3D Engines in Practice – Project Development

Class Period: Wednesday P4
Location: TBD

Instructor

Jeremiah Blanchard
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Office Hours: TBD

Course Description

This course focuses on the development of artificial intelligence within the context of virtual environments games, and specifically the practical application of concepts within a game or simulation group project. Students complete a "pitch" proposal, design documentation, and development milestones throughout the term. Groups also present their work to their peers.

Course Pre-Requisites / Co-Requisites

Prerequisite: None

Course Objectives

Students will reinforce basic design methodology and learn advanced techniques for game and simulation systems in a 3D engine via development of a group project.

Materials and Supply Fees

None

Required Textbooks and Software

There are no required materials for this course. All materials will be provided by the instructor. Submissions must run and be testable on Windows 11.

Course Schedule

Wk	Milestone Focus	Graded Item(s)
0	Project Pitch	Pitch
1	Project Design	Design Draft
2		Design Document, Check-In
3	Pre-Alpha	Peer Evaluation
4	(Ungraded)	Check-In
5	Prototype	Peer Evaluation
6	& Presentation	Check-In, Prototype
7	***ASYNCHRONOUS WORK WEEK***	
8	Beta (Ungraded)	Peer Evaluation
9		Check-In, Beta Build
10	Production Release	Peer Evaluation
11	& Post-Mortem	Check-In, Prod. Rel., Peer Eval.

Evaluation of Grades

Assignment	Points	Percent
Project Milestones		
Pitch	50	5%
Prototype Presentation	100	10%
Prototype Milestone	150	15%
Post-Mortem Presentation	150	15%
Production Release	240	24%
Interaction		
Group Participation (10)	10 x 10	10%
Stakeholder Meetings (5)	14 x 5	7%
Presentation Reviews (4)	15 x 4	6%
Peer Evaluations (5)	14 x 5	7%
Professionalism	10	1%
	1000	**100%**

Information on UF policy may be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Group Work. Work / deliverables completed weekly by student groups. (***individual submission prohibited***)

Evaluations, Reviews, and Meetings. Honest and constructive meetings, reviews, and evaluations of peers.

Project Milestones. Teams will complete these milestones in the course:

Project Pitch – One-minute "elevator pitch" for project
Design Draft – A preliminary / draft plan for the project
Final Design – Shows key elements (interface, architecture, & backend)
Design Prototype – "Proof of Life"; demonstration of "vertical slice"
Prototype Presentation – Live presentation of prototype work to peer audience
Production Release –Feature complete version of project (final submission)
Post-Mortem Presentation – Reflection on challenges, successes, and outcomes

Grading Policy

Percent	Grade	Points
93.0 – 100.0	A	4.00
90.0 – 92.0	A-	3.67
87.0 – 89.0	B+	3.33
83.0 – 86.0	B	3.00
80.0 – 82.0	B-	2.67
77.0 - 79.0	C+	2.33
73.0 - 76.0	C	2.00
70.0 - 72.0	C-	1.67
67.0 - 69.0	D+	1.33
63.0 - 66.0	D	1.00
60.0 - 62.0	D-	0.67
0.0 - 59.0	E	0.00

Attendance Policy, Class Expectations, and Make-Up Policy

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university attendance policies: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/

Course Expectations

Read and adhere to the syllabus. Emails requesting information contained in the syllabus will receive the lowest priority for response with no guaranteed turnaround. Practically, this means responses will come only after the remaining email queue of the instructor is otherwise empty. This condition occurs approx. once every 24 months.

Students must act with honor; academic dishonesty will be strictly addressed. Sharing / copying, "borrowing" of code structure, discussing code structure, looking at code from another student, providing such code, and plagiarism, in addition to other dishonest behaviors, are considered academic dishonesty. No information regarding assignment solutions may be shared by students except at a conceptual level. If students implement algorithms from other sources, they must be cited. Students may not copy code from the Internet or other sources under any circumstances. Any student found to have violated these rules, whether a provider or receiver or unauthorized help, will be assigned a **grade of E (failing) in the course** and referred to the Honor Court. **When in doubt, ask.**

Grade reviews must be requested within one week of a grade being posted. After two weeks, no grades will be revisited. In the event of a grade review, the entire assignment will be reviewed.

All assignments are due by the time listed on Canvas. Projects and homework with a cascading deduction: one (1) weekday late for 10% penalty; two (2) for 25% penalty; or three (3) for 50% penalty. Quizzes and presentations may not be completed late for credit except with instructor approval for extenuating circumstances (see below).

Quiz, presentation, and meeting make-ups will not be permitted except in extenuating circumstances. For make-up consideration students will be required to submit written documentation from a reputable source as evidence. For any planned event (e.g., a wedding), the student is expected to contact the instructor no less than two weeks in advance for consideration. Please note that there is no guarantee that requests will be accommodated. Social, networking, and club events may be taken into consideration strictly at the discretion of the instructor.

Students should visit office hours for project help and grade questions. Do not send email to, send private messages to, or "@" instructors or TAs about project help or grades. The TAs and instructor will often try to answer questions in the chat when possible, but the way to get personalized help is to visit or make arrangements!

Important non-project correspondence be via email. The chat system is helpful for simple questions and allows students to help one another, but students should not expect responses to important questions via chat. Please allow 48 business hours for responses; instructors and TAs have many responsibilities and respond as is practical.