COMP 4900M (Fall, 2026)

Games for Social Good

Instructor: Edward Melcer
Class location: Please check Carleton Central for the room location.
Email: edwardmelcer@cunet.carleton.ca
Office location: Herzberg Building, Room 5356
Best ways to be in touch: In class, via Discord, via email, or during office hours.
Teaching Assistant: A list of teaching assistants and their contact/office hours information will be posted once the course starts.
Lecture times: Wednesdays and Fridays, 11:35 am - 12:55 pm
Course website: https://brightspace.carleton.ca/d2l/home/453109

Important dates and deadlines can be found here: Dates, Deadlines, and Regulations—Registrar's Office, including class suspension for fall, winter breaks, and statutory holidays.

Copyright

Course materials (including this course outline and any slides, posted notes, videos, projects, assignments, and so forth) created for this course and posted on Brightspace, Discord, or Slack are intended for personal use and may not be reproduced, redistributed, given to or used with AI, or posted on any web site without prior written permission from the instructor.

Course Calendar Description

Selected Topics in CS: Games for Social Good

This course provides an overview of games and their applications in health, education, and training. Through relevant readings and the creation of prototypes, the course will focus on giving students a practical guide to the process of conceptualizing, designing, and developing games for addressing social good. Topics include an introduction to serious games, history of games for social good, rapid prototyping and playtesting, design analysis frameworks, design thinking, root cause analysis, theory of change, gamification techniques, and game evaluation techniques.

Learning Material(s) and Other Course/Lab-Related Resources

Students are not required to purchase textbooks or other learning materials for this course.

Welcome

I am excited to welcome you to COMP 4900M: Games for Social Good. In this class, we will explore the foundations of games for social good from concept generation to design and development. For this class, you will learn a variety of exciting topics that will empower you to create games that can enact meaningful change for individuals and communities, as well as create valuable samples for your portfolios. By taking

this course, you will also develop the skills and knowledge to communicate effectively within game development teams, as well as research and rapidly prototype game ideas to address issues within the domains of education, health, and social good.

I also welcome you to contact me outside of class and during office hours. You are always welcome to message me on Discord, email me, stop by my office, or catch me in the hallway between classes. My door is open, and I encourage you to reach out with questions, ideas, enthusiasm, concerns, or anything else that would help you get the most out of the course. I look forward to working with you this term!

Learning Outcomes

The objective of this course is to give students a practical understanding of the scope of games for social good, their designs, and techniques to create them effectively. Students will apply these techniques through the creation of multiple serious game prototypes.

By the end of the course, students will be able to:

- Understand the various forms of games for social good.
- Utilize the game creation process to address a goal beyond entertainment.
- Rapidly prototype and work against deadlines.
- Analyze and assess the efficacy of games for social good.

Topics Covered

The list of readings for each assignment and their corresponding PDFs are available on Brightspace.

Week	Class	Topic/Content	Assignments
1	Sep 9	Introduction to Serious Games	Serious Game Analysis I (Due Sep 16)
	Sep 11	Game Design Recap	
2	Sep 16	Serious Game Analysis Techniques	Serious Game Analysis II (Due Sep 23)
	Sep 18	History and Business of Serious Games	
3	Sep 23	Root Cause Analysis	Randomized Serious Game Brainstorm (Due Sep 30)
	Sep 25	Design Thinking and Brainstorming Techniques	
4	Sep 30	Introduction to Games with an Agenda	Agenda Game Analog Prototype and Postmortem Report (Due Oct 14)
	Oct 2	Procedural Rhetoric	
5	Oct 7	Analog Prototype Playtest	
	Oct 9	Theory of Change	
6	Oct 14	Final Analog Prototype Playtest	Game for Social Good Pitch (Due Nov 6)
	Oct 16	Introduction to Educational Games	
7	Oct 21	Design Patterns and Learning Mechanics	

	Oct 23	Gamification	
8	Oct 28/30	Fall Break – No Class	
9	Nov 4	**Midterm Examination**	
	Nov 6	Game for Social Good Pitches	Game for Social Good Evaluation Prototype (Due Dec 2) Game for Social Good Prototype (Due Dec 9) Game for Social Good Postmortem Report (Due Dec 11)
10	Nov 11	Evaluation of Serious Games	
	Nov 13	Introduction to Games for Health	
11	Nov 18	Accessibility in Game Design	
	Nov 20	Final Project Playtest	
12	Nov 25	AR, VR, MR, and XR for Serious Games	
	Nov 27	Showcasing Your Games for Social Good	
13	Dec 2	Final Project Evaluation Session	
	Dec 4	Class Requested Topic OR Final Project Work Session	
14	Dec 9	Final Project Presentations	

Assessment Scheme

Grade Breakdown

COMPONENT	GRADE VALUE	DATE
Attendance, Participation, and In-Class Activities	15 %	N/A
Assignment 1	5 %	Sep 16
Assignment 2	5 %	Sep 23
Assignment 3	5 %	Sep 30
Assignment 4	5 %	Nov 6
Project 1	15 %	Oct 14
Midterm	20 %	Oct 23
Final Project Evaluation Prototype	5 %	Dec 2
Final Project Prototype & Report	25 %	Dec 9 & Dec 11

Assessments

- **Attendance, Participation, and In-Class Activities** – Attending each class as well as participating in class discussions and activities. Each in-class activity is designed to build upon

what was taught earlier in that class by providing a more concrete/creative context to apply new knowledge.

