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MART 460.01: Game Design Engines

Michael D. Cassens

University of Montana, Missoula, michael.cassens@umontana.edu

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Game Design/Programming MART 460 Syllabus Fall 2022

MART 460 Section 1

Instructor: Michael Cassens

Office: McGill 230

Office Hours: M 9:00 am -10:00 am, 12:00-1:00 pm, W 12:00-1:00 pm or by appt

Phone: (415) 787-0577

Email: michael.cassens@mso.umt.edu

Discord: <https://discord.gg/4yZBu2rbdk>

<https://calendly.com/michael-cassens/460-meeting>

URL: <http://umonline.umt.edu/>

Overview:

This class covers several topics in game design and programming.

Upon completing this course, a student will be able to:

Explain the fundamental concepts that are essential to game development, including but not limited to:

- Leverage game design techniques to implement a project
- Integrate specific gaming platforms
- Work with a diverse project team
- Implement a game
- Generate and apply test plans for a game
- Prepare to deploy a game to the store

Attendance:

This course meets two times a week – Mondays and Wednesdays from 10:00 am – 11:20 am and the **Zoom** link is:

<https://umontana.zoom.us/j/99784578122?pwd=eENTOG5BamxDK1g2TlhYVlFrdStNQT09>

You are required to attend all class sessions. If you must miss, it is your responsibility to get the assignments from classmates or me. Occasionally, I need to travel out of town, and on those days, we will have a guest lecture, or we will have class entirely online, or I will offer an alternate time to meet. Class time consists of using a seminar-style format and a presentation format. This time will significantly benefit your overall knowledge and understanding and help you complete the assignments.

Grading:

Homework and Labs 60%

Final Project 40% **Due Friday Due 16th, 2022, 11:59 PM**

Submit all assignments through Moodle assignments. If you have trouble with your submission, please send them to

michael.cassens@mso.umt.edu

Your subject must be MART 460 Assignment # (e.g., MART 460 Assignment 1)

**Please zip all your files and label your file:
"MART460LastNameAssignment1.zip"**

Grading Scale

100-93	A
93-90	A-
89-87	B+
86-84	B
83-80	B-
79-77	C+
76-74	C
73-70	C-
69-67	D+
66-64	D
63-60	D-
59-below	F

P/NP – pass/no pass, 70 or higher is passing determined by the School of Media Arts policy, which is a C or better.

Late Assignments:

- Late assignments will not be accepted. Sorry for the inconvenience.

Requirements

- Suggested Texts:
 - **Game Development Principles – Alan Thorn (if possible)**
 - **Fundamentals of Game Development – Heather Maxwell Chandler**
 - **Unity in Action: Multiplatform game development in C# 3rd Edition**

Suggestions:

- It will be beneficial to read your specific text and ask as many questions as you can.
- Feel free to set up an appointment if you need help. I am here to help you understand and do well.

Collaboration:

- I encourage you all to work together through problems – make sure you comment who you worked with at the top of the page but copying and plagiarism will not be tolerated. If you are caught cheating, I will give you an F for the course.
- Please refer to the Student Conduct Code in how this will be dealt with: <https://www.umt.edu/student-affairs/community-standards/student-code-of-conduct-2021-pdf>

Incompletes:

"Incomplete for the course is not an option to be exercised at the discretion of students. In all cases it is given at the discretion of the instructor...." Some guidelines for receiving an incomplete are listed in the catalog which include having **a passing grade up to three weeks before the end of the semester** and being in attendance. **"Negligence and indifference are not acceptable reasons."** Also note that there may be financial aid implications.

Late Drops:

The University's policy on drops after **45** days of instruction is very specific. The School of Visual and Media Arts follows this policy rigorously. There are five circumstances under which a late drop might be approved: registration errors, accident or illness, family emergency, change in work schedule, no assessment of performance in class after this deadline. Except in very unusual circumstances, I will only approve late drops if there is documented justification for one of these circumstances.

