Blender Essentials: A 10-Week Intensive Course

Course Objective

Gain a comprehensive understanding of Blender for general-purpose 3D graphics creation.

Duration

10 Weeks

Study Days

Monday, Wednesday, Thursday

Assignments

Weekly, due every Sunday

Week 1: Introduction to Blender

- Monday: Introduction to Blender Interface
  - The BEST Way To Learn Blender in 2023!!
- Wednesday: Basic Navigation in 3D Space
  - Blender 3.4 tutorial for absolute beginner 2023 - Introduction
- Thursday: Object Mode vs. Edit Mode
  - Learn Blender 3D in 20 Minutes! Blender Tutorial for Absolute Beginners (2023)
- Assignment: Design a mini 3D park using basic shapes. Create trees, benches, and a pathway, focusing on using different shapes and arranging them creatively.

Week 2: Modeling Basics

- Monday: Creating and Modifying Basic Shapes
  - Super simple shapes in Blender (Tutorial)
- Wednesday: Introduction to Mesh Editing
  - Beginners Blender 3D: Tutorial 4 - Creating and Modifying Objects
- Thursday: Extruding and Insetting Faces
  - Blender 3D for Beginners - Ep03 - Basic shapes, Edit Mode and Transforming Objects

- Assignment: Create a themed chess set where each piece represents a different character or object, challenging you to use basic modeling techniques for varied shapes.

Week 3: Advanced Modeling Techniques

- **Monday:** Using Modifiers for Non-Destructive Editing

  – Blender: All you need to know about modifiers in general

- **Wednesday:** Sculpting Basics

  – Introduction to Modifiers in Blender

- **Thursday:** Introduction to Texturing

  – Simple, Non-Destructive 3D Modeling for Efficiency- Blender Beginner Tutorial

- **Assignment:** Design a futuristic vehicle using advanced modeling techniques. Add textures to give it a realistic or sci-fi look, depending on your creative vision.

Week 4: Materials and Texturing

- **Monday:** Basics of Material and Textures

  – The Ultimate Guide to MATERIALS in Blender Part 1 - Materials for Beginners!

- **Wednesday:** UV Mapping for Texture Application

  – MATERIALS For Absolute Beginners - Blender Tutorial

- **Thursday:** Procedural Textures and Nodes

  – Blender - Basic Materials and Textures

- **Assignment:** Create a small virtual room and apply different textures and materials to various objects (like walls, furniture, and decor) to practice texture mapping and material creation.

Week 5: Lighting and Rendering

- **Monday:** Introduction to Lighting in Blender

  – Blender 3.0 Beginner Tutorial Part 13: Lighting

- **Wednesday:** Camera Angles and Composition

  – Complete Guide to Blender LIGHTING | Step by Step Tutorial

- **Thursday:** Basics of Rendering

  – Blender Lighting Tutorial for 3D Beginners - Learn how to Light

- **Assignment:** Stage a dramatic scene (like a moody café or a bright beach scene) and use lighting to set the mood. Experiment with different camera angles to find the most compelling shot.

Week 6: Animation Basics

- **Monday:** Keyframe Animation
  - Blender-Keyframing & Animation
- **Wednesday:** Animating Movement and Rotation
  - Blender 3D - Keyframe Animation for Beginners
- **Thursday:** Introduction to the Graph Editor
  - Blender Animation Tutorial - Beginner Basics - Keyframes
- **Assignment:** Create a short story where an inanimate object (like a toy or a ball) comes to life and navigates through a simple obstacle course, practicing keyframe animation and movement.

Week 7: Advanced Animation

- **Monday:** Rigging and Skinning
  - QUICK RIGGING AND SKINNING IN BLENDER
- **Wednesday:** Character Animation Basics
  - Blender 3D Tutorial - Rigging (pt. 3) Skinning Characters for Posing & Animations
- **Thursday:** Non-Linear Animation and the NLA Editor
  - Tutorial: My New Rigging Workflow in Blender
- **Assignment:** Animate a dance routine for a character you've designed, focusing on fluid motion and character expression.

Week 8: Simulation and Effects

- **Monday:** Physics Simulations Basics
  - [2.92] Blender Tutorial: Quick Physics Simulation for Beginners
- **Wednesday:** Particle Systems
  - See the Blender Physics Simulation Tutorials playlist
- **Thursday:** Introduction to Smoke and Fire Simulation
  - Blender Tutorial: Physics Simulation
- **Assignment:** Design a magical scene where you use particle effects to simulate something fantastical, like a wizard casting a spell or a forest filled with floating lights.

Week 9: Compositing and Post-Processing

- **Monday (Basics of Compositing in Blender):**
  - Blender 3.0 Beginner Tutorial Part 14: Compositing - Introduction to compositing in Blender.
- **Wednesday (Nodes for Compositing):**
  - Introduction to Compositing in Blender - Using nodes for compositing.
- **Thursday (Introduction to Post-Processing Effects):**
  - Compositing in Blender for Beginners (Tutorial) - Learning about post-processing effects.
- **Assignment:** Create a short clip where you integrate a 3D object into real-life footage. Use compositing to make the integration as seamless as possible, adding effects like shadows or reflections for realism.

Week 10: Final Project

- **Monday-Thursday:** Work on Final Project.

- **Final Project:** Develop a comprehensive 3D project that tells a story, showcases a concept, or demonstrates an idea you're passionate about. This project should incorporate all the skills you've learned, from modeling and texturing to animation and compositing.

- **Due Date:** End of Week 10 (Sunday).