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CSCI 391.03: ST - Game Design/Programming

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Game/Design Programming MART 391 Syllabus Spring 2019

MART 391 Section 1
Instructor: Michael Cassens
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Office Hours: M 1:00-2:00 pm, TR 12-2 or by appt
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You can contact me via TeamViewer or Zoom

Overview:

This class is designed to cover a number of topics in game and mobile application programming.

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

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

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

Attendance:

This course meets two times a week – Tuesdays and Thursdays from 10:30 am – 12:00 pm in McGill 126. You are required to attend all class sessions. If you must miss, it is your responsibility to get the assignments from classmates or from me. Occasionally, I need to travel out of town and on those days, we will have a guest lecture or we will have class via Moodle. Class time consists of using a seminar style format and a presentation format. This time will greatly benefit your overall knowledge and understanding and help you complete the assignments.

Computer Science Increment:

Computer Science students are required to complete not only programmatic aspects of the primary game project, but also generate an extra project not regularly required for the course. Include a description and overview of the project during the final presentation.

Examples of this project could include:

- A secondary (smaller) game developed on a secondary independent game engine
- A mini-game used as a advertisement for the main game
- Microtransactions in the main game

Grading:

Homework and Labs 50%
Final Project 50%

All Assignments will be submitted through Moodle assignments. If you have trouble with your submission, please send them to

michael.cassens@mso.umt.edu

Your subject must be MART 391 (or CSCI 391) Assignment # (e.g MART 391 or CSCI 391 Assignment 1)

Please zip all your files and label your file:
"MART391LastNameAssignment1.zip"
Grading Scale

100-90 A, A-	79-70 C+, C, C-	59-and beyond F
89-80 B+, B, B-	69-60 D+, D, D-	

P/NP – pass/no pass, 70 or greater is passing determined by Computer Science Department policy, which is a C or better.

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

Requirements
- Required Texts:
  - **Game Development Principles – Alan Thorn (if possible)**
- Suggested Texts:
  - **Fundamentals of Game Development – Heather Maxwell Chandler**
  - **Android Programming: The Big Nerd Ranch Guide (3rd Edition)**
  - **iOS 11 Programming Fundamentals with Swift: Swift, Xcode, and Cocoa Basics**
  - **Pro HTML5 Games: Learn to Build your Own Games using HTML5 and JavaScript 2nd ed. Edition**
  - **LÖVE for Lua Game Programming**

- **Unity in Action: Multiplatform game development in C# 2nd Edition**

- **Corona SDK Mobile Game Development Beginners Guide - Second Edition**

- Computer Science Students: You must have taken at least **Data Structures** and **Software Engineering** or consent of instructor.

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, 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: http://life.umt.edu/vpsa/student_conduct.php

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. Please refer to the Registrar's office for more details. The Computer Science Department 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.

Disabilities:

Students with disabilities should notify the instructor at the beginning of the course. Disabilities should be "certified" by DSS.

Class Etiquette:
- Be respectful of your fellow classmates.
- Call me anytime if you have a question.

- Profanity and Obscenity will not be tolerated in class or assignments.

Special Dates:

- Jan 10, 2019 Classes Begin
- Jan 21, 2019 – Martin Luther King, Jr. Day – No class
- Jan 29, 2019 Out of town – class online
- Feb 18, 2019 – President's day – No class
- March 25-29, 2019 Spring Break – No class
- April 26, 2019 Last Day of class
- **Final Project Turn In: May 1st, 2019 11:55 pm**

Tentative Schedule:

Week 1 Syllabus Introduction, Group Formation
Week 2 Roles on the Team, Game and Game Design
Week 3 Effective Communication
Week 4 Game Software Development
Week 5 Game Programming
Week 6 Game Math
Week 7 Graphics, Pixels, and Color
Week 8 Presentations
Week 9 Meshes, Rigging and Animation
Week 10 Lighting and Rendering
Week 11 Sound and Music
Week 12 Spring Break
Week 13 Special Effects and Post-Processing
Week 14 Distribution, Publishing and Marketing
Week 15 Presentations
Week 16 Finals – Turn in 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 12 - Milestone 5 due (Progress Report on Implement, Testing)
- Week 15 – Presentation II
- Week 16 – Final Projects turn in: **May 1st, 2019 11:55 PM**