MAGD 272-01 Game Development

Spring 2022

Classroom

McGraw 127

Meeting Times

9:30-10:45am, Mondays and Wednesdays

Instructor

Fred Leighton, Assistant Professor MAGD program / Communication department

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Office Phone 262-472-5075

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Office Hours

Mondays and Wednesdays 11:15am to 1:45pm by appointment. Meetings can be schedule for alternate times, by appointment. If you plan on scheduling a meeting for a time not during regular office hours, please email the Instructor in advance, with a requested day and time.

Office

L1217G, Andersen Library, located in the L1217 corridor (near TV Station).

Prerequisites

MAGD 150, MAGD 210, MAGD 220 and Sophomore status.

Course Format

Two in person class meetings per week, mixed format, lectures, demonstrations and discussions. Class meetings will take place in McGraw 127. Course material and related assignments will be available on Canvas along with information that supports class meetings.

Course Schedule

The course schedule is in the Calendar on Canvas. Information for individual class meetings will be made available on Canvas and reflected in the Calendar.

Course Overview

This course is focused on the design and development of interactive games for delivery via web browsers. Unity is the primary software for development including 2D images, animation, sound and interactivity. Students will learn how to create 2D game prototypes in Unity using the C# scripting language. Prior experience with C# is not required but will be a significant part of the course. In developing course projects, students will utilize experience in art and design for creating game assets. Course content is a combination of short lectures, individual and group activities, tutorials, readings, and discussions. Weekly assignments will focus on specific software, including C# scripting, skills along with readings for understanding game design principles. Individual and group projects will focus on combining development and design skills in the creation of working game prototypes.

Course Objectives

By the end of the course, students will learn the following:

Workflows and rapid prototyping of 2D games using Unity software.

Game design and development roles including: artist, project manager, programmer, designer, and tester.

Methods of communication for documentation of design and development and for members of a group in the design and development of projects where each member has a specific role.

C# programming in the context of 2D game development in Unity.

An iterative design and development process that supports problem solving and allows for testing and evaluation leading to improvements within a design and development workflow.

Familiarity with Collaborative Systems.

How to analyze and evaluate gameplay, mechanics, and design of existing games in the form of writing and discussion.

How to design and develop a minimum of three game prototypes built with Unity for delivery via web browsers.

How to write and use play-testing documents to support development of interactive games.

Readings

Rules of Play: Game Design Fundamentals, Salen and Zimmerman, 2004.

A Game Design Vocabulary, Anthropy and Clark, 2014.

Holistic Game Development with Unity: An All-in-One Guide to Implementing Game Mechanics, Art, Design and Programming, Penny de Byl, 2019.

Introduction to Game Design, Prototyping, and Development, Jeremy Gibson Bond, 2018.

Materials

Software will be available on computers in the classroom and remotely via <u>Citrix</u>. Any software tools used beyond what is available through the University will be free or open-source software.

Students should have some means of saving files, a thumb drive or other external drive, or online means of saving files (dropbox.com, Google drive etc.)

Canvas, and shared drives will be used for exchanging files.

All relevant course information will be located on Canvas.

Software / Programming Language

Unity, C#

This course will use C# as the programming / scripting language. Examples given by the instructor will use C#. Although other languages can be used in Unity, Students should submit work using C# unless otherwise instructed.

Grading Opportunities

The final course grade will be calculated from the following areas:

20% assignments

70% projects

10% attendance and participation

There will be ten graded assignments that will each be worth 2% of the final grade. Seven of these assignments will focus on development skills in Unity. Three of the assignments will be based on readings and discussions focusing on game design. Details for each assignment will be given in the assignment description on Canvas.

There will be three graded projects. The first two projects will each be worth 20% of the overall course grade. The third project will be worth 30% of the final grade. Details for each project will be given in the project description on Canvas.

Class Mode

All classes meet in-person in McGraw 127. If there are changes to this during the semester, information will be communicated by the course instructor via campus email and/or Canvas.

Safety / COVID-19

Please follow <u>University guidelines</u> for minimizing your risk and that of others to infection. Face coverings are required in classrooms.

Attendance Policy

Attendance and participation will be worth 10% of the overall grade. You can miss up to three classes without it impacting your attendance grade. Beyond missing three classes, you will loose 5% of your attendance / participation grade for every two classes missed. If you have a legitimate excuse for missing class, i.e., doctors appointment, emergency, or illness, please communicate with the instructor in person or by email and provide documentation to not have the absence negatively impact your attendance / participation grade.

Grading Standards

Letter Grades:

- A (93 and above) Outstanding
- A- (90 92) Excellent
- B+ (87-89) High Achievement
- B (83-86) Good
- B- (80 82) Meets Requirements
- C+(77-79) Acceptable

C (73-76) – Average

C-(70-72) – Below Average

D+ (67-69) - Below Average

D (63-66) - Below Average

D-(60-62) – Below Average

F (59 or below) – Failure

Criteria for evaluation of assignments and projects:

Quality of work relating to concepts, ideas and research, as well as effective and creative use of tools for required tasks. All graded work assignments, and projects, will clearly state the objectives and areas of grading. This information will be included in the assignment, or project description. Feedback for graded work will communicate how a student performed and how the grade was calculated following the stated criteria. If there is any question during the semester as to why a grade was given or how it was determined, please see the instructor during office hours or other scheduled appointment time.

Attendance Policy

Class attendance is critical to understanding the subject matter and successfully completing the course. Missing class without the following valid excuses will negatively impact attendance as it relates the participation part of your final grade:

Family emergency illness and can provide a doctor's note or equivalent from Health Services.

UWW extracurricular activity and can provide note from coach or advisor.

Internship or job interview and can provide documentation from company.

You must communicate with the instructor and provide documentation within one week for an absence to be counted as excused.

Be on time for class and stay for the duration of class session.

Attendance at discussions of project work is very important - you will be made aware of the dates for these discussions, at the end of a project, well in advance via the class schedule and announcements from the instructor. Thoughtful participation in discussing your work and your classmates' work is part of your participation grade in the course.

You are allowed three absences during the semester. Any unexcused absences beyond five will negatively impact your attendance / participation grade. Please see details in the **Grading Opportunities** area above for more information.

Student Conduct

The University of Wisconsin-Whitewater is dedicated to a safe, supportive and nondiscriminatory learning environment. It is the responsibility of all undergraduate and graduate students to familiarize themselves with University policies regarding Special Accommodations, Academic Misconduct, Religious Beliefs Accommodation, Discrimination and Absence for University Sponsored Events (for details please refer to the Schedule of Classes; the "Rights and Responsibilities" section of the Undergraduate Catalog; the Academic Requirements and Policies and the Facilities and Services sections of the Graduate Catalog; and the "Student Academic Disciplinary Procedures (UWS Chapter 14); and the "Student Nonacademic Disciplinary Procedures") (UWS Chapter 17).

Students with Disabilities

Learning support services for students with disabilities is provided.

Students can get more information at the Center for Students with Disabilities:

http://www.uww.edu/csd