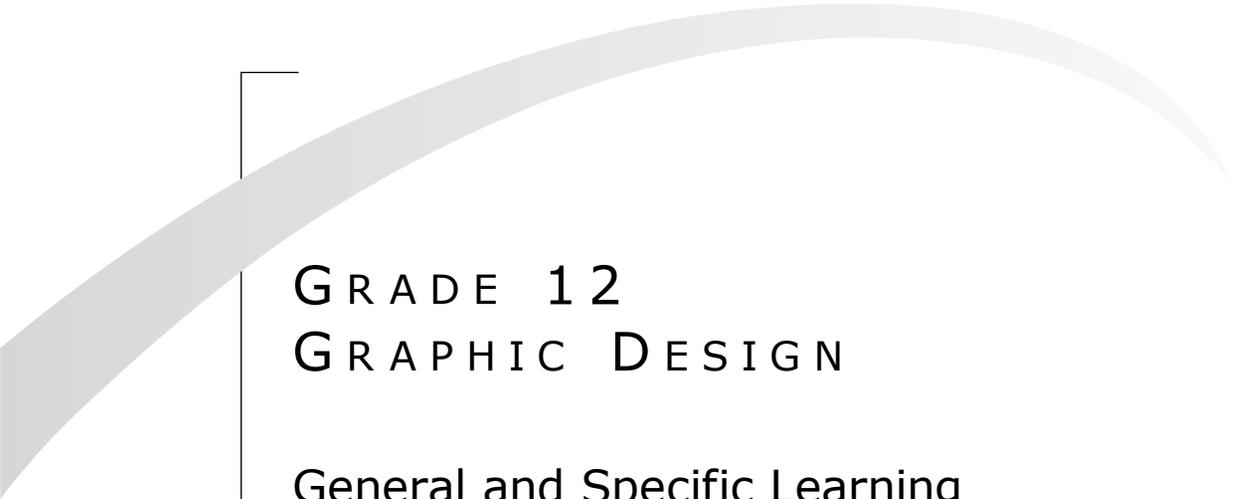
10.10.1.1 Define graphic design.	11A.10.1.1 Discuss the place of the graphic design industry in Canada and internationally.	11B.10.1.1 Discuss the scope of the illustration sector.	11C.10.1.1 Discuss the scope of the interactive graphic design sector.
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GLO 10.2: Demonstrate an understanding of the **educational and career opportunities** in graphic design, as well as **industry and professional associations.**

10.10.2.1 Demonstrate an awareness of the scope of educational opportunities and careers in the graphic design industry and associated professions.	11A.10.2.1 Demonstrate an awareness of the scope of educational opportunities and careers in graphic design and layout.	11B.10.2.1 Demonstrate an awareness of the scope of educational opportunities and careers in illustration.	11C.10.2.1 Demonstrate an awareness of the scope of educational opportunities and careers in interactive graphic design.
10.10.2.2 Demonstrate an awareness of portfolios.	11A.10.2.2 →	11B.10.2.2 →	11C.10.2.2 →

GLO 10.3: Demonstrate an understanding of **working conditions** in the graphic design industry.

10.10.3.1 Describe the working conditions related to different occupations in the graphic design industry.	11A.10.3.1 Demonstrate an understanding of the requirement for graphic designers to adhere to deadlines.
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GRADE 12
GRAPHIC DESIGN

General and Specific Learning
Outcomes by Goal



GRADE 12 GRAPHIC DESIGN: GENERAL AND SPECIFIC LEARNING OUTCOMES BY GOAL

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Goal 1: Describe and apply **health and safety** practices.

GLO 1.1: Describe and apply appropriate **health and safety** practices.

