

COURSE NAME: CIS373 Intro to Game Programming

Credit Value: 4
Total Course Hours: 56
Prerequisite Course(s): CIS 325
Corequisite Course(s): none

COURSE DESCRIPTION

High performance programs that make extensive real-time use of multimedia capabilities, such as simulators and modern computer games, are among the most demanding programs to write. This intensive programming subject explores the issues and techniques of combining responsive animation and sound with analog user input, using current personal computer technology.

LAND ACKNOWLEDGEMENT

Canadore College resides on the traditional territory of the Anishinaabeg and within lands protected by the Robinson Huron Treaty of 1850. This land is occupied by the people of Nipissing First Nation since time immemorial.

PLAR INFORMATION

This course is eligible for Prior Learning Assessment and Recognition. Students are advised to discuss options with their program coordinator.

COURSE LEARNING OUTCOMES

Upon completion of this course, the student will have reliably demonstrated the ability to:

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| 1.0 Discuss and define the terms and principles of game design and development. | 6.3 Gravity |
| 2.0 Practice using different animation production and creation tools. | 6.4 Lighting of sprites |
| 3.0 Select and evaluate programming and type of platform to develop particular games. | 6.5 Use of 3D animators |
| 4.0 Define different duties of the game development team. | |
| 5.0 Discuss and define the main components of a successful game including: | |
| 5.1 Stress achieved through time or possibility of success | |
| 5.2 Music and Sound effects | |
| 5.3 Title screen and main menu | |
| 5.4 Clear intuitive Instructions and main goal | |
| 5.5 Enemies and projectiles | |
| 5.6 Scoring and lives | |
| 5.7 Multiple levels | |
| 6.0 Explore the built in functions of a games engine, such as Unity, to add in realistic features such as: | |
| 6.1 Sound effects | |
| 6.2 Collision Detection | |

GENERAL EDUCATION

This is not a General Education course.

PROGRAM OUTCOMES

This course contributes to the following Ministry of Colleges and Universities approved program learning outcomes (PLO):

Computer Programming and Analysis

1. Identify, analyze, design, develop, implement, verify and document the requirements for a computing environment.
2. Diagnose, troubleshoot, document and monitor technical problems using appropriate methodologies and tools.
3. Analyze, design, implement and maintain secure computing environments.
4. Analyze, develop and maintain robust computing system solutions through validation testing and industry best practices.
5. Communicate and collaborate with team members and stakeholders to ensure effective working relationships.
9. Investigate emerging trends to respond to technical challenges.
10. Gather, analyze and define software system specifications based on functional and non-functional requirements.
11. Design, develop, document, implement, maintain and test software systems by using industry standard software development methodologies based on defined specifications and existing technologies/frameworks.
12. Select and apply object-oriented and other design concepts and principles, as well as business requirements, to the software development process.
14. Integrate network communications into software solutions by adhering to protocol standards.

ESSENTIAL EMPLOYABILITY SKILLS OUTCOMES

This course contributes to the following Ministry of Colleges and Universities approved essential employability skills (EES) outcomes:

3. Execute mathematical operations accurately.
4. Apply a systematic approach to solve problems.
5. Use a variety of thinking skills to anticipate and solve problems.
6. Locate, select, organize, and document information using appropriate technology and information systems.
7. Analyse, evaluate, and apply relevant information from a variety of sources.
10. Manage the use of time and other resources to complete projects.
11. Take responsibility for one's own actions, decisions, and consequences.

EXTERNAL COURSE ACCREDITATIONS AND CONDITIONS

There are no external accreditations or conditions identified for this course.

COURSE EVALUATION

Evaluation Item	Weight
Labs	50%

Assignments	20%
Final Assessment	30%

COURSE PASS GRADE

50

GRADING SYSTEM

A+:	90-100%	B+:	77-79%	C+:	65-69%	D:	50-54%	S - Satisfactory
A:	85-89%	B:	73-76%	C:	60-64%	F:	0-49%	I - Incomplete
A-:	80-84%	B-:	70-72%	D+:	55-59%			F- Repeat Course, included in GPA
								FS- Failure Supplemental
								FR- Repeat course, excluded from GPA

*For a complete chart of grades and descriptions, please see the Grading Policy.