- **Homework Assignments** – Each of the four homework assignments is designed to provide additional practice outside of class that reinforces knowledge, skills, and design thinking learned from previous weeks. Homework will focus more heavily on the development of design skills through practice. Individual homework assignments and objectives will be posted once the course starts.
- **Projects and Postmortems** – Each project focuses on allowing students to think more broadly about how the various design skills and other techniques they learned throughout the course can be utilized to create games for social good that address a specific characterizing goal. Students will apply this knowledge in the creation of a functional game prototype and postmortem detailing the game design, insights gained from playtesting, and revisions made to address those insights. There will be 1 smaller midterm project followed by a larger final project during the course. **Individual failure to contribute to team development of prototypes will result in a zero grade on that project for that individual.**
- **Midterm** – The midterm gives students the opportunity to demonstrate their knowledge of games for social good design concepts.
    - **The midterm will take place in class during class time and will be closed book and closed notes.**
    - **You have one week after the midterm grade is posted to contact your instructor before all grades are final.**

Exams, Sources, Plagiarism, and Use of AI

Exams. All quizzes, tests and exams are expected to be completed individually, and without electronic aid; any communication or access of electronic devices (e.g. cellphones) during the test will be considered cheating. Use of Smart Glasses (or other similar assistive technologies) before or during a test is strictly prohibited and is considered an academic integrity violation. Even if you have prescription glasses with assistive technologies, you will not be allowed to use them during the test, so please make sure that you have acceptable prescription glasses. The proctor has the right to ask to inspect your glasses before or during the test. In addition, unless authorized with PMC accommodations, you are NOT allowed to use headphones nor ear buds during a test. Also, during a test, if you choose to wear a baseball cap, sunglasses or anything else that would prevent a proctor from monitoring where your eyes are focused during the test, you will likely be asked by a proctor to move to a different seat. Lastly, you must submit your test before leaving the classroom or it won't be graded.

Sources and references. You should use appropriate sources to support your work, including academic papers, books, websites, documentation, tutorials, and other online resources. Any ideas, arguments, wording, images, code, designs, or other material that comes from another source must be appropriately acknowledged and cited. Simply changing the wording of a source does not make it your own work. When in doubt about whether something should be cited, please ask.

Plagiarism. Plagiarism includes presenting another person's words, ideas, arguments, research, designs, code, or other intellectual work as your own without appropriate acknowledgement. This includes copying text without citation, closely paraphrasing a source without citation, submitting another person's work as your own, and presenting substantially AI-generated material as your own work. Plagiarism can occur even when material is obtained from publicly available websites, online tutorials, or other freely accessible resources.

Use of generative AI. Generative AI tools may be used in this course for limited proofreading, grammar checking, and coding support. For example, you may use an AI tool to identify spelling, punctuation, or grammatical errors in writing that you have produced yourself. **AI tools may not be used to generate, rewrite, summarize, translate, substantially edit, or develop the content for the written portion of an assignment.** In particular, do not use AI to generate arguments, literature reviews, slide content, postmortems/write-ups, or other substantive assignment content. You are responsible for ensuring that all submitted work accurately represents your own thinking and work.

If you are unsure whether a particular use of a source or AI tool is permitted, please ask before submitting the work.

Grading

In accordance with Carleton University Calendar Regulations, the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100	A = 85-89	A- = 80-84
B+ = 77-79	B = 73-76	B- = 70-72
C+ = 67-69	C = 63-66	C- = 60-62
D+ = 57-59	D = 53-56	D- = 50-52
F = <50		

WDN = Withdrawn from the course; DEF = Deferred; FND = (Failed, no Deferred)

Late and Missed Work Policies

Attendance

Attendance is a core component of the class and required to effectively contribute to team projects and assess student competency. **Students will lose 1 full letter grade for every 5 unexcused absences from class.**

Late Work

Assignments should be submitted by the given due date. You are allowed to submit one late assignment during the semester, as long as it is within one week of the given deadline. There is no need to contact anyone and you will not lose any points. Any subsequent late assignments will lose 10% from the total grade for each day that it is late.