12A.1.1.1 Follow safety practices when using tools, equipment, and materials.	12B.1.1.1 Outline the safety principles for working on and around electrical equipment.	12C.1.1.1 Follow safety practices when using tools, equipment, and materials.	12D.1.1.1 —>
12A.1.1.2 Locate first aid stations and fire extinguishers.	12B.1.1.2 Outline workplace fire safety principles.	12C.1.1.2 Locate first aid stations and fire extinguishers.	12D.1.1.2 —>
12A.1.1.3 Describe the reporting process for injuries.	12B.1.1.3 Maintain a clean and organized work area.	12C.1.1.3 Describe the reporting process for injuries.	12D.1.1.3 —>
12A.1.1.4 Explain the Workplace Hazardous Material Information System (WHMIS).		12C.1.1.4 —>	12D.1.1.4 —>
12A.1.1.5 Match the WHMIS symbols and their meanings.		12C.1.1.5 —>	12D.1.1.5 —>
12A.1.1.6 Describe the steps to use in the Right to Refuse process.		12C.1.1.6 —>	12D.1.1.6 —>
12A.1.1.7 Explain how and where to find information on workplace safety and health.		12C.1.1.7 —>	12D.1.1.7 —>

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Goal 1: Describe and apply **health and safety** practices. *(continued)*

GLO 1.1: Describe and apply appropriate **health and safety** practices. *(continued)*

12A.1.1.8 Give examples of safety and health hazards found in a graphic design studio.		12C.1.1.8 →	12D.1.1.8 →
12A.1.1.9 Describe the importance of using personal protective equipment (PPE).		12C.1.1.9 →	12D.1.1.9 →
12A.1.1.10 Demonstrate proper selection and use of a variety of PPE and fall protection systems.		12C.1.1.10 →	12D.1.1.10 →
		12C.1.1.11 Outline the safety principles for working on and around electrical equipment.	12D.1.1.11 →
		12C.1.1.12 Outline workplace fire safety principles.	12D.1.1.12 →
		12C.1.1.13 Maintain a clean and organized work area.	12D.1.1.13 →

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Goal 2: Demonstrate an awareness of the **evolution, technological progression, and emerging trends** in graphic design.

GLO 2.1: Understand the **evolution, technological progression, and emerging trends** in graphic design.

12A.2.1.1 Demonstrate an awareness of different eras in the history of graphic design and how they influence current design.

12D.2.1.1 Demonstrate an awareness of the portfolio expectations of potential clients, employers, and post-secondary institutions.

12A.2.1.2 Demonstrate an awareness of the influences of various design styles.

Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges.

GLO 3.1: Demonstrate a theoretical understanding of **creativity**.

12A.3.1.1 Research creative solutions and incorporate them into design challenges.

12B.3.1.1 ———>

12C.3.1.1 ———>

12A.3.1.2 Demonstrate an understanding of personal style.

12B.3.1.2 ———>

12C.3.1.2 ———>

GLO 3.2: Demonstrate a theoretical understanding of the **elements and principles of design**.

12A.3.2.1 Demonstrate an advanced understanding of how elements and principles of design are used to communicate messages effectively.

12B.3.2.1 Demonstrate an advanced understanding of the elements and principles of design used in illustrations.

12C.3.2.1 Demonstrate an advanced understanding of the elements and principles of design used in interactive graphic design.

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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.3: Demonstrate a theoretical understanding of **colour**.

12A.3.3.1 Demonstrate an advanced understanding of how colour is used in graphic design and layout.	12B.3.3.1 Demonstrate an advanced understanding of how colour is used in illustrations.	12C.3.3.1 Demonstrate an advanced understanding of how colour is used in interactive graphic design.
12A.3.3.2 Demonstrate an advanced knowledge of colour modes (e.g., subtractive, additive colour, RGB, and CMYK).	12B.3.3.2 —→	12C.3.3.2 —→
12A.3.3.3 Demonstrate an advanced understanding of the psychology of colour.	12B.3.3.3 —→	12C.3.3.3 —→

GLO 3.4: Demonstrate a theoretical understanding of **layout and composition**.

12A.3.4.1 Discuss how the principles of design are applied in layout and composition.	12B.3.4.1 —→	12C.3.4.1 —→
12A.3.4.2 Demonstrate an advanced understanding of composition methods.	12B.3.4.2 —→	12C.3.4.2 —→
12A.3.4.3 Demonstrate an advanced understanding of the use of grid systems in layout and composition.		12C.3.4.3 Demonstrate an advanced understanding of the use of grid systems in layout and composition.

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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.5: Demonstrate a theoretical understanding of **typography**.

