



9097

CODING FOR INTERACTIVE
DIGITAL MEDIA

30S/30E/30M

An Interactive Digital Media Course

9097: CODING FOR INTERACTIVE DIGITAL MEDIA 30S / 30E / 30M

Course Description

This course focuses on the creation of interactive components of projects by using basic coding. Students will learn programming theory, and how to incorporate it into interactive digital media projects.

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

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

- SLO 11C.1.1.1 Describe and practice online safety.
- SLO 11C.1.1.2 Demonstrate the ability to maintain a safe and organized workspace.
- SLO 11C.1.1.3 Demonstrate the ability to keep cables safe and uncluttered.
- SLO 11C.1.1.4 Describe ergonomically appropriate procedures to avoid injury.
- SLO 11C.1.1.5 Demonstrate awareness of health and safety issues related to lighting and glare, including monitors.

Goal 2: Demonstrate the identification, selection, use, and maintenance of **software, hardware, supplies, and equipment.**

GLO 2.1: Demonstrate the identification, selection, and use of **software.**

- SLO 11C.2.1.1 Evaluate and select the most appropriate software for a specific project (i.e., WYSIWYG editor, CMS, game engine, code editor, graphic software).
- SLO 11C.2.1.2 Demonstrate the use of software to develop interactive digital media.

GLO 2.2: Demonstrate the identification, selection, use, and maintenance of **hardware.**

- SLO 11C.2.2.1 Demonstrate the ability to organize files and folders.
- SLO 11C.2.2.2 Demonstrate the ability to maintain backups of files.

Goal 3: Incorporate **project management** processes throughout the development cycle.

GLO 3.1: Document the development process.

SLO 11C.3.1.1 Discuss the history, technological progression, and emerging trends in interactive digital media.

SLO 11C.3.1.2 Demonstrate the ability to create an informal record of the progress of the project under development.

GLO 3.2: Collaborate with peers, teachers, and clients.

SLO 11C.3.2.1 Provide, request, and incorporate feedback from peers, teachers, and/or clients.

GLO 3.3: Assess the project development process.

SLO 11C.3.3.1 Participate in the project development process.

GLO 3.4: Incorporate **quality assurance** processes.

SLO 11C.3.4.1 Demonstrate the ability to perform quality control on coding.

Goal 4: Conceptualize projects.

GLO 4.1: Discuss and incorporate interactive digital media development **theory**.

SLO 11C.4.1.1 Discuss the theory behind the project under development (i.e., colour theory, branding, game theory, programming concepts).

GLO 4.2: Explore and research **project ideas, audience, clients, and project requirements**.

SLO 11C.4.2.1 Demonstrate research skills.

SLO 11C.4.2.2 Demonstrate understanding of audience when developing interface.

SLO 11C.4.2.3 Demonstrate understanding of different platforms.

SLO 11C.4.2.4 Demonstrate the ability to identify programming requirements.

GLO 4.3: Assess, analyze, and select project **concept**.

SLO 11C.4.3.1 Select interface concepts based on project criteria.

Goal 5: Plan projects.**GLO 5.1: Determine **scope, timeline, and milestones.****

SLO 11C.5.1.1 Demonstrate the ability to determine scope, timeline, and milestones of the project under development.

GLO 5.2: Develop **linear and non-linear stories, plans, and flowcharts.**

SLO 11C.5.2.1 Create program flowchart.

SLO 11C.5.2.2 Create pseudo code.

SLO 11C.5.2.3 Use iterative refinement in program development.

Goal 6: Develop projects.**GLO 6.1: Develop and test **prototypes.****

SLO 11C.6.1.1 Develop draft prototype (i.e., level screens, wire frames, comps).

SLO 11C.6.1.2 Test the draft prototype of the project under development.

GLO 6.2: Create and incorporate **assets.**

SLO 11C.6.2.1 Demonstrate understanding of how databases are used in projects under development.

GLO 6.3: Use **code to solve problems.**

SLO 11C.6.3.1 Demonstrate understanding of variables.

SLO 11C.6.3.2 Demonstrate understanding of data types.

SLO 11C.6.3.3 Demonstrate knowledge of keywords.

SLO 11C.6.3.4 Demonstrate understanding of syntax.

SLO 11C.6.3.5 Document code using comments.

SLO 11C.6.3.6 Follow current programming conventions (i.e., naming, commenting, layout).

SLO 11C.6.3.7 Use operators.

SLO 11C.6.3.8 Use pre-existing objects.

