

Fromatio Unreal Engine 5: Creating Video Games

3 days (21 hours)

Overview

Unreal Engine allows you to design interactive video games using its Blueprint visual programming system, without requiring advanced C++ development.

Our Unreal Engine course: Video Game Development with Blueprint will enable you to create a playable mini-game by mastering the basics of gameplay, controls, interactions, and the user interface.

You will learn to understand the Gameplay Framework, create a playable character, configure inputs, work with Blueprints, and build simple game mechanics.

You will be able to implement interactions with the environment, collectible items, doors, triggers, a score system, objectives, and an interface with UMG.

By the end of this course, you will be able to design, test, and package a playable mini-game using Unreal Engine and Blueprint.

Like all our courses, this one will introduce you to **the latest stable version** of the technology and its new features.

Objectives

- Understand Unreal Engine's Gameplay Framework.
- Create game mechanics with Blueprint.
- Set up a playable character, controls, and a camera.
- Implement interactions, collectible items, and triggers.
- Create a user interface with UMG.
- Finalize and package a playable mini-game.

Target Audience

- Game designers
- Beginner developers using Unreal Engine
- Technical artists
- 3D artists looking to create interactive experiences
- Professionals looking to prototype a video game with Blueprint

Prerequisites

- Basic knowledge of the Unreal Engine interface.
- General understanding of programming logic is appreciated.
- No C++ proficiency is required.
- Some experience in 3D creation or game design is a plus.

Technical Prerequisites

- Latest version of Unreal Engine installed
- Windows 11
- Recent multi-core processor
- Minimum 16 GB of RAM, 32 GB recommended
- Dedicated graphics card compatible with DirectX 12
- Mouse with scroll wheel recommended

Unreal Engine Training Program: Video Game Development

[Day 1 - Morning]

Fundamentals of the Gameplay Framework and Blueprint

- Understanding the role of Unreal Engine in video game development
- Discover the Gameplay Framework: GameMode, Pawn, Character, PlayerController
- Understanding the visual logic of Blueprint
- Working with variables, events, functions, and conditions
- Organizing a video game project with a clear structure
- Hands-on workshop: Create your first Blueprints and trigger simple events in a playable scene.

[Day 1 - Afternoon]

Playable character, controls, and camera

- Creating a playable character with Character and Pawn

- Configure keyboard, mouse, or controller inputs
- Set up player movement
- Set up a game camera
- Understand the interactions between PlayerController, Character, and GameMode
- Hands-on workshop: Create a playable character with movement, camera, and basic controls.

[Day 2 - Morning]

Gameplay interactions and collectible items

- Creating interactions between the player and the environment
- Using Collisions, Triggers, and Overlap Events
- Implement collectible items
- Creating doors, switches, and simple mechanisms
- Managing game states with variables and conditions
- Hands-on workshop: Create a playable level with collectible items, doors, and simple interactions.

[Day 2 - Afternoon]

User interface, scoring, and progression

- Creating an interface with UMG
- Display a score, messages, and gameplay information
- Update the interface from Blueprints
- Create a simple level objective
- Manage win and loss conditions
- Hands-on workshop: Add a game interface with a score, objectives, and player feedback.

[Day 3 - Morning]

Advanced Blueprints and minigame logic

- Structuring maintainable Blueprints
- Using functions, macros, and reusable components
- Managing communication between Blueprints
- Creating a simple gameplay loop
- Organizing assets, levels, and interactive elements
- Hands-on workshop: Structuring the complete logic of a minigame with reusable Blueprints.

[Day 3 - Afternoon]

Finalizing, testing, and packaging the game

- Testing and debugging a Blueprint project

- Fixing common gameplay errors
- Optimizing simple Blueprints
- Preparing the project for packaging
- Exporting a playable version of the mini-game
- Hands-on workshop: Finalize, test, and package a playable mini-game developed with Unreal Engine.

Target Audience

This training is intended for both individuals and companies, large or small, wishing to train their teams in new advanced IT technologies or to acquire specific professional knowledge or modern methods.

Assessment upon enrollment

The pre-training assessment complies with Qualiopi quality standards. Upon final registration, the learner receives a self-assessment questionnaire that allows us to evaluate their estimated proficiency in various types of technologies, as well as their expectations and personal goals regarding the upcoming training, within the limits imposed by the selected format. This questionnaire also allows us to anticipate certain connection or internal security issues within the company (intra-company or virtual classroom) that could pose challenges for monitoring and ensuring the smooth running of the training session.

Teaching Methods

Practical Course: 60% Practical, 40% Theory. Training materials distributed in digital format to all participants.

Organization

The course alternates between theoretical input from the trainer, supported by examples and reflection sessions, and group work.

Assessment

At the end of the session, a multiple-choice questionnaire is used to verify that the skills have been properly acquired.

Certification

A certificate will be issued to each trainee who has completed the entire training program.