12A.3.5.1 Explain the fundamentals of typography as they apply to graphic design.	12B.3.5.1 Demonstrate an advanced understanding of the role of illustration in typeface design.	12C.3.5.1 Explain the fundamentals of typography as they apply to interactive design.
12A.3.5.2 Explain type-formatting techniques.	12B.3.5.2 Differentiate hand-lettering techniques.	12C.3.5.2 Explain type-formatting techniques.
12A.3.5.3 Explain how the rules of typography are used in graphic design and layout.		12C.3.5.3 Explain how the rules of typography are used in interactive graphic design.
12A.3.5.4 Evaluate specific typographical solutions.		12C.3.5.4 Evaluate specific typographical solutions.
		12C.3.5.5 Demonstrate an advanced understanding of the use of pixel fonts.
		12C.3.5.6 Demonstrate an advanced understanding of the use of kinetic/interactive typography.

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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.6: Demonstrate a theoretical understanding of **drawing and illustration**.

12A.3.6.1 Demonstrate an advanced understanding of the use of raster and vector formats.	12B.3.6.1 →	12C.3.6.1 →
12A.3.6.2 Demonstrate an advanced understanding of the use of drawings and illustrations to solve design challenges.	12B.3.6.2 Explain the theory behind perspective drawing.	12C.3.6.2 Demonstrate an advanced understanding of the use of drawings and illustrations to solve design challenges.
	12B.3.6.3 Differentiate between traditional and digital media.	
	12B.3.6.4 Explain the theory behind various drawing techniques.	
	12B.3.6.5 Demonstrate an advanced knowledge of various substrates used in illustration.	

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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.7: Demonstrate a theoretical understanding of the use of **photographic images**.

12A.3.7.1 Demonstrate an advanced understanding of the use of photos to solve design challenges.	12B.3.7.1 Demonstrate an advanced understanding of the use of photography in illustration.	12C.3.7.1 Demonstrate an advanced understanding of the use of photos to solve design challenges.
12A.3.7.2 Demonstrate an advanced understanding of photographic manipulation terms.	12B.3.7.2 —————>	12C.3.7.2 —————>
12A.3.7.3 Demonstrate an advanced understanding of the use of photographic manipulation techniques.	12B.3.7.3 —————>	12C.3.7.3 —————>

GLO 3.8: Demonstrate a theoretical understanding of **interactive design**.

12A.3.8.1 Explain how the end product affects graphic design and layout decisions.	12B.3.8.1 Explain how the end product affects illustration decisions.	12C.3.8.1 Demonstrate an advanced understanding of how user experience affects interactive graphic design.
		12C.3.8.2 Explain how the end product affects interactive graphic design.
		12C.3.8.3 Demonstrate an advanced knowledge of different factors influencing interactivity.

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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.8: Demonstrate a theoretical understanding of **interactive design**. *(continued)*

12C.3.8.4 Demonstrate an advanced knowledge of various types of animation and motion graphics techniques.

12C.3.8.5 Demonstrate an advanced knowledge of different factors influencing user experience.

GLO 3.9: Demonstrate a theoretical understanding of **file preparation for intended media**.

12A.3.9.1 Demonstrate an advanced knowledge of colour management in relation to output.

12B.3.9.1 →

12C.3.9.1 →

12A.3.9.2 Demonstrate an advanced knowledge of colour mode in relation to output.

12B.3.9.2 →

12C.3.9.2 →

12A.3.9.3 Demonstrate an advanced knowledge of resolution in relation to output.

12B.3.9.3 →

12C.3.9.3 →

12A.3.9.4 Demonstrate an advanced knowledge of pre-press procedures.

12B.3.9.4 →

12C.3.9.4 →

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Goal 3: Demonstrate a **theoretical understanding of design theory** in order to solve design challenges. *(continued)*

GLO 3.10: Demonstrate a theoretical understanding of the **design process**.