SLO 11C.6.3.9 Use pre-existing functions and methods.

SLO 11C.6.3.10 Use branching or selection structures.

SLO 11C.6.3.11 Use looping or repetition structures.

SLO 11C.6.3.12 Create and use programmer-defined functions.

SLO 11C.6.3.13 Create functions or procedures to respond to events.

SLO 11C.6.3.14 Use a variety of debugging techniques to find and correct programming errors.

SLO 11C.6.3.15 Test code by using a variety of user inputs.

GLO 6.4: Evaluate and incorporate **security features**.

SLO 11C.6.4.1 Discuss awareness of security concerns in code.

Goal 7: Publish, release or present, and assess projects.

GLO 7.1: Publish, release or present, and assess projects.

SLO 11C.7.1.1 Publish project to one or more platforms (i.e., various browsers and/or various devices).

SLO 11C.7.1.2 Demonstrate the ability to present projects.

SLO 11C.7.1.3 Demonstrate the ability to assess completed project.

Goal 8: Describe and demonstrate the transferable **cross-curricular** knowledge and skills relevant to the interactive digital media industry.

GLO 8.1: Read, interpret, and communicate information.

SLO 11C.8.1.1 Use resources to solve problems.

GLO 8.2: Apply the knowledge and skills from **other subject areas** (mathematics, science, art, business education) relevant to interactive digital media design.

SLO 11C.8.2.1 Utilize formulas.

SLO 11C.8.2.2 Utilize mathematical order of operations.

SLO 11C.8.2.3 Demonstrate understanding of data types.

SLO 11C.8.2.4 Utilize Boolean logic.

SLO 11C.8.2.5 Utilize modulus division.

SLO 11C.8.2.6 Demonstrate awareness of binary and hexadecimal numbers.

Goal 9: Demonstrate awareness of **sustainability** as it pertains to interactive digital media development.

GLO 9.1: Describe the interactive digital media design industry's **sustainability** practices and impact on the environment.

SLO 11C.9.1.1 Discuss the lifespan of electronic devices, and its impact on electronic waste.

Goal 10: Demonstrate awareness of the **ethical and legal standards** as they pertain to interactive digital media design.

GLO 10.1: Demonstrate awareness of the **ethical and legal standards** as they pertain to interactive digital media design.

SLO 11C.10.1.1 Demonstrate understanding of, and comply with copyright legislation as it pertains to code.

Goal 11: Demonstrate **employability skills**.

GLO 11.1: Demonstrate **fundamental employability skills**.

SLO 11C.11.1.1 Demonstrate regular and punctual attendance.

SLO 11C.11.1.2 Demonstrate the ability to communicate respectfully and effectively with teachers, supervisors, co-workers, and students.

SLO 11C.11.1.3 Demonstrate accountability by taking responsibility for their actions.

SLO 11C.11.1.4 Demonstrate adaptability, initiative, and effort.

SLO 11C.11.1.5 Demonstrate teamwork skills.

SLO 11C.11.1.6 Demonstrate the ability to stay on task and effectively use time in class and work environments.

SLO 11C.11.1.7 Demonstrate the responsible use of technology.

SLO 11C.11.1.8 Provide and accept constructive feedback.

GLO 11.2: Demonstrate awareness of **cultural proficiency**, and its importance in the workplace.

No applicable SLOs.

GLO 11.3: Demonstrate understanding of the **business operation** of an interactive digital media design organization.

No applicable SLOs.

GLO 11.4: Demonstrate **critical thinking skills**.

SLO 11C.11.4.1 Demonstrate critical thinking skills when solving problems.

Goal 12: Demonstrate understanding of the **interactive digital media industry**.

GLO 12.1: Demonstrate understanding of the **scope** of the interactive digital media industry.

SLO 11C.12.1.1 Discuss the place of coding in the Canadian economy.

GLO 12.2: Demonstrate understanding of the **educational and career opportunities**, as well as **industry and professional associations**.

SLO 11C.12.2.1 Develop an online portfolio.

SLO 11C.12.2.2 Discuss career opportunities in coding.

GLO 12.3: Demonstrate understanding of **working conditions** in interactive digital media.

SLO 11C.12.3.1 Discuss the working conditions related to different occupations in interactive digital media.

Goal 13: Demonstrate awareness of the **evolution, technological progression, and emerging trends** in interactive digital media.

GLO 13.1: Describe the **history, technological progression**, and **emerging trends** in interactive digital media.

SLO 11C.13.1.1 Discuss the history, technological progression, and emerging trends in interactive digital media.