

# Course : Blender, mastering 3D creation

Practical course - 4d - 28h00 - Ref. LEB

Price : 1940 CHF E.T.

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You will master the advanced aspects of 3D object modeling. You'll discover new animation modes and learn to create new textures and renderings. You'll be able to video-edit your animations and discover the powerful Python scripting language.

## Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Create new textures and renderings
- ✓ Animate an object using the frame system
- ✓ Mastering physical simulations
- ✓ Video editing of your animations
- ✓ Apply Python scripts to 3D models

## Intended audience

Architects, builders, draughtsmen, designers, engineers, design office managers.

## Prerequisites

Good knowledge of Blender or knowledge equivalent to that acquired in the course " Blender, an introduction to 3D creation " (ref. LER).

## Course schedule

### 1 Advanced modeling

- Using loops.
- Topology and retopology.
- Modifiers: Decimate, Boolean, Multiresolution, Skin, Displace.

## Hands-on work

Create a model on top of another. Reshape an area of the model with a " brush ".

## PARTICIPANTS

Architects, builders, draughtsmen, designers, engineers, design office managers.

## PREREQUISITES

Good knowledge of Blender or knowledge equivalent to that acquired in the course " Blender, an introduction to 3D creation " (ref. LER).

## TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

## ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.

Participants also complete a placement test before and after the course to measure the skills they've developed.

## 2 Sculpt Mode

- Sculpting tools.
- Brush customization.
- Create a brush from a volume.
- Baking from Normal Maps.

### Hands-on work

Create a custom brush.

## 3 Nodal materials

- Node principle.
- The silky effect.
- Use metallic paint.
- Example of the ghost effect.

### Hands-on work

Create a metallic paint finish.

## 4 Skeletal animation

- Creation of a framework.
- Assign a model to the framework using Envelopes and Bone Heat Painting.
- Inverse kinematics.
- Stresses in the framework of an armature.

### Hands-on work

Animate an object using the armature system.

## 5 Non-linear actions editor

- Discover the non-linear actions editor.
- Different operating modes: simple, combined.
- Obtain a composite animation.
- Add and mix action tracks.

### Hands-on work

Adding and mixing action strips.

## 6 Physics and particles

- Introduction and adjustment of gravity.
- Physics, Flexible bodies, Rigid bodies.
- Simulation of fabrics, fluids and smoke.
- Use the generic, dynamic and static particle engine.
- Go further with simulations, Obstacles, Force fields and Influences.

### Hands-on work

Creation of a haircut.

## TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

## TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

## ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at [psh-accueil@orsys.fr](mailto:psh-accueil@orsys.fr) to review your request and its feasibility.

## 7 Video editing

- The VSE.
- Combine multiple video tracks and apply effects to them.
- Stabilisation d'une vidéo.
- Add an audio track.
- Make the final film.

### Hands-on work

Edit an animation.

## 8 Scripting Python

- Interact with Blender through programming.
- Overview of Python scripting possibilities.
- Manipulate 3D objects using Python scripts.

### Demonstration

Application of Python scripts on a Blender 3D model.