<p>12A.3.10.1 Demonstrate an advanced understanding of the design process in graphic design and layout, as well as the importance of each step in the design process.</p> <ol style="list-style-type: none"> 1. Identify the design challenge. 2. Research design solutions. 3. Conceptualize design solutions. 4. Refine design concepts. 5. Create design solutions. 6. Present design solutions. 7. Implement design solutions. 8. Evaluate design solutions. 	<p>12B.3.10.1 Demonstrate an advanced understanding of the design process in illustration, as well as the importance of each step in the design process.</p> <ol style="list-style-type: none"> 1. Identify the design challenge. 2. Research design solutions. 3. Conceptualize design solutions. 4. Refine design concepts. 5. Create design solutions. 6. Present design solutions. 7. Implement design solutions. 8. Evaluate design solutions. 	<p>12C.3.10.1 Demonstrate an advanced understanding of the design process in interactive graphic design, as well as the importance of each step in the design process.</p> <ol style="list-style-type: none"> 1. Identify the design challenge. 2. Research design solutions. 3. Conceptualize design solutions. 4. Refine design concepts. 5. Create design solutions. 6. Present design solutions. 7. Implement design solutions. 8. Evaluate design solutions. 	
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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.

GLO 4.1: Demonstrate the practical application of **creativity**.

<p>12A.4.1.1 Apply creativity in solving a design challenge.</p>	<p>12B.4.1.1 Apply creativity in using illustrations to solve a design challenge.</p>	<p>12C.4.1.1 Apply creativity in solving design challenges in interactive graphic design.</p>	<p>12D.4.1.1 Apply creativity in creating a portfolio.</p>
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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.2: Demonstrate the practical application of **elements and principles of design**.

12A.4.2.1 Solve design and layout challenges using the design process.	12B.4.2.1 Solve illustration challenges using the design process.	12C.4.2.1 Solve interactive design challenges using the design process.
12A.4.2.2 Solve design and layout challenges using the elements and principles of design.	12B.4.2.2 Solve illustration challenges using the elements and principles of design.	12C.4.2.2 Solve interactive design challenges using the elements and principles of design.

GLO 4.3: Demonstrate the practical application of **colour**.

12A.4.3.1 Apply colour systems to solve client-driven graphic design challenges.	12B.4.3.1 Apply advanced knowledge of the application of colour in client-driven illustrations.	12C.4.3.1 Apply advanced knowledge of the application of colour in client-driven interactive graphic designs.
12A.4.3.2 Apply advanced knowledge of the psychology of colour to solve client-driven graphic design challenges.	12B.4.3.2 Apply advanced knowledge of the psychology of colour to solve client-driven graphic design challenges involving illustration.	12C.4.3.2 Apply advanced knowledge of the psychology of colour to solve client-driven interactive graphic design challenges.
12A.4.3.3 Apply advanced knowledge of colour modes to solve client-driven graphic design challenges.		

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.4: Demonstrate the practical application of **layout and composition**.

12A.4.4.1 Apply measurement to the set-up of client-driven design documents.	12B.4.4.1 Demonstrate application of the principles of design in layout and composition (e.g., negative space, hierarchy, scale, contrast, proximity, repetition).	12C.4.4.1 Apply grid systems in interactive graphic design for client-driven design challenges.
12A.4.4.2 Solve client-driven design challenges using a variety of composition methods.	12B.4.4.2 —————>	12C.4.4.2 —————>
12A.4.4.3 Design and lay out a client-driven multi-page document.	12B.4.4.3 Create an illustration for a client-driven multi-page document.	12C.4.4.3 Design and lay out a client-driven multi-screen interactive product.
12A.4.4.4 Arrange elements by applying principles of design to create an advanced layout for client-driven design challenges.		12C.4.4.4 Apply the principles of design in the solution of client-driven interactive graphic design challenges.

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.5: Demonstrate the practical application of **typography**.

