CS 3371-010: Computer Game Development I

Grant Wilde

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Office Hours: MTWRF 9 – 11 am
Office: MCS 205K

Course Website: Blackboard
Class Hours: TR 2:00 - 3:15 pm
Class Room: MCS 115

Course Description

Introduction to the design and implementation of computer games, including realtime graphics, audio and interactive multimedia programming techniques. Prerequisite: Computer Science 2336

Goals

The goal of this course is to master the basics of game development theory and game development implementation in the Unity game development platform.

Learning Outcomes

When you complete this course, you should be able to:
1. Students will learn the aesthetic and technical aspects of game development including story development, game play & mechanics, game content development, game programming, and play testing.
2. At the end of the course, students will have designed a new game, developed the story board and art assets for the game, and implemented their games in Unity.

Course Delivery

This is a face-to-face course with learning resources and supplemental materials posted in Blackboard. You will allowed to come to class every Tuesday and Thursday. All material needed to take this course remotely will be posted to Blackboard.

Required Materials

Textbook: Hocking, J. (2018). Unity in Action: Multiplatform game development in C# (2nd Edition), Manning Publication, Book Only: ISBN 978-1617294969

Software:
1. Unity:
   - Available on the machines in the MCS computer labs.
   - You can download Unity free of cost from unity3d.com. Details will follow when class starts.
   - When we start working with Unity during the 4th Week of class, we will discuss the version you are to download. The version you will need is the same version as on the MSC computers now.

Blackboard: Blackboard will used for lecture note postings, class recordings, assignment postings, and assignment submissions.

Computer: You must have access to an adequate computer or laptop (Chromebook is insufficient) with a webcam and Internet connectivity to participate fully in the class. ASU computer labs are available for your use. A table describing supported browsers can be viewed on the Blackboard support site.

COVID Related Requirements

Please refer to ASU's COVID-19 (Coronavirus) Updates web page for current information about campus guidelines and safety standards as they relate to the COVID-19 pandemic.

Communication

You are responsible for checking your ASU email account and Blackboard frequently throughout the duration of this course. Email communication should be exclusively through your ASU email address. Please include your course name and section number in the subject line of your email.

Office Hours

Office hours will be held **virtually** through Blackboard Collaborate during the posted office hours. If you need a face-to-face meeting, please contact me via email to set up an appointment.

Activities Assessing Learning Outcomes

Quizzes You will be assigned textbook material, videos, and PowerPoint slides. You will also be given quizzes during class. Quizzes will cover the material assigned in the previous class.

Homework Homework assignments will take the form of written papers related to the theory and approach taken in Game Development. The purpose of homework assignments is to assess student's learning in aspects that are non-programming related.

Programming assignments: The purpose of the programming assignments is to give you individual programming practice on the topics that you are learning and to explore some ideas more deeply. Assignments will be given frequently for you to complete. Due dates will be posted on Blackboard and no late assignments will be accepted.

Final Project In the place of a final exam, a final project will be completed by the student. The final project will be an original 3 dimensional game of the student's own creation. 2-D games are NOT allowed. The project will consist of the student creating a 10-15 minute presentation detailing how each of the topics covered throughout the semester were implemented in the digital game. The student will then present to the instructor and class the presentation on **Saturday, November 21, 2020 from 1:00 - 3:00 p.m.**

Grades

Your course grade will be based on the following:

Activity	Percentage
Quizzes	25%
Homework	25%
Programming Assignments	25%
Final Project	25%

ASU employs a letter grade system. Grades in this course are determined on a percentage scale:

Grade	Percentage
A	90-100
B	80-89
C	70-79
D	60-69
F	0-59

Incomplete Grade Policy

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 Grading Procedures for more information.

Course Outline

Weekly tentative schedule:

Week	Topics
1	Intro to Game Dev, Game Design Theory
2	Game Design Theory
3	Game Design Theory
4	Intro to Unity, 3D Space
5	Enemies and Projectiles
6	Enemies and Projectiles
7	Graphics
8	Graphics
9	Terrain and Height Maps
10	Player Movement and Animation
11	Player Movement and Animation
12	Unity Nav Mesh
13	Interactive Devices and Items
14	Interactive Devices and Items
15	Special Topics
16	Final Project Demo

Course Policies

All students are required to follow the policies and procedures presented in these documents:
- Angelo State University Student Handbook
- Grading Procedures

Policy on absenteeism/non-communication
- Attendance will be taken every day in the beginning of class. Quiz reviews and programming assignments will be given, so absenteeism will negatively impact your grade. Failure to participate or communicate on your part will result in an appropriate reduction of your grade and possibly in your failure of this course.

Submissions/Late work
- All assignments, unless otherwise specified, must be submitted to Blackboard containing your name, course name, the title of the assignment and the due date.
- No late assignment will be accepted. No e-mail submission is accepted. There are no exceptions to this rule.

Student Disability Services

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student's responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the Student Disability Services website Student Disability Services website. The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Ms. Dallas A. Swafford
- Director of Student Disability Service
- 325-942-2047
- dallas.swafford@angelo.edu
- Office of Student Affairs
- Houston Harte University Center, Room 112

Title IX Statement

The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance.
Students are encouraged to report any incidents of sexual misconduct directly to ASU's Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:

Michelle Nicole Boone, J.D.
- Director of Title IX Compliance/Title IX Coordinator
- 325-486-6357
- Michelle.boone@angelo.edu
- Mayer Administration Building 210.

You may also file a report online 24/7 at www.angelo.edu/incident-form

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

For more information about Title IX in general you may visit www.angelo.edu/title-ix.

Student Absence for Observance of Religious Holy Days

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for Observance of Religious Holy Day for more information.

Student Conduct Policies

Academic Integrity
Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the university's Statement of Academic Integrity.

All assignments should be the product of the student alone. Cheating occurs when a student either submits work for a grade that is not entirely due to his/her own effort or allows others to use his/her work.

Plagiarism
Plagiarism is a serious topic covered in ASU's Academic Integrity policy in the Student Handbook. Plagiarism is the action or practice of taking someone else's work, idea, etc., and passing it off as one's own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality via Turnitin. Resources to help you understand this policy better are available at the ASU Writing Center.

Copyright Policy

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

Modifications to the Syllabus

The instructor and the university reserve the right to modify or change the syllabus (schedule, course requirements, grading policy, etc.) as the curriculum and/or program require(s).