Intro. to 3D Video Game
CSCI 4970/6970

Instructor Info —

- Kelvin Gao
- Office Hrs: Mon/Wed 9:00 AM to 10:30 AM (Request Needed)
- Zoom appointment
- www.kell.vin
- zgao1@aum.edu

Course Info ——

- Prereq: CSCI 3000 (Structured Programming II)
- Online
- Online
- Zoom

Lab Info ——

- Thursday
- 9:25 am - 10:40 am
- GH205

TA Info ——

- TBD
- Office Hrs: TBD
- TBD

Overview

This course is an introduction to the design and the development of 3D video games. We will utilize Unity as the game engine and learn 3D space, graphics/objects, GUI, internet connectivity, sound effects/music, etc. Our ultimate goal is that everyone can create their first 3D games at the end of the semester.

Material

Unity in Action (Second Edition), 978-1617294969, by Joseph Hocking

Grading Scheme

10%	Attendance
40%	Class Project
30%	Programming Assignment
20%	Weekly Quiz

Grades will follow the standard scale: A = 89.5-100; B+ = 84.5-89.4; B = 79.5-84.4; C+ = 74.5-79.4; C = 69.5-74.4; D = 60-69.4; F <60. Curving is at the discretion of the professor.

Class time

We have two classes every week:

1. The first one will be presented by video.
2. The second one will be on every Thursday.

For hybrid students, the meeting on Thursday (9:25 am - 10:40 am) is mandatory.

For online students, the meeting on Thursday (same time above) is optional.

Zoom Link: https://auburn.zoom.us/j/89861137396

Late Submission Policy and Make-up Policy

Except in the cases outlined above for excused absences, programming assignments must be submitted before the specified deadline in order to receive full credit.

- 0 to 24 hours late: 10% of points will be deducted from the original score.
- 24 to 48 hours late: 20% of points will be deducted from the original score.
- Others: No acceptance.

Note: No late submissions will be accepted after the final exam.

Make-up exams or assignments will only be allowed for students who have a substantiated excuse approved by the instructor *before the due date*. Leaving a phone message or sending an e-mail without confirmation is not acceptable.

Learning Objectives

Students will be able to develop a fully functional 3D video game by using Unity.

- Understand game scene
- Understand game interaction
- Understand game script (C#)
- Understand game GUI
- Understand sound effects and music

FAQs

? What programming languages are expected to use?

! C#

? Any programming work in this course?

! Yes, we do have several class projects that require programming works.

? How are exams organized?

! We don't have final exam but we do have weekly quizzes.

Diversity and Inclusivity Statement

I consider this classroom to be a place where you will be treated with respect, and I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability - and other visible and non-visible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class.

Accommodations for Students with Disabilities

Students who need accommodations are asked to arrange a meeting during office hours to discuss your accommodations. If you have a conflict with my office hours, an alternate time can be arranged. To set up this meeting, please contact me by e-mail. If you have not registered for accommodation services through the Center for Disability Services (CDS), but need accommodations, make an appointment with CDS, 147 Taylor Center, or call 334-244-3631 or e-mail CDS at cds@aum.edu.

Free Academic Support

All students have the opportunity to receive free academic support at AUM. Visit the Learning Center (LC) in the WASC on second floor Library or the Instructional Support Lab (ISL) in 203 Goodwyn Hall. The LC.ISL offers writing consulting as well as tutoring in almost every class through graduate school. The LC may be reached at 244-3470 (call or walk-in for a session), and the ISL may be reached at 244-3265. ISL tutoring is first-come-first served. Current operating hours can be found at www.aum.edu/learningcenter

Blackboard support: Students may seek technology assistance from the ITS Help Desk located in the computer lab on the first floor of the Taylor Center. You may also call 334-244-3500 or email helpdesk@aum.edu.

AUM Policy COVID-19 Requirements

Following the AUM social distancing and face covering policy, all members (faculty and students) in this class must maintain social distancing at all time in an indoor classroom as follows:

1. Stay at least 6 feet from other people
2. Avoid unnecessary grouping and congregating of people
3. Adhere to posted signage that regulates pedestrian traffic flow

All members (faculty and students) must wear face coverings (face masks, face shields, and any other covering that is consistent with federal and state public health guidance, while in an indoor classroom at all time.

Students who violate this policy will be asked to leave the classroom to access the lecture/course materials online and may be referred to the Office of the Dean of Students and be subject to discipline policy described in the Student Handbook.

Academic Integrity

The University Code of Academic Integrity is central to the ideals of this course. Students are expected to be independently familiar with the Code and to recognize that their work in the course is to be their own original work that truthfully represents the time and effort applied. Violations of the Code are most serious and will be handled in a manner that fully represents the extent of the Code and that befits the seriousness of its violation.

Class Schedule

MODULE 1: First Steps

Week 1	Getting to know Unity	Aug 16: ch1-intro.pptx, syllabus
Week 2	Building a demo that puts you in 3D space	Aug 23: ch2-demo.pptx, Programming Assignment 1
Week 3	Adding enemies and projectiles to the 3D game	Aug 30: ch3-demo-2.pptx
Week 4	Developing graphics for your game 1	Sep 8: ch4-graphic-1.pptx
Week 5	Developing graphics for your game 2	Sep 15: ch4-graphic-2.pptx

MODULE 2: Getting comfortable

Week 6	Building a Memory game using Unity's 2D functionality	Sep 20: ch5-2d-demo.pptx
Week 7	Creating a basic 2D platformer	Sep 27: ch6-platformer.pptx, Class Project Due: Programming Assignment 1
Week 8	Putting a GUI onto a game	Oct 4: ch7-gui.pptx, Programming Assignment 2
Week 9	Creating a third-person 3D game: player movement and animation	Oct 11: ch8-third-person.pptx
Week 10	Adding interactive devices and items within the game	Oct 18: ch9-devices.pptx

MODULE 3: Strong finish

Week 11	Connecting your game to the internet	Oct 25: ch10-internet.pptx
Week 12	Playing audio: sound effects and music	Nov 1: ch11-audio.pptx Due: Programming Assignment 2

MODULE 4: Develop your own game

Week 13	Putting the parts together into a complete game	Nov 8: ch12-integration.pptx
Week 14	Deploying your game to players' devices	Nov 15: ch13-deployment.pptx
Week 15	Thanksgiving holidays	Nov 22
Week 16	Project Q&A	Nov 29: Class Project Report and Demo