12A.4.5.1 Use typographic techniques to solve a client-driven design challenge.	12B.4.5.1 Demonstrate the application of the anatomy of type in hand lettering to solve a client-driven design challenge.	12C.4.5.1 Demonstrate the application of the fundamentals of typography in interactive graphic design to solve a client-driven design challenge.
12A.4.5.2 Demonstrate the application of the fundamentals of typography to solve a client-driven design challenge.	12B.4.5.2 Demonstrate the application of illustrative techniques in typeface design to solve a client-driven design challenge.	12C.4.5.2 Demonstrate the application of type techniques in interactive graphic design to solve a client-driven design challenge.
12A.4.5.3 Demonstrate the application of the rules of typography to solve a client-driven design and layout challenge.	12C.4.5.3 Demonstrate the ability to hand letter.	12C.4.5.3 Demonstrate the application of the rules of typography in interactive graphic design to solve a client-driven design challenge.
12A.4.5.4 Demonstrate the application of type-formatting techniques to solve a client-driven design challenge.		12C.4.5.4 Demonstrate the application of specific typographical solutions to solve a client-driven design challenge.
		12C.4.5.5 Demonstrate the application of pixel fonts to solve a client-driven design challenge.

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges. *(continued)*

GLO 4.5: Demonstrate the practical application of **typography**. *(continued)*

12C.4.5.6 Demonstrate the application of kinetic/interactive typography to solve a client-driven design challenge.

GLO 4.6: Demonstrate the practical application of **drawing and illustration**.

12A.4.6.1 Demonstrate the use of thumbnails and rough sketches to solve a client-driven design challenge.

12B.4.6.1 →

12C.4.6.1 Demonstrate the use of thumbnails and/or storyboards and rough sketches to solve a client-driven design challenge.

12A.4.6.2 Demonstrate the use of drawings and illustrations to solve a client-driven design challenge.

12B.4.6.2 Demonstrate the ability to create drawings and illustrations in raster and vector formats to solve a client-driven design challenge.

12C.4.6.2 →

12B.4.6.3 Create drawings and illustrations to solve a client-driven design challenge.

12B.4.6.4 Demonstrate the ability to draw in perspective.

12B.4.6.5 Compare and contrast traditional and digital media.

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.7: Demonstrate the practical application of **photographic images**.

12A.4.7.1 Demonstrate the use of photographs to solve a client-driven design challenge.

12B.4.7.1 Demonstrate the use of photography in illustration to solve a client-driven design challenge.

12C.4.7.1 Demonstrate the use of photographs to solve a client-driven design challenge.

12A.4.7.2 Demonstrate the ability to use advanced photographic manipulation techniques to solve a client-driven design challenge.

12B.4.7.2 ———>

12C.4.7.2 ———>

GLO 4.8: Demonstrate the practical application of **interactive design**.

12B.4.8.1 Demonstrate the ability to create digital assets to solve a client-driven design challenge.

12C.4.8.1 ———>

12C.4.8.2 Demonstrate the ability to create interactive graphic designs to solve a client-driven design challenge.

12C.4.8.3 Demonstrate the application of different factors influencing interactivity to solve a client-driven design challenge.

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges. *(continued)*

GLO 4.8: Demonstrate the practical application of **interactive design**. *(continued)*

12C.4.8.4 Demonstrate the application of various types of animation and motion graphics techniques to solve a client-driven design challenge.

GLO 4.9: Demonstrate the practical application of **file preparation for intended media**.

12A.4.9.1 Demonstrate the application of colour profiles/ colour modes in relation to output techniques to solve a client-driven design challenge.

12B.4.9.1 →

12C.4.9.1 →

12A.4.9.2 Demonstrate the application of resolution in relation to output techniques to solve a client-driven design challenge.

12B.4.9.2 →

12C.4.9.2 →

12A.4.9.3 Demonstrate the application of pre-press procedures to solve a client-driven design challenge.

12B.4.9.3 →

12C.4.9.3 →

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.10: Solve challenges using the **design process**.

12A.4.10.1 Demonstrate the ability to apply the design process in graphic design and layout to solve a client-driven design challenge.	12B.4.10.1 Demonstrate the ability to apply the design process in illustration to solve a client-driven design challenge.	12C.4.10.1 Demonstrate the ability to apply the design process in interactive graphic design to solve a client-driven design challenge.	
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Step 1: Identify the design challenge.

