CS325: Introduction to Game Design

(Spring 2025)

1 Course Basics

Instructor

Course Information	
Course:	CS325
Format:	In-Person
Section:	001-19292
Semester:	Spring 2025
Date/Time:	MW 3:00 PM – 4:15 PM
Location:	Music/Theater Building Room 1007

Instructor	
Name:	Shahnaz Kamberi
Email:	kamberis@gmu.edu
Phone:	(703) 993 1530
Office:	ENGR 2706
Office Hours:	Mondays/Wednesdays 1:30 PM – 2:30 PM or by Appointment

Course Overview:

This course is designed to give you a deep dive into the exciting role of a game designer, providing you with plenty of hands-on experience throughout the entire creative process of game development. Through a mix of theory and practice, you'll get a solid understanding of what it takes to create engaging and innovative games.

Course Outcomes:

Upon completion of this course, students will be able to:

1. An ability to employ a variety of data structures in a game development and design context.
2. An ability to identify the issues involved in the core mechanics and design of a game and how to solve them with appropriate techniques.
3. An ability to design and implement simple games from the ground up.

Topics:

1. Principles of Game Design
2. The Structure of Games
3. Formal and Dramatic Elements
4. System Dynamics
5. Prototyping
6. Playtesting
7. Teams
8. Development

Prerequisite

CS211 Object-Oriented Programming

1.1 Textbook

None Required

Recommended:
- *Game Design Workshop* by Tracy Fullerton.
- The Art of Game Design by Jesse Schell
- The CRPG Book (pdf version)

1.2 Required Software

Students will need access to:

For Class --
> Computer on which they can access Internet sites and install programs
> Internet Connection
> Canvas
> Piazza – for announcements, discussions, TA contact information

For Assignments --
> Microsoft Word/Word Processing Software
> Unity https://unity.com/releases/editor/whats-new/2018.4.13
> Visual Studio
> For Hosting Website on mason.gmu.edu/~NetID
>> https://its.gmu.edu/knowledge-base/how-to-set-up-a-personal-site/
>> https://its.gmu.edu/knowledge-base/how-to-upload-files-with-filezilla/
>> VPN https://its.gmu.edu/service/virtual-private-network-vpn/

Optional:
> Audacity (for creating music)
> Royalty Free Music: https://incompetech.com/music/royalty-free/music.html
> Blender.org (for making 3D Assets)
> Various Graphics Software
> Various Website Development Sites
> Unity Asset Store

1.3 Piazza

- Announcements, Discussion, GTA/UTA contacts and office hours will be on Piazza.
- **The discussion board on Piazza is required reading.**

1.4 [Canvas](#)

Important Notice: This course will be hosted on Canvas for the Spring 2025 semester. Please ensure you are familiar with accessing and navigating this platform. Resources and support are available at: https://lms.gmu.edu/getting-started-students/ to help you get started. If you have any questions, contact the ITS Support Center for assistance.

- Course schedule, course syllabus, description of assignments, lecture slides, and helpful videos will be posted on Canvas.
- All assignments will be submitted (per published deadlines) via Canvas.
- All grades will be posted to Canvas.

2 Grading

Category	Points	Percent
In-Class Participation (Attendance)	100	10%
Concept Document	50	5%
Pitch Presentation	50	5%
Group Project	300	30%
Game Design Document	50	
Game Production Document	50	
Completed Game Prototype	150	
Beta Testing Results/Analysis	50	
Exercises	200	20%
Quizzes	100	10%
Game Portfolio Website	100	10%
Final Presentation	100	10%
Total:	1000	100%

- Your Homework is due electronically (via Canvas) on the date as assigned by your instructor. You may resubmit as many times as you like up until the deadline. But only the most recent upload is graded.
- Contesting of grades on any/all submissions must be requested **within one week** of receiving the grade (on Canvas). No grade changes will be considered after that deadline.
- No late work accepted (unless you have accommodations or a valid excuse).
- Please contact the instructor as soon as possible if there are extenuating circumstances which affect your ability to complete an assignment or exam.

Assessment

- A+ (>= 98.0%) A (>= 92.0%) A– (>= 90.0%)
- B+ (>= 88.0%) B (>= 82.0%) B– (>= 80.0%)
- C+ (>= 78.0%) C (>= 72.0%) C– (>= 70.0%)
- D (>= 60.0%)
- F (< 60.0%)
- There will be no make-up or extra-credit assignments at the end of the semester; your grade should be a measure of your semester-long progress.

Email Communication/Class Recordings/Class Materials Policies

Students must use their Mason email account to receive important University information, including communications related to this class. I will not respond to messages sent from or send messages to a non-Mason email address. I expect all email to be written in a professional manner, please indicate your name and what course you are referring to in your email.

