CS 4483B/9541B - Game Design Course Outline - Winter 2025

1. Course Information

Course Information
CS 4483B/9541B - Game Design

Time/Place
1:30 - 3:30 PM, Tuesdays, [redacted]
1:30 - 2:30 PM, Thursdays, [redacted]

2. Instructor Information

Instructors	Email	Office	Phone	Office Hours
Dr. Umair Rehman (Course Coordinator)	urehman6@uwo.ca	[redacted]	[redacted]	By Appointment

Course Communication Guidelines

Primary Channels for Communication

- Email: Formal communication, such as course updates and assignment submissions, should be conducted via email. Students are required to use their Western (@uwo.ca) email addresses when contacting instructors. This is essential for maintaining a formal and secure line of communication.
- MS Teams: For real-time interactions, queries about course material, and brief updates, MS Teams will be utilized. This platform facilitates more immediate and interactive communication.

Email Etiquette

- Subject Line: When sending an email, students must include the course number followed by a brief description of the email's purpose in the subject line. For example, "CS4483 – Project Query" or "CS4483 – Request for Meeting".
- Instructor Messaging: The instructor's email is integrated into MS Teams, allowing students to message the instructor directly through the platform. This should be used for quick questions or clarifications.

3. Course Description

This course provides a comprehensive introduction to game design theory and practice, covering the essential elements required to create engaging, well-balanced, and player-centered games. Students will explore foundational topics such as game mechanics, gameplay loops, systems design, narrative development, level design, and aesthetics. Through a combination of lectures, collaborative workshops, and iterative prototyping, students will progress from brainstorming and conceptualizing game ideas to building functional prototypes. The course emphasizes playtesting and iteration, teaching students to analyze player feedback, refine their designs, and balance their games for optimal user experience. By integrating storytelling, art direction, sound design, and systems thinking, students will develop a cohesive, playable game prototype that reflects their creative vision and design expertise.

Course Goal

The goal of this course is to enable students to master the fundamental principles of game design and apply them to create engaging, player-centered games. By the end of the course, students will have the practical skills and design mindset to transform ideas into fully realized prototypes while critically evaluating their work through player feedback and design iteration.

Learning Outcomes

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

- Analyze existing games using frameworks like MDA and player types.
- Brainstorm, select, and scope innovative game concepts.
- Design and prototype core mechanics, gameplay loops, and progression systems.
- Create compelling levels, narratives, and world-building elements.
- Develop player-centric systems, balancing challenge, rewards, and flow.
- Apply playtesting methods to refine game mechanics and user experience.
- Integrate art, sound, and visual design principles into their prototypes.
- Showcase their games through polished prototypes and presentations.

4. Course Topics

Week	Topic	Subtopics	Lecture Focus
1	**Introduction to Game Design**	- Game design principles: fun, flow, engagement - MDA framework - Player types (Bartle's taxonomy)	Understanding what makes games engaging and how to analyze them.
2	**Game Ideation & Brainstorming**	- Brainstorming techniques - Identifying themes and goals - Target audience and genre selection	Generating and refining creative game ideas with clear goals.

3	**Core Mechanics & Gameplay Loops**	- Defining core mechanics - Gameplay loops: core and meta loops - Feedback loops	Designing core game systems and understanding short- and long-term loops.
4	**Paper Prototyping & Playtesting**	- Low-fidelity prototyping - Playtesting methods - Feedback collection	How to prototype quickly and gather actionable player feedback.
5	**Level Design & Player Guidance**	- Spatial layout and pacing - Visual cues and navigation - Balancing challenge and exploration	Designing levels that guide the player and maintain flow and challenge.
6	**Narrative Design & World-Building**	- Storytelling in games - World-building and lore - Dialogue systems	Integrating story and characters into gameplay to create immersion.
7	**Systems Design & Game Balance**	- Resource systems: health, energy, currency - Balancing difficulty and risk-reward systems	Understanding game balance and designing resource systems.
8	**Progression Systems & Rewards**	- Player progression: leveling, unlockables - Reward structures: intrinsic vs extrinsic motivation	Designing systems that keep players engaged through progression and rewards.
9	**Art, Aesthetics, and Sound Design**	- Art direction and visual style - UI/UX basics - Sound design and music integration	Enhancing gameplay through visuals, sound, and user-friendly interfaces.
10	**Playtesting & Iteration**	- Playtesting methods: surveys, observations - Analyzing player feedback - Iterative design	Refining the game through repeated testing and balancing.
11	**Polish & Presentation**	- Debugging and refinement - Pitch preparation - Creating a gameplay video	Polishing the final prototype and preparing for the final showcase presentation.

12	**Showcase and Feedback**	- Presenting and critiquing games - Peer evaluation - Reflecting on design process	Sharing completed games, receiving critiques, and reflecting on progress.

5. Course Materials

The following two books are recommended as references for this course and may be available for purchase through the University Bookstore or other sources, such as used book retailers:

- **J. Schell**. *The Art of Game Design*, Third Edition. CRC Press, 2019.
- **E. Adams**. *Fundamentals of Game Design*, Third Edition. New Riders Press, 2013.

Both texts are well-written and provide valuable insights for the course. *The Art of Game Design* by Schell offers engaging and thought-provoking perspectives on game design, while *Fundamentals of Game Design* by Adams aligns more closely with the structure and content of the course.