12A.4.10.S1.1 Identify options for a client-driven product based on its end use.	12B.4.10.S1.1 →	12C.4.10.S1.1 →	12D.4.10.S1.1 Identify the factors that influence portfolio design (e.g., purpose, printing specifications, audience, printing method, delivery date, style, aesthetics, theme, technology, quantity, and post-press considerations).
12A.4.10.S1.2 Clarify the client's needs.	12B.4.10.S1.2 →	12C.4.10.S1.2 →	
12A.4.10.S1.3 Identify the target market to solve a client-driven design challenge.	12B.4.10.S1.3 →	12C.4.10.S1.3 →	
12A.4.10.S1.4 Identify the specifications to solve a client-driven design challenge.	12B.4.10.S1.4 →	12C.4.10.S1.4 →	

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.10: Solve challenges using the **design process.** *(continued)*

Step 1: Identify the design challenge. *(continued)*

12A.4.10.S1.5 Identify the factors that influence design (e.g., purpose, printing specifications, audience, printing method, delivery date, style, aesthetics, theme, technology, workforce, client's personality, quantity, and post-press considerations).	12B.4.10.S1.5 →	12C.4.10.S1.5 →
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Step 2: Research design solutions.

12A.4.10.S2.1 Consider the required specifications to solve a client-driven design challenge.	12B.4.10.S2.1 →	12C.4.10.S2.1 →
12A.4.10.S2.2 Research, gather, and document examples to solve a client-driven design challenge.	12B.4.10.S2.2 →	12C.4.10.S2.2 →
12A.4.10.S2.3 Identify the impact that demographics, target market, and client preferences have on a design challenge.	12B.4.10.S2.3 →	12C.4.10.S2.3 →

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.10: Solve challenges using the **design process**. (continued)

Step 3: Conceptualize design solutions.

12A.4.10.S3.1 Brainstorm possible design solutions to solve a client-driven design challenge.	12B.4.10.S3.1 →	12C.4.10.S3.1 →
12A.4.10.S3.2 Explore potential concepts by rendering thumbnail sketches to solve a client-driven design challenge.	12B.4.10.S3.2 →	12C.4.10.S3.2 →
12A.4.10.S3.3 Incorporate historical influences on their own designs to solve a client-driven design challenge.	12B.4.10.S3.3 →	12C.4.10.S3.3 →

Step 4: Refine design concepts.

12A.4.10.S4.1 Select potential design solutions to solve a client-driven design challenge.	12B.4.10.S4.1 →	12C.4.10.S4.1 →
12A.4.10.S4.2 Refine a design concept to solve a client-driven design challenge.	12B.4.10.S4.2 →	12C.4.10.S4.2 →

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.10: Solve challenges using the **design process.** (continued)

Step 5: Create design solutions.

12A.4.10.S5.1 Incorporate the required specifications to solve a client-driven design challenge.	12B.4.10.S5.1 →	12C.4.10.S5.1 →
12A.4.10.S5.2 Create a design solution suitable to present to a client.	12B.4.10.S5.2 →	12C.4.10.S5.2 →

Step 6: Present design solutions.

12A.4.10.S6.1 Demonstrate the ability to present the design solution to a client.	12B.4.10.S6.1 →	12C.4.10.S6.1 →
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Step 7: Implement final design solutions.

12A.4.10.S7.1 Produce the end product to solve a client-driven design challenge.	12B.4.10.S7.1 →	12C.4.10.S7.1 →
12A.4.10.S7.2 Demonstrate the ability to complete the design process to solve a client-driven design challenge.	12B.4.10.S7.2 →	12C.4.10.S7.2 →

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Goal 4: Demonstrate the **practical application of graphic design techniques** to solve design challenges.
(continued)

GLO 4.10: Solve challenges using the **design process**. (continued)

Step 8: Evaluate design solutions.

12A.4.10.S8.1 Evaluate the design during each step of the process.

12B.4.10.S8.1 →

12C.4.10.S8.1 →

Goal 5: Identify, select, use, and manage **tools, equipment, and materials**.

GLO 5.1: Identify, select, use, and manage **tools, including software**.

12A.5.1.1 Use industry-standard software to solve a client-driven design challenge.

12B.5.1.1 →

12C.5.1.1 →

12D.5.1.1 Use industry-standard software to create a portfolio.

GLO 5.2: Identify, select, use, and manage **equipment, including hardware**.

