

Introduction to 3D Game Development

The goal of this workshop is to get participants up and running with the Unity game engine focusing specifically on working with its suite of 3D features. As participants work through the activities, they will build a 3rd person 3D game from the ground up, covering major subject areas including importing, animation, character configuration, implementing game mechanics, and publishing.

The project is a 3D Battle Arena game. In the workshop, participants will build a simple arena level, create the character and enemies, implement gameplay, and setup health and score UI before learning the basics of publishing their game to PC.

Level: Beginner

Prerequisites: Prior experience with the Unity editor.

Duration: 7-8 hours **Class**

size: 15 people

Trainer: Unity Certified Instructor

Learning Objectives and Outcomes

Demonstrate the use of key features of the Unity toolset needed to create 3D games

- Identify the different Editor windows and their purposes
- Use common hotkeys and shortcuts in the Scene view
- Configure a Unity Project for 3D development

Configure engaging game environments using project assets

- Create and configure physically based materials
- Use imported assets to build levels
- Create level component Prefabs for reuse throughout the game
- Apply Colliders for Physics interactions
- Modify default lighting to achieve more realistic effects

Create a feature complete character controller for user interactions

- Use the Animator to manage different animation states
- Configure imported animation clips to blend appropriately with other animations
- Integrate scripts to create a Player controller with keyboard input
- Use a Cinemachine camera to create the third person camera effect
- Build a UI to display game data

Implement scripts to create gameplay mechanic structures

- Create Navigation meshes for enemy Pathfinding
- Configure NavMesh Agents to work with Navigation meshes
- Integrate scripts to create enemy behaviors

Prepare completed projects for publishing

- Configure build settings for PC or Mac games

Activities

- Introduction: Learning Action Plan and course overview
- Activity 1: Unity Editor Basics
- Activity 2: Creating Environments
- Activity 3: Creating the Player
- Activity 4: Implementing Gameplay
- Activity 5: User Feedback and Publishing
- Wrap-up: Updating your Learning Action Plan and next steps

What to Bring

- Each participant will need to bring a laptop (Windows or OSX), power supply (including any necessary international adapters), and mouse.
- Install Unity prior to the workshop (minimum requirement of Unity 2018.1)