GIMM 110 "INTERACTIVE PROGRAMMING"

1. STUFF YOU NEED TO KNOW IN CASE YOU HAVE A PROBLEM

- ☐ **Who is teaching this course?** Professor Anthony Ellertson & this class will be synchronous—meaning we will meet online during the regular class time for lectures and exercises
- ☐ **Where is Ellertson's Office?** GIMM Lab—Small Studio **Now mostly online**
- ☐ **Ok, so when is he there?** Fridays from 11 to 2 PM on Zoom (otherwise by appointment)
- ☐ **What is the easiest way to get ahold of him?** anthonyellertson@boisestate.edu (email is always best)
- ☐ **Who else is going to help me in this class?** Peer Mentors are waiting to help you on Fridays during open lab hours (Friday 11-4–Ellertson is available most Fridays too).
- ☐ **So when are they around?** In the pandemic we will be available to you via Zoom links which Prof. Ellertson will make available in class.

2. WHAT IS THIS COURSE ALL ABOUT?

"Interactive Programming" will examine the convergence of media into rich interactive environments and study how these environments are tied together by coding practices. Students will learn the basics of procedural programming, Object Oriented practices and OOP design theory. Students will create a series of small projects involving media and game design as they learn concepts of programming. By the end of the course, students will demonstrate their grasp of programing concepts by creating an interactive media/game final project demonstrating skills learned over the course of the semester. "Interactive Programming" is designed to help students refine critical thinking and programming skills in the context of media and network culture. Since this class is primarily a workshop course, many of the in-class activities will be done in small groups. Students will work closely with their peers through each step of the programming process.

By the end of this course you will:

1. Have an understanding of programming practices
2. Be introduced to the practice & theory of Object-Oriented Programming
3. Have a basic understanding of Programming Design patterns and their uses
4. Have a basic understanding of the frameworks necessary to create interactive experiences
5. Have a basic introduction to concepts in game physics

Ok, so what else to do I need for this course?

Our texts are: Julie McGonigal's **Reality is Broken** and Lave & Wenger's Situated Learning. We will have some supplementary stuff too that Ellertson will provide. You will need to have your textbooks by the third week of class—so get the Kindle editions.

You also need:

1. One set of good headphones (preferably USB headphones with a microphone)
2. One 500 GB Hard Drive
3. Adobe Creative Cloud for Students (not necessary but highly recommended)
4. A high performance machine—laptop is best (not necessary but highly recommended)

What are we doing & how am I graded?

Assignments:

Class Participation: 5 (points)
Portfolio Artifact: 5
Discussion Questions/Reaction Papers: 10
In Class Work Problems/Quizzes: 5
Individual Game Storyboard: 25
Final Game Project: 50

Grading:

92-100 = A
90-92 = A-
87-89 = B+
83-86 = B
80-82 = B-
77-79 = C+
74-76 = C
70-73 = C-
67-69 = D+
64-66 = D
60-63 = D-
60< = F **Total 100 points**

Daily Assignments:

Daily work consists of **unannounced reading quizzes**, short in-class assignments, and leading group discussions. Daily assignments do not appear on the syllabus and will be announced in class. Daily assignments cannot be made up if you have missed class without making prior arrangements with me or having a doctor's excuse. All reading assignments should be done before class.

Major Assignments:

All major assignments must be turned in during class on their respective due dates. The only exceptions for not handing in an assignment are a written excuse from your doctor or advisor. You will automatically lose one letter grade on the assignment if it is not turned in on the day that it is due. **No late assignments will be accepted after five days past the due date**. All papers written for class need to be typed and should follow MLA guidelines (double spaced with one inch paper margins, citations, and works cited page).

3. CLASS POLICIES

Late policy:
All assignments are due at the beginning of class. Daily assignments cannot be made up or handed in late; therefore, repeated absences and/or tardiness will affect your final grade.

