CSC404: Video Game Design

Course topics include: game history & genres, “ludology” (theory of fun, story creation, optimal experience), character & level design, industry tools & processes, graphics & animation, modelling techniques, collision detection, visual effects, scripting (passive & active), HCI & interface design, verification & playtesting, business of gaming. Material & projects based on real-world processes.

Instructor Information

<table>
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<tr>
<th>Name</th>
<th>Email</th>
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<tbody>
<tr>
<td>Elias Adum</td>
<td><a href="mailto:elias@cs.toronto.edu">elias@cs.toronto.edu</a> (put “CSC404” in the subject)</td>
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Class Information

- **Lecture:** Wednesday 6:00 PM – 8:00 PM (SF3201)
- **Tutorial:** Wednesday 8:00 PM – 9:00 PM (SF3201)
- **Office hours:** Wednesday 5:00 PM – 6:00 PM or by appointment (BA2283 / Discord)

Course Materials

- **Web Page:** Quercus (Discord for presentations, itch.io for submissions)
- **TA Contact:** csc404ta@cs.toronto.edu
- **Engine:** Recommended engines are: Unity and Unreal.
- **Discord:** https://discord.gg/WEsdsZWnjD

Course Schedule

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<tr>
<th>Week of</th>
<th>Topics</th>
<th>Milestone(s)</th>
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<tr>
<td>Sep 14</td>
<td>Course Intro, Ludology Part 1, Game Mechanics</td>
<td>Game Jam Assignment 1</td>
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<tr>
<td>Sep 21</td>
<td>Ludology Part 2, Pitching, Unity Tutorial</td>
<td>Game Jam Assignment 2 &amp; Game Ideas</td>
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<td>Sep 28</td>
<td><strong>In Class (Online) Pitch Presentation</strong></td>
<td><strong>Milestone 1: Pitch &amp; Creative Brief</strong></td>
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<td>Oct 05</td>
<td>Design Docs, Character &amp; Level Design</td>
<td><strong>Tech Demo</strong></td>
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<td>Oct 12</td>
<td><strong>In Class (Online) Design Document Presentation</strong></td>
<td><strong>Milestone 2: Design Document</strong></td>
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<td>Oct 19</td>
<td>Prototyping, Playtesting &amp; Project Management</td>
<td><strong>Tutorial Level</strong></td>
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<td>Oct 26</td>
<td>UI/UX for Games</td>
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<td>Nov 02</td>
<td><strong>In Class (Online) Alpha Presentation</strong></td>
<td><strong>Milestone 3: Alpha</strong></td>
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<td>Nov 09</td>
<td><strong>Reading Week</strong></td>
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<td>Nov 16</td>
<td>AI for Games, Business of Games</td>
<td><strong>Updated Game Demo</strong></td>
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<td>Nov 23</td>
<td><strong>In Class (Online) Beta Presentation</strong></td>
<td><strong>Milestone 4: Beta &amp; Playtesting Report</strong></td>
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<tr>
<td>Nov 30</td>
<td>Mobile Game Design, Production &amp; Publishing</td>
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<tr>
<td>Dec 07</td>
<td><strong>In Class (Online) Final Presentation</strong></td>
<td><strong>Milestone 5: Final Builds, Itch.io page, Dev Logs, Trailer, Peer Evaluations</strong></td>
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## Course Deliverables

**Note:** For all presentation milestones, groups must provide feedback when not presenting.

### Game Jam Assignments 10% (5% each)
- One-day online hackathon events held at UofT.

### Game Brainstorming 3%
- Submitting ideas for potential games for the project.

### Milestone #1: Game Pitch & Creative Brief 5% & 2%
- Present main game idea and how it targets the theme and the audience.
- Describe game mechanics, secret ingredients, and what a completed final product will look like.
- Include: mock-ups, mood boards, sketches, game inspirations, etc.
- **Submit:** Creative brief document.

### Milestone #2: Design Document & Prototype 5% & 5%
- Present all pre-coding design details of the final game.
- Include: mock-ups, storyboards, mood boards, sketches, data models, etc.
- Also include technology proof-of-concept (presentation), and task breakdown (document)
- **Submit:** Design document

### Milestone #3: Game Alpha 5%
- In-class demo of playable prototype.
- Describe plans for upcoming sprints, and goals for final product.
- Include: Assets and animations for the main characters, at least one fully playable level, music & SFX.
- **Submit:** Link to development repository, Alpha builds on the itch.io page.

### Milestone #4: Beta Release & Playtesting Report 5% & 5%
- In-class demo of completed product, and playtesting results.
- Produce tutorial, with descriptions of gameplay and controls.
- **Submit:** Playtesting Report, Beta builds on the itch.io page.

### Milestone #5: Playtesting Demo & Final Items 15% & 5%
- Testing & evaluation by industry professionals
- Final reflections on development process and final product.
- Include: Finalized tutorial, finalized game assets, finalized gameplay features, and all levels.
- **Submit:** Finalized itch.io page, Final Game Builds, Video Trailer, Peer Evaluations.

### Tech Demo, Tutorial Level, Updated Game Demo 15% (5% each)
- Progress checks to demonstrate current state of the game.

### Itch.io Page 10%
- A development journal, outlining your group’s weekly progress, challenges, and setbacks.

### Participation 10%
- Participating in online classes, online presentations, online discussions, providing feedback to other groups, etc.

This course, including your participation, might be recorded on video and will be available to students in the course for viewing remotely and after each session. Course videos and materials belong to your instructor, the University, and/or other source depending on the specific facts of each situation and are protected by copyright. In this course, you are permitted to download session videos and materials for your own academic use, but you should not copy, share, or use them for any other purpose without the explicit permission of the instructor. For questions about recording and use of videos in which you appear please contact your instructor.