Lecture Notes and Brightspace

- Lecture materials will be available on Brightspace (Online Web Learning) prior to each class.
- Regular checking of the course site on Brightspace is essential for news and updates. It is the primary method of information dissemination for this course.
- Assistance with the site can be sought on the Brightspace help page or by contacting the Western Technology Services Helpdesk at phone number 519-661-3800 or ext. 83800.

Course Delivery and Format

- The course is planned to be delivered in-person for the entire term, subject to any unforeseen complications.
- Any changes aligning with University guidelines will be communicated through announcements via Brightspace.

6. Methods of Evaluation

Activities (10% of Final Grade):
Students will complete a series of structured activities designed to scaffold the game design process. These include creating a team contract to define roles and expectations, analyzing an existing game using the MDA framework, brainstorming and selecting a game concept, sketching the gameplay loop and core mechanics, creating and testing a paper prototype, designing a level layout, developing story and world-building elements, defining resource and progression systems, creating a style guide, conducting playtests, and presenting the final game. Each activity builds toward the final project deliverable, fostering hands-on learning and iterative development.

Course Project (90% of Final Grade):
The course also requires a 12-week scaffolded project where students progressively design, prototype, and refine a complete game, with weekly activities and clear deliverables. The course culminates in three major deliverables, each building on the work completed in prior weeks.

The journey begins in Week 1 with an introduction to game design principles, the MDA framework, and player types, leading to a presentation analyzing an existing game. In Week 2, students engage in ideation techniques, brainstorming creative game concepts and narrowing their focus to a single idea with clearly defined themes and target audience. By Week 3, students sketch the core mechanics and gameplay loops, providing the foundational systems for their game. In Week 4, they produce a paper prototype and playtest it, gathering actionable feedback for iteration.

In Week 5, the focus shifts to level design, where students define player navigation, spatial layout, and pacing. Week 6 introduces narrative design and world-building, requiring students to create immersive lore and integrate it into gameplay. This progress is consolidated into Deliverable 1: Project Proposal (20%), submitted at the end of Week 6. The proposal includes the problem definition, core mechanics, narrative design, and level sketches.

Building on their proposal, Week 7 explores systems design and game balance, where students integrate resource systems like health, energy, and rewards. Week 8 expands on this with progression systems such as leveling, unlockables, and player rewards. In Week 9, students focus on art, aesthetics, and sound design, producing a style guide with placeholders for visuals and sound effects. These components are combined and tested through extensive playtesting in Week 10, where feedback is used to refine game balance, mechanics, and user experience.

At the end of Week 11, students present their progress in Deliverable 2: Mid-Project Report (30%), which includes updated prototypes, integrated systems, narrative elements, playtesting insights, and a roadmap for final polishing.

In the final stretch, Week 11 focuses on polish and finishing touches, where students refine their game, address any remaining issues, and produce a short gameplay video highlighting key features and core loops. Rather than an in-person public showcase, students submit their final prototype and recorded demonstration, receiving feedback from instructors and peers through online review. This final submission forms Deliverable 3: Final Game Prototype and Showcase Presentation (40%), marking the culmination of all previous design, testing, and iteration efforts.

Three Major Project Deliverables

1. Deliverable 1: Project Proposal (20%) – Due Feb 11 (11:30 PM Brightspace)
2. Deliverable 2: Mid-Project Report (30%) – Due Mar 25 (11:30 PM Brightspace)
3. Deliverable 3: Final Game Prototype and Showcase Presentation (40%) – Due Apr 5 (11:30 PM Brightspace)

7. Student Absences

For 2025–2026, student absences in this course are handled under Western's Academic Consideration process: if a student misses a course component or assessment due to extenuating circumstances, they must submit a request through the Student Absence Portal (with formal supporting documentation). If consideration is granted, the instructor will provide an appropriate accommodation (e.g., make-up, extension, or reweighting) consistent with the course assessments.

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration_Sep24.pdf.

8. Accommodation and Accessibility

Religious Accommodation
When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday to the course instructor and/or the Academic Counselling office of their Faculty of Registration. Please consult University's list of recognized religious holidays (updated annually) at

https://multiculturalcalendar.com/ecal/index.php?s=c-univwo

Accommodation Policies
Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic Accommodation_disabilities.pdf.

9. Academic Policies

The website for Registrarial Services is http://www.registrar.uwo.ca.

In accordance with policy,

https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf,

the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at their official university address is attended to in a timely manner.

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.

All required submissions may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (http://www.turnitin.com).

10. Support Services

Please visit the Science & Basic Medical Sciences Academic Counselling webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters: https://www.uwo.ca/sci/counselling/.

Students who are in emotional/mental distress should refer to Mental Health@Western (https://uwo.ca/health/) for a complete list of options about how to obtain help.

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at

https://www.uwo.ca/health/student_support/survivor_support/get-help.html.

To connect with a case manager or set up an appointment, please contact support@uwo.ca.

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Accessible Education at

http://academicsupport.uwo.ca/accessible_education/index.html

if you have any questions regarding accommodations.

Learning-skills counsellors at the Student Development Centre (https://learning.uwo.ca) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Western University is committed to a thriving campus as we deliver our courses in the mixed model of both virtual and face-to-face formats. We encourage you to check out the Digital Student Experience website to manage your academics and well-being: https://www.uwo.ca/se/digital/.

Additional student-run support services are offered by the USC, https://westernusc.ca/services/.