

3D Engines in Practice – Topic Survey

Class Period: Tuesday P4 (15:00)

Instructor

Jeremiah Blanchard

jib@eng.ufl.edu

Course Description

Focuses on basic technical knowledge and skill in design, conceptualization, and visualization for three-dimensional engine content production. Coverage of scene and agent development, multi-disciplinary teams, complex pipelines, and production processes. Project-based, culminating in a practical 2D, 2.5D, or 3D application. (3)

Course Objectives

By the end of the semester, successful students should be able to:

- Conceptualize and plan the systems, design, and visual aesthetics for a 2D/2.5D application.
- Develop an industry standard design document.
- Consider and integrate designs regarding usability and user experience.
- Effectively implement core principles of the design production process.
- Create a final application build including multiple levels in a cohesive executable package.

Course Pre-Requisites / Co-Requisites

Some prior programming experience

Course Schedule

Day	Topics
9/02	Setup & Engine Basics
9/09	C# Fundamentals & Version Control
9/16	Signals & Scripting
9/23	Physics & Collision
9/30	Design Patterns
10/07	Animation
10/14	User Interfaces
10/21	Prototype Presentations
11/28	Asynchronous Work Week
11/04	User Experience Design
11/11	Lighting & Audio
11/18	Inventory Factory Pattern & Object Spawning
11/25	November Festival / Thanksgiving
12/02	Integrating Properties
12/09	Post-Mortem Presentations & Showcase

Required Textbooks and Software

There are no required materials for this course. All materials will be provided by the instructor.

Professionalism & Expectations

Students are expected to adhere to the following guidelines in this course:

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

Please allow 48 business hours for a response by email. Remember that we will not respond to requests for exercise help or grades. Instructors and TAs have many responsibilities; they will respond to messages as is practical, but it can take some time, especially during the busy parts of the term.