Unity 2 Course Syllabus

Objectives

This course will take a deeper look into programming games using the Unity Game engine. Students will learn how to manipulate various game components using Unity in conjunction with code written in C#. In this course, students will create a variety of video game projects that will reinforce best programming practices and the game development cycle.

Topics and Schedule

Module 1	Topic - Introduction to C#
L1-1	C# Intro and Syntax
L1-2	Creating a C# File
L1-3	Printing & Data Types
L1-4	Declaration vs. Initialization
L1-5	Math Operations
L1-6	Combined Assignment Operators
L1-7	Conditional Statements
L1-8	Logical and Relational Operations
L1-9	While Loops
L1-10	For Loops
L1-11	Arrays and Lists
L1-12	Methods
L1-13	Project: Turn-based Combat

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Module 2	Topic - Unity and C#
L2-1	Intro to Unity Scripting
L2-2	Unity-Specific Data Types
L2-3	Start & Update
L2-4	FixedUpdate and GetComponent
L2-5	Instantiate & Destroy
L2-6	Debug Module
L2-7	Physics Methods
L2-8	Mathf and Random
L2-9	Time and Coroutines
L2-10	Unity Events & Scriptable Objects
L2-11	Project: Cube Fall

Module 3	Topic - Mini Games
L3-1	Guess the Number
L3-2	Stay in the Zone
L3-3	Zombie Attack
L3-4	Zombie Attack (cont'd)
L3-5	Collect-a-thon
L3-6	Collect-a-thon (cont'd)
L3-7	Rigidbody Exercises
L3-8	Project: Mini-game Upgrade

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Module 4	Topic - Intro to 2D
L4-1	Introduction to 2D Unity
L4-2	Sprites & 2D Colliders
L4-3	Tilemap and 2D Extras
L4-4	2D Physics & Effectors
L4-5	UnityEvents
L4-6	Using DontDestroyOnLoad
L4-7	Project: 2D Platforming Game