LEARNING RESOURCES

Course Textbooks:

Recommended:

Title: 2D Game Development with Unity
 Author: Franz Lanzinger
 Publisher:
 Edition: 1st
 Print ISBN: 9780367349073
 eBook ISBN:

Specific text will be outlined in the Specific Course Content in each class.

Resources listed on the course outline support the achievement of learning outcomes, and may be used throughout the course to varying degrees depending on the instructor's teaching methodology and the nature of the resource.

Technology requirements - <https://www.canadorecollege.ca/BYOD>

The Harris Learning Library's staff can help you find resources to support your learning - www.eclibrary.ca

LEARNING ACTIVITIES

In Class discussion, labs, assignments, quizzes

DELIVERY MODE

This course may be delivered, in whole or in part, in a number of modalities, including In-Person, Remote (synchronous and/or asynchronous), hybrid, or Hyflex, as per accreditation and/or regulatory standards where appropriate. This information is identified on the course schedule (student and faculty).

RECORDING GUIDELINES

This class may be recorded by faculty of the College. Faculty will inform students when recording of the class commences and ceases. 'Recorded' means that the audio-visual and chat portions of the class will be recorded and then be stored on the College or vendor provider server. They will be made available to students, but only for the express and sole use of those registered in this course. If you have any questions or concerns about this recording, please contact your instructor or the College's privacy officer at privacy.officer@canadorecollege.ca. Full recording guidelines can be found at: <https://cdn.agilitycms.com/canadore-college/academic-centre-of-excellence/Canadore%20Recording%20Guidelines.pdf>

ACADEMIC POLICIES

Canadore College is committed to the highest standards of academic integrity, and expects students to adhere to these standards as part of the learning process in all environments. The College's Academic Integrity policy seeks to ensure that all students understand their rights and responsibilities in upholding academic integrity and that students receive an accurate and fair assessment of their work. Please review the Academic Integrity policy (A-18) and other academic policies found on our website: <https://www.canadorecollege.ca/about/policies>.

COLLEGE POLICIES

- Protecting human rights in support of a respectful college community

For college policies please see: <http://www.canadorecollege.ca/about-us/college-policies>.

Accessibility Learning Services for Students with Disabilities - Student Success Services

Student Success Services provides comprehensive support to students. We aim to ensure that all students have equal access to educational opportunities and can succeed in their academic journey. Our services focus on reducing and eliminating barriers related to education through individualized accommodations and support. If you are a student with a disability, we encourage you to register with Accessible Learning by completing the Student Success – Accessible Learning Services Form (https://canadorecollege-accommodate.symphlicity.com/public_accommodation/).

For more detailed information about the services offered, please visit our webpage: Student Success Services - (<https://www.canadorecollege.ca/support/student-success-services>). To connect with Student Success Services email studentsuccessnow@canadorecollege.ca or call 705.474.7600 ext 5205.

FIRST PEOPLES' CENTRE:

A culturally safe environment offering CONFIDENTIAL student focused services, drop in or make an appointment to access:

- One on one counselling
- Elder in residence program
- Peer tutoring
- Peer mentorship
- Lunch & learn workshops on study skills, self-care, life skills
- Learning Resource Centre

Drop by our offices at C254 College Drive, W103 Commerce Court or call 705 474 7600 Ext. 5961 College Drive / 5647 Commerce Court.

<https://www.canadorecollege.ca/experience/indigenous-student-experience>

WAIVER OF RESPONSIBILITY

Every attempt is made to ensure the accuracy of this information as of the date of publication. The college reserves the right to modify, change, add, or delete content.

HISTORICAL COURSE OUTLINES

Students use course outlines to support their learning. Students are responsible for retaining course outlines for future use in applications for transfer of credit to other educational institutions.