

## COURSE OUTLINE

# 3D ANIMATION WITH BLENDER

Blender software is a free and open-source toolset used for professional-grade 3D computer graphics. It offers a range of features such as modeling, rigging, animation, simulation, rendering, compositing, and motion tracking. The software is highly versatile and has broad applications in visual effects, game design, architectural visualization, and animations.

Since Blender is a low-cost alternative to expensive 3D software, many industries use it to create high-quality 3D content. Professionals who undergo this training can make the most of the software's capabilities to complete complex creation tasks more efficiently. Therefore, this training is a testament to the holder's proficiency in 3D design and animation.

## Course Details



### Duration

5 Days

Monday - Friday

9.00 am - 5.00 pm



### Location

Plaza Glomac, Kelana Jaya,  
Selangor



Educ8 Technology



### Prerequisite

Participants of Blender Training should have basic knowledge of 3D modeling and feel comfortable using the Microsoft Windows desktop environment.



### Target Group

This course is directed at Artists, Game developers and product designers, as well as any other beginner or professional who wants to achieve a photorealistic render, animation, VR and simulation at a professional level.

## Course Objectives

After completing this course, participants are expected to be able to:

- Understand how to create 3D models and the game assets using Blender 3D.
- Understand the principles and core concepts of 3D modeling.
- Explore a variety of modes and tools for modeling and editing 3D meshes.
- Learn how to create animations and visual effects with Blender.
- Add curves, surfaces, metaballs, and hair particles to simulate realistic 3D motions.
- Use the tools for UV mapping/unwrapping, sculpting, and painting 3D models.
- Export 3D models and assets to a game engine, 3D printer, or other software.

Brought to you by:



Contact Us



+603 7883 0530



[www.educ8technology.com](http://www.educ8technology.com)

# Course Outline

## Module 1: Introduction to Blender

- Overview
- Features of Blender
- Blender Installation

## Module 2: Editing Basics

- Types of editors
- Switching between edit and object modes
- Vertices, edges, and faces
- Editing mesh data and objects

## Module 3: Modeling Meshes

- Modeling modes
- Structuring meshes
- Adding primitives
- Selecting and editing meshes
- Object data, vertex groups, and custom data
- UV maps and unwrapping
- Mesh analysis and retopology

## Module 4: Curves and Surfaces

- Tools and structure
- Bézier and NURBS
- Transforming objects
- Shapes and splines

## Module 5: Metaballs and Hair Particles

- Tools and structure
- Adding and editing meta objects
- Using grease pencil
- Modifying particles

## Module 6: Sculpting and Painting

- Enabling selection masking
- Using the brush tool
- Shaping models in sculpt mode
- Adaptive sculpting methods
- Editing UV textures and images

## Module 7: Animation and Rigging

- Keyframes and keying sets
- Using armature for rigging
- Applying the lattice
- Constraints, actions, and drivers
- Markers, shape keys, and motion paths

## Module 8: Rendering 3D Scenes

- Render engines in Blender
- Eevee, cycles, and workbench
- Using cameras, light objects, and materials
- Shading nodes and color management
- Freestyle non-photorealistic (NPR) rendering
- Using layers and passes
- Rendering and previewing animations

## Module 9: Exporting Files

- Supported media formats
- Exporting files to Alembic
- Using the Collada module
- Exporting files as USD, SVG, and PDF

Brought to you by:



**Contact Us**



+603 7883 0530



[www.educ8technology.com](http://www.educ8technology.com)