Missed Work

Short-term (5 days or less): If you would like to request a deferral for an assignment/project deadline (apart from the one-time assignment extension available to everyone), please contact your TA and instructor on a single email and fill in the academic considerations form no later than three working days after the work was due. You will then be informed about the next steps.

Midterm: If you are sick or have personal circumstances (e.g., death in the family) that prevents you from doing the Midterm, you will also need to fill in the academic considerations form. If you do not have a valid excuse for missing the Midterm, your grade of zero will be kept.

Long-term (> 5 days): If you are experiencing chronic, ongoing challenges, please follow the above steps but fill out the longer-term accommodation form instead. Please also consider reaching out to the Paul Menton Centre and/or the Care Support team.

School of Computer Science Laptop Requirement

Every student that has been enrolled in a 1000-level (i.e., first year) course offered is required to have a laptop. This includes COMP1001, COMP1005, and COMP1006. For more information, please visit https://carleton.ca/scs/scs-laptop-requirement/ and then review the requirements at https://carleton.ca/scs/scs-laptop-requirement/laptop-specs/.

Undergraduate Academic Advisors

The Undergraduate Advisors for the School of Computer Science are available in Room 5302HP; or by email at scs.ug.advisor@cunet.carleton.ca. The undergraduate advisors can assist with information about prerequisites and preclusions, course substitutions/equivalencies, understanding your academic audit and the remaining requirements for graduation. The undergraduate advisors will also refer students to appropriate resources such as the Science Student Success Centre, Learning Support Services and Writing Tutorial Services.

SCS Computer Laboratory

Students taking a COMP course can access the SCS computer labs. The lab schedule and location can be found at: https://carleton.ca/scs/tech-support/computer-laboratories/. All SCS computer lab and technical support information can be found at: https://carleton.ca/scs/tech-support/. Technical support staff may be contacted in-person or virtually, see this page for details: https://carleton.ca/scs/tech-support/contact-it-support/.

Assistance and Resources for Students

Carleton Wellness: https://wellness.carleton.ca/

Career Services: https://carleton.ca/career/

Writing Services: https://carleton.ca/csas/support/

Peer Assisted Study Sessions (PASS): https://carleton.ca/csas/group-support/pass/

Math Tutorial Centre: https://carleton.ca/math/math-tutorial-centre/

Science Student Success Centre: https://sssc.carleton.ca/

Academic Accommodations and Regulations

Academic Accommodation

Carleton is committed to providing academic accessibility for all individuals. You may need special arrangements to meet your academic obligations during the term. The accommodation request processes are outlined on the Academic Accommodations website (https://students.carleton.ca/course-outline/).

Chat GPT/Generative AI Usage

As our understanding of the uses of AI and its relationship to student work and academic Integrity continue to evolve, students are required to discuss their use of AI in any circumstance not described here with the course instructor to ensure it supports the learning goals for the course.

Academic Integrity

Students are expected to uphold the values of academic Integrity, which include fairness, honesty, trust, and responsibility. Examples of actions that compromise these values include but are not limited to plagiarism, accessing unauthorized sites for assignments or tests, unauthorized collaboration on assignments or exams, and using artificial intelligence tools such as ChatGPT when your assessment instructions say it is not permitted.

If you are unsure of the expectations regarding academic Integrity (how to use and cite references, if unauthorized collaboration with lab- or classmates is permitted (and, if so, to what degree), then you must ASK your instructor. Sharing assignments or quiz specifications as well as posting them online to sites like Chegg, CourseHero, OneClass, and so forth is ALWAYS considered academic misconduct.

Misconduct in scholarly activity will not be tolerated and will result in consequences as outlined in Carleton University's Academic Integrity Policy. A list of standard sanctions in the Faculty of Science can be found here.

Additional details about this process can be found on the Faculty of Science Academic Integrity website.

Students are expected to familiarize themselves with and abide by Carleton University's Academic Integrity Policy. Claiming ignorance of or confusion about the academic integrity standards as described in the Policy does not excuse a student from responsibility for violations of those standards."

Student Rights & Responsibilities

Students are expected to act responsibly and engage respectfully with other students and members of the Carleton and the broader community. See the 7 Rights and Responsibilities Policy for details regarding the expectations of non-academic behaviour of students. Those who participate with another student in the commission of an infraction of this Policy will also be held liable for their actions.

Student Concerns

If you have any concerns regarding this course, your first point of contact is me. Please email me or visit during my student hours, and I will do my best to address your concerns. If I cannot resolve the issue, the next point of contact is the School of Computer Science at studentconcerns@scs.carleton.ca. If the concern remains unresolved, the final point of contact is the Office of the Dean of Science at ODScience@carleton.ca. Please follow this order of contact. **Note:** You can also bring your concerns to Ombuds services.

Land acknowledgement

Here at Carleton University, it is important that we acknowledge that the land on which we gather is the traditional and unceded territory of the Algonquin nation.