Land Acknowledgement:

The Séliš-Qłispé Cultural Committee created the following language, *"The University of Montana acknowledges that we are in the aboriginal territories of the Salish and Kalispel people. Today, we honor the path they have always shown us in caring for this place for the generations to come."*

Inclusion Policies:

The University of Montana values leadership, engagement, diversity, and sustainability, because our institution is committed to respect, welcome, encourage, and celebrate the differences among us. As members of the University of Montana community, we aspire to:

- Respect the dignity and rights of all persons.
- Practice honesty, trustworthiness, and academic integrity.
- Promote justice, learning, individual success, and service.
- Act as good stewards of institutional resources.
- Respect the natural environment.

The College of the Arts and Media at the University of Montana, has chosen to actively pursue equity and access for all persons. In this charge we will be

researching, planning, and implementing ways in which our culture can be more accessible, inclusive, equitable, sustainable. It is not enough to be anti-bias in principle without being equitable in action. We will implement these actions organized by a group of students, faculty, and staff across the entire College in an ongoing way.

Student Support Resources

Academic Misconduct and the Student Conduct Code

"This Code of Conduct embodies and promotes honesty, integrity, accountability, and duties associated with citizenship as a student in our community at the University of Montana. This Code exists to protect the interests of the community and dignity of its members, and to challenge those behaviors which are not in accordance with our policies". The Code is available for review online at <https://www.umt.edu/student-affairs/community-standards/student-code-of-conduct-2021-pdf>

Accommodations

"Students with disabilities may request reasonable modifications by contacting the DSS office. The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students (DSS). For more information, please consult <http://www.umt.edu/disability>. "

The Writing and Public Speaking Center provides one-on-one tutoring to students at all levels and at any time in the writing process. Visit now. Visit often. We're ready when you are. www.umt.edu/writingcenter.

Mental Health and Wellbeing Policy: The University of Montana is committed to advancing the mental health and wellbeing of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. For help, visit <https://www.umt.edu/diversity/resources/mental-health.php>

Stay connected:

Please join SVMA social media to stay informed about events and happenings in our school.

- Instagram: https://www.instagram.com/umt_svma/
- Facebook: <https://www.facebook.com/UMTsvma>

Class Etiquette:

- Be respectful of your classmates.
- Call me anytime if you have a question.
- Profanity and Obscenity will not be tolerated in class or assignments.

Special Dates:

- Aug 29th, 2022 – First Day of Class

- Sept 5th, 2022 – Labor Day
- Nov 8th, 2022 – Election Day
- Nov 11th, 2022 – Veteran’s Day
- Nov 23rd – Nov 25th – Fall Break
- Dec 9th, 2022 – Last Day of Class
- Dec 12th – Dec 16th, 2022 – Finals Week
- **Final Project Turn In: Dec 16th, 2022, 11:59 pm**

Tentative Schedule:

Week 1 Syllabus Introduction, Group Formation – Get the Environment Installed
 Week 2 Roles on the Team, Game, and Game Design – Unity Playground
 Week 3 Effective Communication – Apply scripts to a new project
 Week 4 Game Software Development – GDD, Creator Kit-RPG
 Week 5 Game Programming – Unity 2D Game Kit
 Week 6 Ruby’s Adventure 2D
 Week 7 Ruby’s Adventure 2D
 Week 8 Presentations
 Week 9 Unity 3D Game Kit
 Week 10 Introduction to Unreal Game Engine
 Week 11 3D Game Dev
 Week 12 3D Game Dev
 Week 13 – Trailers/Fall Break
 Week 14 Work on Projects
 Week 15 Presentations
 Week 16 Turn in the final project

Project Assignment:

- Week 2 – Milestone 1 due (Project Idea)
- Week 4 – Milestone 2 due (Specifications, Proof of Concept submission)
- Week 6 – Milestone 3 due (Design)
- Week 8 – Presentation I
- Week 11 – Milestone 4 due (Progress Report on Implementation, Turn in working version)
- Week 15 – Presentation II
- Week 16 – Final Projects turn in: **Dec 16th, 2022 11:59 pm**