

CS 4371 – Computer Game Development II

Spring 2022 Course Syllabus



Instructor: Grant Wilde

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Office: MCS 205K

Office Hours: MWF 2:00 p.m. – 4:00 p.m.
TR 11:00 a.m. – 1:00 p.m.

Class Times: MWF 1:00 p.m. – 1:50 p.m.

Classroom: MCS 105

Course Information

Course Description

Continuation of Computer Science 3371. Advanced game programming techniques, including designing game mechanics, concepts of emergence and progression, and the use of visual design tools.

Prerequisite Courses

CS 3371: Computer Game Development I

Prerequisite Skills

A first course in Unity.

Student Learning Outcomes

When you complete this course, you should be able to:

1. Develop a 2D Memory card game
2. 2D Platformer game
3. Model a basic object and incorporate it into a game
4. Incorporate audio into 2D/3D games
5. Develop a complete, 3D game in Unity with multiple levels and loading/saving capabilities
6. Connect a complete game to the internet

7. Deploy a 2D/3D to user's devices

Course Delivery

This is a face-to-face course with learning resources and supplemental materials posted in Blackboard. Materials posted to Blackboard will take the form of PDF notes, Powerpoint slides, and recorded videos.

Required Texts and Materials

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

Technology Requirements

Technology: 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.

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.

Communication

- **Written communication via email:** All private communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes. In your emails to faculty, include the course name and section number in your subject line.
- **Blackboard Collaborate:** I will be available every weekday during office hours in the virtual Collaborate classroom under Blackboard. You will be able to text, audio/video chat and share your computer screen with me.
- **Phone:** I can be contacted via my office telephone during office hours.

Grading

Evaluation and Grades

Course grades will be determined as indicated in the table below.

Assessment	Percent of Total Grade
Quizzes	10%
Homework	30%
Programming Assignments	30%
Final Project	30%
Final Exam	15%
Total	100%

Grading System

Course grades will depend on completing course requirements and meeting the student learning outcomes.

This course uses the following grading scale:

- A = 90.00-100 points
- B = 80.00-89.99 points
- C = 70.00-79.99 points
- D = 60.00-69.99 points
- F = 0-59.99 points (Grades are not rounded up)

Assignment and Activity Descriptions

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.

Programming assignments: 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 game of the student's own creation. 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. Students will then upload their games to gamejolt.com for the instructor to play and evaluate.

General Policies Related to This Course

All students are required to follow the policies and procedures presented in these documents:

- [Angelo State University Student Handbook](#)¹
- [Angelo State University Catalog](#)²

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](#)³ (Page 97).

Accommodations for Students with Disabilities

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](#).⁴ The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

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

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](#)⁵ for more information.

Plagiarism

Plagiarism is a serious topic covered in ASU's [Academic Integrity Statement](#)⁶ 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. Resources to help you understand this policy better are available at the [ASU Writing Center](#).⁷

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](#)⁸ for more information.

Title IX at Angelo State University

Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual nature. The term includes sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex.

You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Miller, J.D. You may submit reports in the following manner:

Online: [Incident Reporting Form](#)⁹

Face to Face: Mayer Administration Building, Room 210

Phone: 325-942-2022

Email: michelle.miller@angelo.edu

Note, as a faculty member at Angelo State, I am a mandatory reporter and must report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325-942-2371), the 24-Hour Crisis Helpline (325-486-6345), or the University Health Clinic (325-942-2171).

For more information about resources related to sexual misconduct, Title IX, or Angelo State's policy please visit the [Title IX website](#).¹⁰

Information About COVID-19

Please refer to ASU's [COVID-19 \(Coronavirus\) Updates](#)¹¹ web page for current information about campus guidelines and safety standards as they relate to the COVID-19 pandemic.

Modifications to the Syllabus

This syllabus, including grade evaluation and course schedule, is subject to modification on potentially short notice based on developing circumstances.

Course Schedule

Important Note: My wife is currently 37 weeks pregnant as of January 12, 2022. Whenever she does go into labor, I will be out of the office and classroom for one week (7 days). You will be instructed via a Blackboard announcement as soon as this happens. You will be told what materials to watch on Blackboard as there will not be in-person class during that time. I will do my best to reply to any emails I receive during that time, but please be patient with me during this time.

Week	Topic
1	Theory of Game Development not covered in CS 3371
2	2D Memory Card Game
3	2D Memory Card Game
4	2D Platformer
5	2D Platformer
6	Modeling
7	Connecting Games to the Internet
8	Connecting Games to the Internet
9	Audio
10	Audio
11	Completing a 3D Game
12	Completing a 3D Game
13	Deploying games to devices
14	Deploying games to devices
15	Playtesting theory and playtesting of games
16	Final Project

¹ <https://www.angelo.edu/current-students/student-handbook/>

² <https://www.angelo.edu/academics/catalog/>

³ <https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=97>

⁴ <https://www.angelo.edu/current-students/disability-services/>

⁵ <https://angelo.policystat.com/policy/10659448/latest/>

⁶ <https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=97>

⁷ https://www.angelo.edu/current-students/writing-center/academic_honesty.php

⁸ <https://angelo.policystat.com/policy/10659368/latest/>

⁹ <https://www.angelo.edu/incident-form>

¹⁰ <https://www.angelo.edu/title-ix>

¹¹ <https://www.angelo.edu/covid-19/>