

# Blender 3D – Basic Course

Course code: BLEND1

In the first part of the course you will be introduced to the theoretical level of basic concepts of 3D production graphics - modeling, UV mapping, texturing, material preparation, rigging, animation, lighting and rendering. In the second part of the course you will work in open-source (free) software Blender 3D. You will learn the basics of 3D modeling and create your simple model, prepare a scene where you put it, prepare materials to use as texture, add lights to the scene, prepare a camera and eventually create output in the form of images and animations. The course is very suitable as an introduction to the world of 3D graphics in general, can continue in any other 3D software.

## Who is the course for

The course is designed for beginners in 3D graphics. It is assumed basic knowledge of 2D graphics.

## Required skills

Basics in common 2D graphics programs (Photoshop, Illustrator or alternatives).

## Course outline

### Introduction

- theory and principles of 3D modeling
- overview of the possibilities of the program Blender 3D
- installation of Blender 3D
- basic control Blender 3D - orientation in 3D space, types of navigation
- list of types of windows, introduction to 3D view property window, outliner

### Creating 3D scenes

- objects in the scene and basic work with them - adding, transformation, rotation, scaling
- basics of objects mesh, curve, text, metaball, empty
- modeling mesh in edit mode - selection, transformation, extrusion, adding / deleting geometry
- sculptural modeling tools
- modifiers and their use
- organization of scenes, organizing hierarchical scene
- texture
- camera work
- animation - keyframing object level
- animation - shape key
- introduction to advanced techniques - armature, rigging, vertex groups, vertex colors, constraints, drivers, action, NLA

### Rendering using Cycles renderer

- material adjustment
- lights
- rendering the scene and output settings, animation output settings

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