GAM 398: Creating in Unreal Engine

Description:

This course focuses on teaching students how implement their design into Unreal Engine. From developing proper pipelines in level building, creating gameplay mechanics in blueprint, or importing and implementing assets from other software like Maya, Blender, Houdini. By the end of the course the students will build a small game from scratch in the Unreal Engine. No programming knowledge is required to take this course. Students will learn basic concepts and modules of Unreal Engine in order develop further projects in their degree.

Quarter/Year:	AQ 2021
Meeting Time:	M – 1:30 – 3:00pm
Location:	14 East Jackson Room 505 (Daley Building) / Zoom
Software:	UE4
Instructor:	Will Meyers
Email:	wmeyers@cdm.depaul.edu

Learning Outcomes:

- Students will learn the how to navigate the Unreal Interface effectively.
- Students will learn the basics of scripting Blueprints in Unreal Engine and how to turn design into gameplay.
- Students will understand the basics of several different Unreal Engine Modules. Modules such as Lighting, Level Building, Animation, Particle Systems, etc.
- Students will create and implement a basic game from scratch in the Unreal Engine.

Prerequisites:

PREREQUISITE(S): None

Grading:

- Adventure Game
    - 5 Milestones (12% each)
    - 1 Final Project (30%)
    - Participation (10%)

Topics Overview

- Unreal Engine 4 Interface
    - Teach the basics of the Unreal Engine interface and how to use them
    - Topics:
        - Content Window (Asset browser)
        - Viewport
        - World Outliner
        - Details
        - Modes
- Gameplay Framework, Project Templates, Importing Assets
    - Teach the basics of the Gameplay Framework that helps run every UE4 project.
    - Topics:
        - Setting up projects and starting templates
        - Importing Assets and Unreal Marketplace
        - World Settings & Game Modes
        - GameObjects Anatomy
            - Actors, Pawns, HUD, PlayerController, GameStates
            - Level BluePrints
- Static Meshes & Materials
    - Basics of importing Static Meshes from Maya/Blender
    - Basics of creating materials for your static meshes
- Lighting And Rendering
    - Basics of lightings and rendering pipelines in UE4
    - Basics of Post Processing
- BSP Tools & Level Building
    - Basics of how to use BSP tools for blocking out levels in UE4
- Intro to Blueprints
    - Basics of how to implem1ent behavior in UE4 using Blueprints.
    - Topics:
        - Blueprint Interface
        - Variables
        - Functions

        - Input Events
        - Collision Events
        - Timelines
        - Create Basics Behaviors using blueprints
- Animations
    - Basics of how import, use or create animations in UE4
    - Topics:
        - Importing animations
        - Skeletons & Animations
        - Animations Blueprints
        - State machines
        - Animation events
- Intro to UMG (U.I.)
    - Basics of how to develop an user interface in Unreal Engine using UMG
- Sequencers
    - Basics of creating cinematic pieces in UE4 using Sequencers.

Important Dates

- September 14, 2021 Last day to add classes to AQ 2021 schedule
- September 21, 2021 Last day to drop classes with no penalty, Last day to select pass/fail option
- September 22, 2021 Grades of "W" assigned for AQ 2021 classes dropped on or after this day
- September 28, 2021 Last day to select auditor status
- October 26, 2021 Last day to withdraw from AQ 2021 classes

Course Policies

Changes to Syllabus

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be thoroughly addressed during class, posted under Announcements in D2L and sent via email.

Online Course Evaluations

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is

our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Students complete the evaluation online in CampusConnect.

Academic Integrity and Plagiarism

This course will be subject to the university's academic integrity policy. More information can be found at http://academicintegrity.depaul.edu/. If you have any questions be sure to consult with your professor.

Academic Policies

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on enrollment, withdrawal, grading and incompletes can be found at: cdm.depaul.edu/enrollment.

Students with Disabilities
Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential. To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at: csd@depaul.edu.
Lewis Center 1420, 25 East Jackson Blvd. Phone number: (312)362-8002 Fax: (312)362-6544 TTY: (773)325.7296

Retroactive withdrawal
This policy exists to assist students for whom extenuating circumstances prevented them from meeting the withdrawal deadline. During their college career students may be allowed one medical/personal administrative withdrawal and one college office administrative withdrawal, each for one or more courses in a single term. Repeated requests will not be considered. Submitting an appeal for retroactive withdrawal does not guarantee approval. Information on enrollment, withdrawal, grading and incompletes can be found at: http://www.cdm.depaul.edu/Enrollment-Policies.aspx