12A.5.2.1 Select, use, and manage equipment, including industry-standard hardware and devices, to solve a client-driven design challenge.

12B.5.2.1 →

12C.5.2.1 →

12D.5.2.1 Use and manage equipment, including industry-standard hardware and devices, to create a portfolio.

GLO 5.3: Identify, select, use, and manage **materials**.

12A.5.3.1 Select, use, and manage materials to solve a client-driven design challenge.

12B.5.3.1 →

12C.5.3.1 →

12D.5.3.1 Select, use, and manage materials to create a portfolio.

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Goal 6: Describe and demonstrate the transferable **cross-curricular** knowledge and skills relevant to graphic design.

GLO 6.1: Read, interpret, and communicate information relevant to graphic design.

12A.6.1.1 Read, interpret, and communicate information.	12B.6.1.1 →	12C.6.1.1 →	12D.6.1.1 →
12A.6.1.2 Extrapolate information from text to produce visual communication.	12B.6.1.2 →	12C.6.1.2 →	12D.6.1.2 →
12A.6.1.3 Demonstrate an understanding of the terminology associated with graphic design.	12B.6.1.3 →	12C.6.1.3 →	12D.6.1.3 →
12A.6.1.4 Demonstrate the ability to proofread text.	12B.6.1.4 →	12C.6.1.4 →	12D.6.1.4 →

GLO 6.2: Apply the knowledge and skills from **mathematics** relevant to graphic design.

12A.6.2.1 Demonstrate the ability to calculate fractions, decimals, ratios, and percentages.	12B.6.2.1 →	12C.6.2.1 →	12D.6.2.1 →
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Goal 7: Demonstrate an awareness of **sustainability** as it pertains to graphic design.

GLO 7.1: Describe the graphic design industry's **sustainability practices** and impact on the environment.

12A.7.1.1 Consider sustainability practices (e-waste, energy consumption) in graphic design.	12B.7.1.1 →	12C.7.1.1 →	12D.7.1.1 →
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GLO 7.2: Describe the impact of **human sustainability** on the well-being of those employed in graphic design and the users of their services.

12A.7.2.1 Discuss the importance of graphic design to human health and well-being.	12B.7.2.1 →	12C.7.2.1 →	12D.7.2.1 →
12A.7.2.2 Discuss ergonomically correct procedures to avoid injury (e.g., stress, strain).	12B.7.2.2 →	12C.7.2.2 →	12D.7.2.2 →

GLO 7.3: Describe **sustainable business practices** within the graphic design industry.

12A.7.3.1 Define and discuss sustainable business practices.	12B.7.3.1 →	12C.7.3.1 →	12D.7.3.1 Discuss the importance of graphic designers staying current with industry trends.
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Goal 8: Demonstrate an awareness of the **ethical and legal standards** as they pertain to graphic design.

GLO 8.1: Demonstrate an awareness of the **ethical and legal standards** as they pertain to graphic design.

12A.8.1.1 Demonstrate an awareness of the ethical considerations related to presenting solutions and critiquing work.	12B.8.1.1 →	12C.8.1.1 →	12D.8.1.1 →
			12D.8.1.2 Demonstrate an awareness of the steps required to register a business.

Goal 9: Demonstrate **employability skills**.

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

12A.9.1.1 Demonstrate regular and punctual attendance.	12B.9.1.1 →	12C.9.1.1 →	12D.9.1.1 →
12A.9.1.2 Demonstrate the ability to communicate respectfully and effectively with teachers, supervisors, co-workers, and students.	12B.9.1.2 →	12C.9.1.2 →	12D.9.1.2 →
12A.9.1.3 Demonstrate accountability by taking responsibility for their actions.	12B.9.1.3 →	12C.9.1.3 →	12D.9.1.3 →
12A.9.1.4 Demonstrate adaptability, initiative, and effort.	12B.9.1.4 →	12C.9.1.4 →	12D.9.1.4 →