Please give 48 hours (usually 24 hours) for faculty to respond to email on weekdays. Emails sent on the weekend will be responded to on the following Monday.

The use of computers is required in this class.

During class, you will only be permitted to work on material related to the class. Engaging in activities not related to the course (e.g., email, chat, etc.) is not acceptable.

All course materials posted to Canvas or other course sites are private to this class; by federal law, any materials that identify specific students (via their name, voice, or image) must not be shared with anyone not enrolled in this class.

- Video recordings — whether made by instructors or students — of class meetings that include audio, visual, or textual information from other students are private and must not be shared outside the class.
- Live video conference meetings (e.g. Collaborate or Zoom) that include audio, textual, or visual information from other students must be viewed privately and not shared with others in your household or recorded and shared outside the class.

All of our in-person meetings in **this class will be recorded** to provide necessary information for students in this class. Recordings will be stored on Canvas and will only be accessible to students taking this course during this semester.

Dr. Kamberi's Classroom Expectations:

- The expectations of this course are for you to put in at least 5+ hours of work/week outside of class, to complete this course successfully.

- You are expected to treat the faculty and each other respectfully. I will treat you with respect and fairness.

- You are expected to come to class on time, participate in class and stay the full class period.

- Please show respect when the professor is lecturing.

- Submitting assignments on time is expected of all students.

- All assignments must be submitted using Canvas. *Emailed assignments will not be graded [*unless Canvas is down and is not working; and the assignment is due that day/time].

- Students must verify that the correct assignment has been submitted by the due date. Blank copies and incorrect file format assignments turned in will automatically receive a zero grade.

- No make-up for tests and/or late submission of assignments accepted, except for documented mitigating circumstances. Example of a mitigating circumstance is death in immediate family, or student's illness as verified by a physician.

- I will let you know what my assignment expectations are prior to work being assigned, and you are expected to turn in assignments on the due date as specified by me.

- I, in turn, will make sure to grade your assignment and give you feedback within a reasonable timeframe.

- Your grade is NOT based on how hard you work but based on how you have mastered the material.

3 Honor Code/Academic Standards

- The honor code at George Mason is an important part of our academic culture. A degree from this institution should be a direct measure of your own progress and abilities, and as such, at all times we must ensure that all work that should be your own is your own.
- All students are expected to abide by the GMU Honor Code and Academic Standards Code. These policies are rigorously enforced.
- The computer science department has an CS Honor Code Policies to understand better what constitutes cheating in the CS setting. It clarifies some scenarios that are unique to our sort of assignments. Note that the CS department doesn't have any "extra" policy for the honor code on top of the university's, this document merely helps you to understand how the honor code applies to programming and CS, but it doesn't restrict it at all.
- We take the honor code quite seriously. Any attempts at copying or sharing code, algorithms, or other violations of the honor code simply will not be tolerated. Cheating will be prosecuted and result in a notification of the Honor Committee as outlined in the GMU Honor Code.
- The **use of AI tools** (including but not limited to Copilot, ChatGPT) to aid in the completion of graded assignments/exams, and the use of solutions which are derived directly or indirectly from AI prompts, is considered unauthorized assistance and **is strictly prohibited under the honor code**.
- **Confirmed violations of the Academic Standards Code or the CS Honor Code are generally Level 2 violations which result in a final grade of an F in the course.**
- Please read Understanding the Honor Code - Dr. Snyder's thoughts about the purpose of the honor code in a computer science course.
- Sharing of instructor-created materials, particularly materials relevant to assignments or exams, to public online "study" sites is considered a violation of Mason's Honor Code.

4 University Policies

Student Resources

The four policies below affect students in all courses at George Mason University. This Course Policy Addendum must be made available to students in all courses (see Catalog Policy AP.2.5).

Academic Standards

Academic Standards exist to promote authentic scholarship, support the institution's goal of maintaining high standards of academic excellence, and encourage continued ethical behavior of faculty and students to cultivate an educational community which values integrity and produces graduates who carry this commitment forward into professional practice.

As members of the George Mason University community, we are committed to fostering an environment of trust, respect, and scholarly excellence. Our academic standards are the foundation of this commitment, guiding our behavior and interactions within this academic community. The practices for implementing these standards adapt to modern practices, disciplinary contexts, and technological advancements. Our standards are embodied in our courses, policies, and scholarship, and are upheld in the following principles:

- **Honesty:** Providing accurate information in all academic endeavors, including communications, assignments, and examinations.

- **Acknowledgement:** Giving proper credit for all contributions to one's work. This involves the use of accurate citations and references for any ideas, words, or materials created by others in the style appropriate to the discipline. It also includes acknowledging shared authorship in group projects, co-authored pieces, and project reports.

