

## Course guide

### 320147 - PP - Product Presentation

**Last modified:** 19/04/2023

**Unit in charge:** Terrassa School of Industrial, Aerospace and Audiovisual Engineering  
**Teaching unit:** 717 - DEGD - Department of Engineering Graphics and Design.

**Degree:** BACHELOR'S DEGREE IN INDUSTRIAL DESIGN AND PRODUCT DEVELOPMENT ENGINEERING (Syllabus 2010). (Compulsory subject).

**Academic year:** 2023    **ECTS Credits:** 6.0    **Languages:** Catalan

#### LECTURER

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**Coordinating lecturer:** Jordi Voltas i Aguilar

**Others:** Rosó Baltà  
Oriol Quin

#### DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

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##### Specific:

CED20-DIDP. Ability to design and project in different environments of effective and efficient communication with the different agents involved in the industrial design and development process. (Specific technology module: industrial design).

CED21-DIDP. Ability to make decisions regarding the graphic representation of concepts. (Specific technology module: industrial design).

CED22-DIDP. Ability to apply specific methods, techniques and instruments for each form of technical representation. (Specific technology module: industrial design).

CED23-DIDP. Knowledge of design topology, products, and their presentation. (Specific technology module: industrial design).

CED27-DIDP. Knowledge of advanced 3D modeling. (Specific technology module: industrial design)

CED28-DIDP. Knowledge of basic 3D animation and simulation. (Specific technology module: industrial design)

CED61-DIDP. Practical knowledge of product detail design. (Specific technology module: Industrial Design)

CED62-DIDP. Practical ability to analyze the form, composition, and structure of the product. (Specific technology module: Industrial Design)

##### Generical:

CG02-DIDP. Acquisition of technical, scientific, humanistic, aesthetic, environmental and creativity enhancing knowledge and procedures necessary for professional practice related to product design.

#### TEACHING METHODOLOGY

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- Theoretical classes
- Practical classes (individual or in group)
- Project development (individual or in group)

#### LEARNING OBJECTIVES OF THE SUBJECT

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Optimal presentation of projects in three-dimensional environments.

Assimilation of the basic principles of animation in terms of simulation chambers.

The application of the principles of visual language.

Generation of three-dimensional animations.

Generation of audiovisual elements that mix real and virtual elements.



## STUDY LOAD

Type	Hours	Percentage
Hours large group	15,0	10.00
Self study	90,0	60.00
Hours small group	45,0	30.00

**Total learning time:** 150 h

## CONTENTS

### TOPIC 1: Principles of animation

**Description:**

- 1.1. Fotorealistic environments
- 1.2. Virtual cameras
- 1.3. Rendering

**Related activities:**

Reading and analysis of sample material.

**Full-or-part-time:** 10h

Laboratory classes: 4h

Self study : 6h

### TOPIC 2: Global lighting models

**Description:**

- 2.1. Lighting photon map based
- 2.2. Lighting image based (IBL)

**Specific objectives:**

Rendering using photon map systems  
Rendering using IBL systems

**Related activities:**

Reading and analysis of sample material  
Solving on concret exercices  
Layout of own proposals models.

**Full-or-part-time:** 10h

Laboratory classes: 4h

Self study : 6h

### TOPIC 3: Textures

**Description:**

- 3.1. Basic materials
- 3.2. Textures
- 3.2. Sample material collections
- 3.3. Unwrapping methods

**Specific objectives:**

Applying textures  
Using rendering engines

**Related activities:**

Reading and analysis of sample material  
Solving on concret exercices  
Layout of own proposals models.

**Full-or-part-time:** 20h

Laboratory classes: 8h

Self study : 12h

### TOPIC 4: Indoor and outdoor scenes

**Description:**

- 4.1. Outdoor lighting
- 4.2. Indoor lighting
- 4.3. Exposure compensation
- 4.4. Lighting day / night

**Specific objectives:**

Applying audiovisual standards on lights and cameras to producte presentation images of products.

**Related activities:**

Reading and analysis of sample material  
Solving on concret exercices  
Layout of own proposals models.

**Full-or-part-time:** 20h

Laboratory classes: 8h

Self study : 12h

### (ENG) TEMA 5: Introduction at 3D Animation

**Description:**

- 5.1. Animation by keyframe.
- 5.2. Dummies use
- 5.3. Animation curves edition
- 5.4. Parametric animation.
- 5.5. Camera animation.
- 5.6. Lights animation.

**Specific objectives:**

Setup of animation environments  
Do 3d animations of products to be presented

**Related activities:**

Reading and analysis of sample material  
Solving on concrete exercises  
Layout of own proposals models.

**Full-or-part-time:** 20h

Laboratory classes: 8h

Self study : 12h

### TEMA 6: Advances animation

**Description:**

- 6.1. Particles animation
- 6.2. Physics

**Specific objectives:**

Add realism at product presentations using particle animation and physics.

**Related activities:**

Reading and analysis of sample material  
Solving on concrete exercises  
Layout of own proposals models.

**Full-or-part-time:** 20h

Laboratory classes: 8h

Self study : 12h

## TEMA 7: Integración

### Description:

- 7.1. Camera matching
- 7.2. Integration
- 7.3. Rendre elements
- 7.4. Editing and compositign

### Specific objectives:

Mixing real and virtual models on product presentations

### Related activities:

Reading and analysis of sample material  
Solving on concret exercices  
Layout of own proposals models.

### Full-or-part-time: 20h

Laboratory classes: 8h

Self study : 12h

## GRADING SYSTEM

The course is graded on the following areas:

- Presentation of individual works
- Presentation of projects
- Theory

40% Exams

20% Exam 1

20% Exam 2

Practices and deliverables along course: 60%

For those students who meet the requirements and submit to the reevaluation examination, the grade of the reevaluation exam will replace the grades of all the on-site written evaluation acts (tests, midterm and final exams) and the grades obtained during the course for lab practices, works, projects and presentations will be kept.

If the final grade after reevaluation is lower than 5.0, it will replace the initial one only if it is higher. If the final grade after reevaluation is greater or equal to 5.0, the final grade of the subject will be pass 5.0.

## EXAMINATION RULES.

Assistance at practices is compulsory.

The evaluation methodology will be:

- Questionnaires
- Evaluation of all the deliveries
- Correction process and participation by students

## BIBLIOGRAPHY

### Basic:

- Brooker, Darren. Essential CG lighting techniques with 3ds Max. 3rd ed.. Oxford: Focal Press Elsevier, 2008. ISBN 9780240521176.
- Eissen, Koos; Steur, Roselien. Sketching product design presentation. Amsterdam: BIS Publishers, 2014. ISBN 9789063693299.
- Robertson, Scott; Bertling, Thomas. How to render: the fundamentals of light, shadow and reflectivity. Culver City, CA: Design Studio Press, 2014. ISBN 9781933492964.