3D Digital Art Software

Course Overview

This course teaches students how to use Blender, a free and open-source 3D creation software, to create and edit 3D graphics. The course will cover the basics of Blender, including its tools and features, and how to use them to create, manipulate, and enhance 3D models. Students will learn how to work with objects, apply textures, create animations, and render their final projects.

Course Objectives

- Learn to navigate and utilize Blender's interface for 3D modeling effectively.
- Apply textures and materials for realistic model appearances.
- Practice animation skills for dynamic scene creation.
- Understand and apply rendering techniques for high-quality outputs.
- Explore particle systems and physics simulations for enhanced visual effects.

Udemy Link

https://www.udemy.com/share/104tuU3@v9VG15WCgGENWnOXo8u10PHqacerYUucBpyZE0RadG7sUtBqt4vHgbqLXkp3kJF8rw==/

Unit 1: Intro to Blender

Explain Blender and give a course overview. Describe the basic interface and navigation tools, and introduce the concept of 3D modeling.

- ☐ What is Blender and why use it?
- ☐ Interface overview: Viewport, properties panel, and tool shelf
- ☐ Basic tools: Move, rotate, and scale
- ☐ Navigating in 3D space: Pan, zoom, and orbit
- ☐ Working with objects: Adding, duplicating, and deleting
- ☐ Unit 1 Project - Create a basic scene with multiple objects and experiment with moving, rotating, and scaling them.

Unit 2: Texturing and Materials

Introduce students to texturing and materials in Blender, and how to apply them to 3D models.

- ☐ Material properties: Diffuse, specular, and normal maps
- ☐ UV mapping: Unwrapping a model's surface for texturing

- ☐ Applying textures: Creating and importing texture maps
- ☐ Introduce complementary software (e.g., Substance Painter) for texturing to expose students to industry-standard workflows.
- ☐ Creating and editing materials: Adding and adjusting materials to a model
- ☐ Unit 2 Project - Create a textured model of a simple object, such as a cube or sphere.

Unit 3: Animation and Rendering

Teach students how to create animations and render their final projects in Blender.

- ☐ Animation basics: Keyframes, animation curves, and the timeline
- ☐ Animating objects: Moving, rotating, and scaling over time
- ☐ Animating cameras: Creating and adjusting camera paths
- ☐ Rendering: Choosing render settings and exporting final images and videos
- ☐ Modifiers: Altering a model's geometry with modifiers
- ☐ Particles: Creating particle systems for effects like fire and smoke
- ☐ Physics simulation: Creating realistic physics simulations for objects
- ☐ Rigging and animation: Adding an armature and rigging a model for animation
- ☐ Unit 3 Project - Create an animated scene with multiple objects and a moving camera.