Participation:
As an involved participant in "Interactive Programming" **you will be evaluated on your ability to ask insightful questions and stimulate critical discussion in your groups.**

Plagiarism
Plagiarism is the act of using another person's thoughts, writings, or creative inventions as if they were your own. **Plagiarism is an act of dishonesty, and if you plagiarize an entire assignment or part of an assignment, you will be given a failing grade for the course and reported to the appropriate university officials as necessary.**

Attendance:
Attendance and participation in class is mandatory and all assignments must be completed to pass the course. **If you miss one class (or are more than 20 minutes late) without an excuse I will dock your final grade by one letter grade. If you miss two classes unexcused, or are repeatedly arriving late or leaving early you will fail the course.** Contact me in advance **via email** if you are unable to come to the class Zoom session. You are allowed no more than one excused absence during the course. **Remember, two or more absences will automatically result in a failing grade for the course.**

Students with Disabilities:
Any students with disabilities who need accommodations in this course are encouraged to speak with the instructor as soon as possible to make appropriate arrangements for these accommodations.

Syllabus is subject to change at any time per the instructor's discretion!!

4. WEEKLY BREAKDOWN. **PLEASE NOTE THIS SYLLABUS GOES FOR ALL 4 SECTIONS**

Week 1 (Starting August 24th)

Course introduction, policies, and introduction to the field of interactive programming inside GIMM

Week 2 (Starting August 31)

Assigned Readings & 3 Discussion Questions due (look at Blackboard for links)

1. Wired: The Web is Dead
2. Why are Web Apps So Slow
3. Smart Phones: The Silent Killer of the Web as you Know It
4. Apple, Adobe and Augmented Reality

Activities:

1. Lecture on the state of interface, game, and mobile design.
2. Discussion of Class Readings
3. Assignment of Game Storyboard & Final Game Project

Introduction of programming topics:

1. Basic Javascript Part One
2. Working with Functions Conditional Statements & Loops
3. Working with Advanced Animation Techniques

Week 3 (Starting Sept 7)

Assigned Reading & 3 Discussion Questions are due:

1. Introduction and first half of Reality is Broken

Activities:

1. Lecture on Reading Javascript
2. Work on Coding problems with Variables

Introduction of programming topics:

1. Basic Javascript Part Two
2. Advanced Animation Techniques

Week 4 (Starting Sept 14)

Assigned Reading & 3 Discussion Questions due:

1. Second half of Reality is Broken

Activities:

1 Discussion of Class Readings
2 Lecture on Basic Movement & Trigonometry

Introduction of programming topics:

1 Basic Player Movement
2 Timers & Frame Events

Week 5 (Starting Sept 21)

Assigned Readings:

Situated Learning

Activities

1. Watch Documentary on Game Development

Introduction of programming topics:

1. Basic Player Movement

Week 6 (Starting Sept 28)

Activities

1. Lecture on Advanced Movement & Game Physics

Introduction of programming topics:

1. Advanced Movement
2. Gravity
3. Velocity & Acceleration

Week 7 (Starting Oct 5)

Activities

1. Lecture on Advanced Game Dev
2. Drag and Drop

Introduction of programming topics:

1. Boundaries & Friction
2. Easing & Springing
3. Velocity & Acceleration

Week 8 (Starting Oct 12)

Activities

1. Lecture on Collision Detection
2. Sign Up for Conferences on Individual Game

Introduction of programming topics:

1. Basic Collision Detection
2. Advanced Collision Detection

Week 9 (Starting Oct 19)

Conferences—Class is meeting with Instructor individually on Individual Game Assignment

Week 10 (Starting Oct 26)

Conferences—Class is meeting with Instructor individually on Individual Game Assignment

Week 11 (Starting Nov 2)

Activities

1. **Game Storyboard Assignment is DUE!!!**
2. **Advanced Game Development Topics**

Introduction of programming topics:

1. Endless Scrolling
2. Sound Game

Week 12 (Starting Nov. 9)

Activities

1. Advanced Game Topics

Introduction of programming topics:

1. Kinematics

Week 13 (Starting Nov. 16)

Activities

1. Advanced Game Topics

Introduction of programming topics:

1. Shooting

Week 14 (Starting Nov 23th—BREAK) !!!

Week 15 (Starting Nov 30)

Conferences with Instructor on project

Week 16 (Starting Dec 7)

Conferences with Instructor on project

Week 17 (Starting Dec 16)

Finals—Hand in Project with Presentation of Portfolio Artifact