



Spring 2026

Overview

This is a team and project-based course on video game design and development using Unreal Engine. Topics covered will include geometric modeling, game physics and AI, shader programming, and software and engineering practices within the game industry. The central focus of the course will be the design and development of a game by teams of 3 to 5 students.

Communication

It is your responsibility to stay engaged with the course...at a minimum this means:


- 1. Checking CampusWire every Tuesday for weekly announcements**
- 2. Watching the Calendar for assignment due dates**

3. Engaging with your project group and contributing significantly to the project.

You should also attend the live discussions...but we understand that conflicts come up and will not make attendance mandatory. You definitely should watch all the posted videos in order to successfully complete the Homework and Exams.

CampusWire

We will use CampusWire for answering questions and administering the course.

- Click [this link](https://campuswire.com/p/G0111DA4F)  (<https://campuswire.com/p/G0111DA4F>) to join/view the forum
- Use the passcode **9678**
- For any question involving a grade you should select the tag Post to instructors and TAs.

Course Staff

- Professor Eric Shaffer, shaffer1@illinois.edu (<mailto:shaffer1@illinois.edu>)
- Yuxiang Liu (TA)
- Shan Huang (TA)
- Uche Uche-Ike (TA)
- Kyo Kim (TA)

Instructional Content

The course will be taught using online lectures along with additional reading materials.

Lectures

- Live discussion on Zoom will be held **Tu at 11am Central Time**.

ZOOM LINK  (<https://illinois.zoom.us/j/87338377232?pwd=RbxbjdYFXqF3T9Q3eO32J3sxS1UZD.1>)

- If you do miss the occasional discussion...no worries. The lectures will be recorded and available on Canvas.
- **There is no live lecture on Thursday.** Pre-recorded lectures and other content will be posted on Thursdays. You are expected to watch these and/or read the posted content.

Assessments

Assigned work will include 6 homework assignments, 2 exams, 3 programming assignments, and a final project.

Homework

There will be 6 short homework assignments on PrairieLearn. This homework will be based on the lecture material.

- You should budget an hour to complete a homework assignment.
- Each homework can be retaken as many times as you wish for full credit.
- The homework is open web.
- Each homework will be available for 2 weeks at full credit.
- After that week, the homework can be submitted for half credit.

Exams

There will be two exams. They will:

- Be on PrairieLearn
- Be very much like the homework...sometimes will even have the same questions!
- Have a strict time limit of 50 minutes
- **Will be scheduled for a morning and evening (conflict) session on the exam date.**
- The questions are randomized...no two exams will be the same.
- **You should not collaborate or share information about the exams.**
The sanction for doing so will be failure in the course

The exam dates are:

- **March 10 11am to noon (conflict March 10 8pm to 9pm)**
- **May 5 11am to noon (conflict May 5 8pm to 9pm)**

The exams are not meant to be difficult...do the homework to prepare and you will be fine.
There's really no need to cheat.

Programming Assignments

There will be 3 machine problems (MPs) that will serve as an introduction to Unreal. You will use Unreal 5 and Blueprints (and/or C++) to implement the MPs.

Project

The course project will be team-based with teams of 3 to 5 people working on a project. You will have a choice of what to implement, but your proposed project is expected to be related to game development in some way...typically it should be a game.

Gen AI and Plagiarism Policy

For the Programming Assignments and Project we will have the following the rules:

- **DO NOT SUBMIT SOMEONE ELSE'S GAME AS YOUR OWN** The penalty for doing so will be **failure in the course.**

- If you are in a situation that makes completing the assignment difficult (e.g. health reasons, interview schedule, whatever) **contact the course staff on CampusWire at least 3 days before the due date and we can come up with a plan to complete the work that does not involve plagiarism.**
- You can use assets, even code, created by others for the project but you must tell us did and acknowledge the original author or source and **the project as a whole needs to be substantially new work by your team.**
- You can use Gen AI tools for the project but you must tell us did and acknowledge the source and **the project as a whole needs to be substantially new work by your team.**

4 Credit Option

Students taking the course for 4 credits will complete two additional programming assignments.

Grades

We weight grades as follows:

Name	3 credits	4 credits
MP 0	1%	1%
MP 1	9%	4%
MP 2	15%	10%
Homework	10%	5%
Exam 1	15%	15%
Exam 2	15%	15%
Project	35%	35%
4 Credit Work	NA	15%

The course grade cutoffs can be expected to be:

Percentage lower bound	Grade
93%	A
90%	A-
87%	B+
83%	B
80%	B-
77%	C+

Percentage lower bound	Grade
73%	C
70%	C-
67%	D+
63%	D
60%	D-
0%	F

How to get an A+

To earn an A+, you must earn an A numerically and do something that stands out as exceptional to the course staff. For example, you could do an exceptional job at answering questions on Campuswire or you could do a great job at asking good questions on Campuswire or your submitted game could truly exceptional in terms of creativity or gameplay.

Mental Health

Diminished mental health, including significant stress, mood changes, excessive worry, substance/alcohol abuse, or problems with eating and/or sleeping can interfere with optimal academic performance, social development, and emotional wellbeing. The University of Illinois offers a variety of confidential services including individual and group counseling, crisis intervention, psychiatric services, and specialized screenings at no additional cost. If you or someone you know experiences any of the above mental health concerns, it is strongly encouraged to contact or visit any of the University's resources provided below. Getting help is a smart and courageous thing to do – for yourself and for those who care about you.

- Counseling Center: 217-333-3704, 610 East John Street Champaign, IL 61820
- McKinley Health Center: 217-333-2700, 1109 South Lincoln Avenue, Urbana, Illinois 61801

Statement on CS CARES and CS Values and Code of Conduct

All members of the Illinois Computer Science department - faculty, staff, and students - are expected to adhere to the CS Values and Code of Conduct. The CS CARES Committee is available to serve as a resource to help people who are concerned about or experience a potential violation of the Code. If you experience such issues, please contact the CS CARES Committee. The Instructors of this course are also available for issues related to this class.