- **Uniqueness of Work:** Ensuring that all submitted work is the result of one's own effort and is original, including free from self-plagiarism. This principle extends to written assignments, code, presentations, exams, and all other forms of academic work.

Violations of these standards—including but not limited to plagiarism, fabrication, and cheating—are taken seriously and will be addressed in accordance with university policies. The process for reporting, investigating, and adjudicating violations is outlined in the university's procedures. Consequences of violations may include academic sanctions, disciplinary actions, and other measures necessary to uphold the integrity of our academic community.

The principles outlined in these academic standards reflect our collective commitment to upholding the highest standards of honesty, acknowledgement, and uniqueness of work. By adhering to these principles, we ensure the continued excellence and integrity of George Mason University's academic community.

Student responsibility: Students are responsible for understanding how these general expectations regarding academic standards apply to each course, assignment, or exam they participate in; students should ask their instructor for clarification on any aspect that is not clear to them.

Accommodations for Students with Disabilities
Disability Services at George Mason University is committed to upholding the letter and spirit of the laws that ensure equal treatment of people with disabilities. Under the administration of University Life, Disability Services implements and coordinates reasonable accommodations and disability-related services that afford equal access to university programs and activities. Students can begin the registration process with Disability Services at any time during their enrollment at George Mason University. If you are seeking accommodations, please visit https://ds.gmu.edu/ for detailed information about the Disability Services registration process. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email: ods@gmu.edu. Phone: (703) 993-2474.

Student responsibility: Students are responsible for registering with Disability Services and communicating about their approved accommodations with their instructor *in advance* of any relevant class meeting, assignment, or exam.

FERPA and Use of GMU Email Addresses for Course Communication
The Family Educational Rights and Privacy Act (FERPA) governs the disclosure of education records for eligible students and is an essential aspect of any course. **Students must use their GMU email account** to receive important University information, including communications related to this class. Instructors will not respond to messages sent from or send messages regarding course content to a non-GMU email address.

Student responsibility: Students are responsible for checking their GMU email regularly for course-related information, and/or ensuring that GMU email messages are forwarded to an account they do check.

Title IX Resources and Required Reporting
As a part of George Mason University's commitment to providing a safe and non-discriminatory learning, living, and working environment for all members of the University community, the University does not discriminate on the basis of sex or gender in any of its education or employment programs and activities. Accordingly, **all non-confidential employees, including your faculty member, have a legal requirement to report to the Title IX Coordinator, all relevant details obtained directly or indirectly about any incident of Prohibited Conduct** (such as sexual harassment, sexual assault, gender-based stalking, dating/domestic violence). Upon notifying the Title IX Coordinator of possible Prohibited Conduct, the Title IX Coordinator will assess the report and determine if outreach is required. If outreach is required, the individual the report is about (the "Complainant") will receive a communication, likely in the form of an email, offering that person the option to meet with a representative of the Title IX office.

For more information about non-confidential employees, resources, and Prohibited Conduct, please see University Policy 1202: Sexual and Gender-Based Misconduct and Other Forms of Interpersonal Violence. Questions regarding Title IX can be directed to the Title IX Coordinator via email to TitleIX@gmu.edu, by phone at 703-993-8730, or in person on the Fairfax campus in Aquia 373.

Student opportunity: If you prefer to speak to someone *confidentially*, please contact one of Mason's confidential employees in Student Support and Advocacy (SSAC), Counseling and Psychological Services (CAPS), Student Health Services (SHS), and/or the Office of the University Ombudsperson.

Mental Health

- What is listed on the syllabus are our/Mason's usual course policies. However, we fully understand that each of us may face unique obstacles. Please communicate with us if such things are getting in your way in this class. **Our goal is to facilitate your growth and success**; we can only do that if you tell us what is happening.
- If you are experiencing feelings of anxiety, panic, depression, sadness during the semester, Student Health Services and Counseling and Psychological Services Offices (703-993-2380) provides a range of resources to assist and support you.
- Students can call (703-993-2831) or walk-in during open hours to schedule an appointment to talk with a health care provider. If you or someone you know experiences a mental health crisis or emergency, seek help immediately. Call 911 for local emergency services, the National Suicide Prevention Lifeline (1-800-273-8255), or text the Crisis Text Line (741-741) anytime.
- We believe we learn best when we can show up as whole and healthy people. To learn effectively we need to have basic security: a roof over our head, a safe place to sleep, a stable place to live, and enough food to eat. If you are struggling to meet any of these basic needs, visit our campus food pantry (https://ssac.gmu.edu/patriot-pantry/), or reach out to other Mason resources https://learningservices.gmu.edu/campus-resources/. Remember, asking for assistance and advocating for yourself is an important part of your collegiate experience. **YOU** are not alone.