Course guide  
320147 - PP - Product Presentation

**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:** 2022  
**ECTS Credits:** 6.0  
**Languages:** Catalan, Spanish

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**LECTURER**

**Coordinating lecturer:** Jordi Voltas i Aguilar  
**Others:** Rosó Baltà  
Oriol Quin

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**DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES**

**Specific:**
1. DES: Ability to design and project in different situations, effectively and efficiently with different agents involved in the process of design and industrial development.
2. DES: Ability to take decisions related to the graphic representation of concepts.
3. DES: Ability to apply specific methods, techniques and instruments for each form of technical drawing.
4. DES: Knowledge of the types of design and products, and their presentation.
5. DES: Knowledge of basic animation and 3D simulation.

**Transversal:**
6. SELF-DIRECTED LEARNING - Level 2: Completing set tasks based on the guidelines set by lecturers. Devoting the time needed to complete each task, including personal contributions and expanding on the recommended information sources.
7. TEAMWORK - Level 3. Managing and making work groups effective. Resolving possible conflicts, valuing working with others, assessing the effectiveness of a team and presenting the final results.

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**TEACHING METHODOLOGY**

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

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**LEARNING OBJECTIVES OF THE SUBJECT**

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

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Hours small group</td>
<td>45,0</td>
<td>30.00</td>
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<tr>
<td>Self study</td>
<td>90,0</td>
<td>60.00</td>
</tr>
<tr>
<td>Hours large group</td>
<td>15,0</td>
<td>10.00</td>
</tr>
</tbody>
</table>

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 exercises
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 exercises
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 produce presentation images of products.

Related activities:
Reading and analysis of sample material
Solving on concret exercises
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.

**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. Fisics

**Specific objectives:**
- Add realism at product presentations using particle animation and fisics.

**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. Rendere elements
7.4. Editing and compositing

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: