



Learn 3D GameDev From Zero With Godot 4

Take your skills into the third dimension!

- ✓ Beginner-friendly (Level II)
- ✓ 60 day "no questions asked" refund policy
- ✓ Lifetime access


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 **EARLY ACCESS**
APR 30, 2024

 **GODOT VERSION**
Latest (Godot 4+)

 **DURATION**
Self-paced

 **LANGUAGE**
English

 **PREREQUISITES**
Learn 2D GameDev

Important Notice:

Throughout Early Access, this outline is provided for reference only. It remains subject to modification based on user feedback and other pedagogical factors.

Course content: 15 modules featuring GDquest Edtech:

- ✓ **GDSchool:** GDQuest's unique, integrated learning platform dedicated to gamedev education. GDSchool is packed with interactive tools, study guides, glossary terms, code references, quizzes and practices integrating lessons and in-Godot practices.
- ✓ **GDPractice:** Gamedev exercises validated directly in the Godot editor using GDQuest's Live Testing Panel.
- ✓ **GDTour:** In-Godot wizards providing step-by-step interactive GDQuest tutorials with live validation.

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Module 1. Introduction

ETA: 30 min - 1 hr

Get to know GDQuest's gamedev teaching method. Understand what to expect from the course and how its thematic approach will build upon your foundations to include the skills required for 3D gamedev.

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Module 2. Get to know 3D

ETA: 1 - 2 hrs

Get familiar with the 3D workflow in Godot with a series of interactive tours that guide you as you explore an existing game project and assemble your first 3D mini-level from pre-made parts.

Gamedev concepts: Basics of 3D nodes, intro to 3D transforms, setting up 3D cameras, creating lights, specifying materials.

✓ **Godot Tours** ✓ **GDSchool**

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Module 3. Gobot the Sorcerer

ETA: 4 - 6 hrs

Code a character controller in a 3D action game with a fixed overhead camera and spell firing mechanics.

Gamedev concepts: 3D transforms with overhead view, setting up a 3D camera, review of loading and instancing scene, hit and hurt boxes, kill plane, overview of how to create a 3D game level, using visual effects to enhance gameplay.

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Module 4. Patrol, Alert, Attack!

ETA: 4 – 6 hrs

Code two mobs that attack the player with behaviors controlled via a finite state machine. One is a flying mob that charges the player and the other stomps the ground and deals damage in an area.

Gamedev concepts: Programming a state machine and using it, using state machines for enemy AI, creating an AoE (Area of Effect) attack.

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Module 5. Turn on the lights! First-Person camera and 3D interactions

ETA: 4 – 6 hrs

Code a first-person character controller with only the camera and the ability to interact with objects in the game scene with the mouse. The character can move, walk, shoot and turn lights or switches on and off.

Gamedev concepts: 3D character body, 3D collisions, rotating a 3D camera, interacting with the environment, moving and strafing.

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Module 6. What's in the Chest

ETA: 3 – 5 hrs

Reusing the first-person character from the previous module, code a chest that spawns random loot.

Gamedev concepts: 3D rigid bodies, instancing scenes at runtime, interaction with mouse, areas, interactions with the keyboard.

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Module 7. Walk in the Park. Third Person Character Movement

ETA: 5 – 8 hrs

Using an animated model, set up and use a character controller in third-person view, with a camera that pivots around its shoulders.

Gamedev concepts: Third-person character movement, walking on slopes, third-person camera movement, input direction relative to camera orientation, coding a simple jump, separating the character skin from the character controller.

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Module 8. New Coat of Paint. Design a level and make it look pretty

ETA: 5 – 8 hrs

Create a bounded level for the third-person character you created in the previous module. Add lights, shadows, and built-in post-processing effects.

Gamedev concepts: Greyboxing, importing 3D assets, basic 3D level design, adding lights, setting up a 3D environment, setting up 3D collisions for the environment, setting up standard 3D materials, revision of kill plane.

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Module 9. It's Alive. Set up an animation Tree

ETA: 3 – 5 hrs

Start with a raw character model in GLTF format with a library of animations. Learn to set up the animation tree and the animation state machine. Turn the model into a drop-in replacement skin for the third-person character controller.

Gamedev concepts: Scene inheritance, animation tree, animation state machine, creating an API.

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Module 10. Where's Gobot? Branching Dialogue

ETA: 6 – 8 hrs

Reuse and extend the dialogue system introduced in the 2D course. Set up a 3D NPC (Non-Playable Character), start the dialogue and switch the camera to show who is talking.

GameDev concepts: Data structures, creating a dialogue UI, using 2D and 3D scenes together, switching cameras, interacting with an NPC, dialogue system.

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Module 11. To the Exit. AI Pathfinding and Remote Interactions

ETA: 5 – 7 hrs

Code point-and-click controls for a character. When you click on an interactive object in the environment, the character moves to the target and interacts with it.

GameDev concepts: Pathfinding with navigation, navigation region, navigation mesh baking, implementing AI actions (e.g. NPC opening a door), queuing AI actions (e.g. move and press button), review of mouse input in 3D.

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Module 12. Sophia's Rainbow: 3D Platformer

ETA: 7 – 9 hrs

Students code a 3D platformer character controller with a jump with controllable height, and steering and inertia in the base motion. They also get to play with collectibles and power ups.

GameDev concepts: Review of third-person controllers, rigid bodies, third-person camera, jump, and more.

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Module 13. Time to Fight! Add Stomp and Attack to the Platformer

ETA: 5 – 8 hrs

Explore combat mechanics. Code mobs that smartly find paths towards the player character and damage it upon touching it on the ground. However, if the player character jumps on the enemy, it's the enemy that gets damaged.

GameDev concepts: Applying AI navigation to a mob, hit and hurt boxes, attack mechanics, detecting the position and angle of a collision (stomping mechanic).

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Module 14. The Final Challenge. Create a 3D Adventure Game

ETA: 10 – 20 hrs

Build a 3D action or adventure game by re-implementing and combining mechanics you learned in previous modules. Decide on the game's goals and choose how much combat and which mechanics you want to put in the final project.

GameDev concepts: Review of everything in the course, assembling a game from smaller components.

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Module 15. Where to Go from Here

ETA: 30 min – 1 hr

Take stock of what you've learned in this course.

Get some pointers to continue your journey as a game developer.

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