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Goal 9: Demonstrate employability skills. <i>(continued)</i>			
GLO 9.1: Demonstrate fundamental employability skills. <i>(continued)</i>			
12A.9.1.5 Demonstrate teamwork skills.	12B.9.1.5 →	12C.9.1.5 →	12D.9.1.5 →
12A.9.1.6 Demonstrate the ability to stay on task and effectively use time in class and work environments.	12B.9.1.6 →	12C.9.1.6 →	12D.9.1.6 →
12A.9.1.7 Demonstrate the responsible use of technology.	12B.9.1.7 →	12C.9.1.7 →	12D.9.1.7 →
GLO 9.2: Demonstrate cultural awareness and an understanding of its importance in the workplace.			
12A.9.2.1 Discuss the importance of cultural awareness in the workplace.	12B.9.2.1 →	12C.9.2.1 →	12D.9.2.1 Demonstrate an understanding of workplace culture.
GLO 9.3: Demonstrate critical thinking skills.			
12A.9.3.1 Demonstrate the use of critical thinking to solve a client-driven design challenge.	12B.9.3.1 →	12C.9.3.1 →	12D.9.3.1 Demonstrate the use of critical thinking to develop a portfolio.
GLO 9.4: Demonstrate project management skills.			
12A.9.4.1 Demonstrate project management skills (including following timelines and meeting deadlines) to solve a client-driven design challenge.	12B.9.4.1 →	12C.9.4.1 →	12D.9.4.1 Demonstrate project management skills (including following timelines and meeting deadlines) to create a portfolio.

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Goal 9: Demonstrate employability skills. (continued)

GLO 9.5: Demonstrate an understanding of the **business operation** of a graphics organization.

12A.9.5.1 Demonstrate an awareness of financial considerations related to solving design challenges.	12B.9.5.1 →	12C.9.5.1 →	12D.9.5.1 →
12A.9.5.2 Demonstrate an understanding of the business operation of a graphics organization, including client management, marketing, accounting, documentation, file storage, networking, and social media.	12B.9.5.2 →	12C.9.5.2 →	12D.9.5.2 →
12A.9.5.3 Describe the process of communicating and collaborating with outside services.	12B.9.5.3 →	12C.9.5.3 →	12D.9.5.3 →
12A.9.5.4 Demonstrate the ability to communicate with clients in order to solve a design challenge.	12B.9.5.4 Demonstrate the ability to educate clients in order to solve a design challenge.		

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Goal 10: Demonstrate an understanding of the **graphic design industry.**

GLO 10.1: Demonstrate an understanding of the scope of the **graphic design industry.**

12A.10.1.1 Demonstrate an understanding of the scope of the graphic design sector.	12B.10.1.1 Demonstrate an understanding of the scope of the illustration sector.	12C.10.1.1 Demonstrate an understanding of the scope of the interactive graphic design sector.	12D.10.1.1 Demonstrate an understanding of the scope of opportunities in the graphic design industry, including <ul style="list-style-type: none"> ■ employment ■ self-employment ■ post-secondary programs
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GLO 10.2: Demonstrate an understanding of the **educational and career opportunities** in graphic design, as well as **industry and professional associations.**

12A.10.2.1 Demonstrate the ability to evaluate examples of work for a portfolio.	12B.10.2.1 →	12C.10.2.1 →	12D.10.2.1 Demonstrate the ability to research career and educational opportunities. 12D.10.2.2 Demonstrate the ability to create a digital portfolio and a physical portfolio to <ul style="list-style-type: none"> ■ obtain employment in the graphic design industry ■ obtain self-employment opportunities in graphic design ■ gain admittance to a post-secondary program in graphic design
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Goal 10: Demonstrate an understanding of the **graphic design industry.** *(continued)*

GLO 10.2: Demonstrate an understanding of the **educational and career opportunities** in graphic design, as well as **industry and professional associations.** *(continued)*

12D.10.2.3 Demonstrate the ability to promote their skills through a variety of media.

12D.10.2.4 Demonstrate the ability to create a resume to

- obtain employment in the graphic design industry
- obtain self-employment opportunities in graphic design
- gain admittance to a post-secondary program in graphic design

12D.10.2.5 Demonstrate the skills required to prepare for and participate in a job interview.

GLO 10.3: Demonstrate an understanding of **working conditions** in the graphic design industry.

12D.10.3.1 Compare and contrast working conditions in various graphic design facilities versus self-employment opportunities.



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