

# Beginning Unreal 4 Project Group

## Instructor Info

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## Course Overview

Welcome to the Beginning Unreal 4 project group! Unreal Engine 4 is a game development (game creation) engine built with all sorts of useful tools and functions. It can be used to create a variety of different games ranging from 2D-platformers to first person shooters to virtual reality games. Here are some recent popular games built with Unreal Engine:

- Fortnite
- PlayerUnknown's Battlegrounds (PUBG)
- Bioshock series
- Borderlands series
- Star Wars Jedi: Fallen Order
- Mortal Kombat
- Outer Worlds
- Tropico 6
- Batman: Arkham series

The best part about Unreal Engine 4 is that it is completely free! In this project group we will learn the basics of Unreal Engine 4 and design a basic game as a final project.

## Course Expectations

1. Absences. Notify me at least one hour prior if you will not be able to make a meeting (text/email)
2. Respect Everyone. Stay off your phones and pay attention!
3. Come prepared. There is so much content to go over in the little amount of time I have. That being said, the faster everyone understands concepts and ideas, the more I will be able to teach. This class will go at a fast pace and contains a lot of content. Bring your laptop and questions to every meeting.

## Requirements

1. PC or Laptop that can run Unreal 4  
Unreal recommends 8 GB RAM and a quad-core processor. Unreal will run on computers below these recommendations, but performance will be limited. Obviously you should

not buy a new computer just for this course, but Unreal is a very powerful program that can be intensive on your computer. (an external mouse is also highly suggested, but not required)

2. Textbook *Learning Unreal Engine Game Development* by Joanna Lee (2016)  
ISBN: 9781784398156  
This textbook is paid for by OSU libraries.

### **Finding the textbook**

- go to [library.osu.edu](http://library.osu.edu).
- click on “Research Databases List” to the right of the center search bar.
- search “safari books online” in the search bar.
- click the link titled “Safari: O'Reilly's Learning Platform for Higher Education”.
- log in with your name.# and password.
- Choose OSU if it is listed, or type in your academic email (name.#@osu.edu).
- Search for *Learning Unreal Engine Game Development* in the search bar and click the first book in the list.

This webpage should show the table of contents of the book. It is a good idea to bookmark this page or url for future use.

### **Point System**

You have the opportunity to earn a maximum of 100 points in this course, divided as follows:

- attendance: 4 points/week = 56 points max
- final project: 44 points

### **Course Structure**

The first seven weeks of this course will be spent going through the textbook and learning how to use Unreal Engine 4. The last seven weeks will be spent designing a final project to present at the MMC End of the Semester Party.

### **Final Project**

We will discuss requirements later in class. To show what you have learned, you will be creating a game using all the aspects of game design you have learned in this course. You must get your game idea approved by me before beginning the project. The requirements are as follows:

- a definitive start and definitive end
- clearly stated instructions or objectives
- unique meshes not from Starter Content
- two or more different types of lighting discussed in class
- unique materials not from Starter Content
- actor collisions/overlaps and blueprint logic

There is no limit to the amount of things you may add, as long as you include these requirements. Remember, someone who has never seen your game before should be able to start your game and know how to play.

### Course Schedule

Week	Subject	Homework
01 (09/01)	Overview of Unreal Engine 4	Download Unreal 4 and set up Epic Games account/ explore panels
02 (09/08)	Creating your First Level	Read chapter 2, 3
03 (09/15)	Game Objects	Read chapter 4, 7 part 1
04 (09/22)	Materials, Light, and Terrain	Watch videos
05 (09/29)	Introduction Blueprints	Practice
06 (10/06)	Collision and Input	Apply collision to a level
07 (10/13)	AI Actors	Work on project
08 (10/20)	Work on project	Work on project
09 (10/27)	Work on project	Work on project
10 (11/03)	Work on project	Work on project
11 (11/10)	Work on project	Work on project
12 (11/17)	Work on project	Work on project

13 (11/24)	Work on project	Work on project
14 (12/01)	Project presentations	