320147 - PP - Product Presentation

Coordinating unit: 205 - ESEIAAT - Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 717 - EGE - Department of Engineering Presentation
Academic year: 2018
Degree: BACHELOR'S DEGREE IN INDUSTRIAL DESIGN AND PRODUCT DEVELOPMENT ENGINEERING (Syllabus 2010). (Teaching unit Compulsory)
ECTS credits: 6
Teaching languages: Catalan, Spanish

Teaching staff
Coordinator: Jordi Voltas i Aguilar
Others: Rosó Baltà

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.

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

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>Total learning time: 150h</th>
<th>Hours large group: 15h</th>
<th>10.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hours medium group: 0h</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>Hours small group: 45h</td>
<td>30.00%</td>
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<tr>
<td></td>
<td>Guided activities: 6h</td>
<td>4.00%</td>
</tr>
<tr>
<td></td>
<td>Self study: 84h</td>
<td>56.00%</td>
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</table>
## Content

### 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.

**Learning 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)

**Related activities:**
- Reading and analysis of sample material
- Solving on concrete exercises
- Layout of own proposal models.

**Specific objectives:**
- Rendering using photon map systems
- Rendering using IBL systems
# TOPIC 3: Textures

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

**Related activities:**
- Reading and analysis of sample material
- Solving on concrete exercises
- Layout of own proposals models.

**Specific objectives:**
- Applying textures
- Using rendering engines

## Learning time:
- 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

**Related activities:**
- Reading and analysis of sample material
- Solving on concrete exercises
- Layout of own proposals models.

**Specific objectives:**
- Applying audiovisual standards on lights and cameras to producte presentation images of products.

## Learning time:
- Laboratory classes: 8h
- Self study: 12h
### (ENG) TEMA 5: Introduction at 3D Animation

<table>
<thead>
<tr>
<th><strong>Description:</strong></th>
<th><strong>Learning time:</strong> 20h</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1. Animation by keyframe.</td>
<td>Laboratory classes: 8h</td>
</tr>
<tr>
<td>5.2. Dummies use</td>
<td>Self study: 12h</td>
</tr>
<tr>
<td>5.3. Animation curves edition</td>
<td></td>
</tr>
<tr>
<td>5.4. Parametric animation.</td>
<td></td>
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<tr>
<td>5.5. Camera animation.</td>
<td></td>
</tr>
</tbody>
</table>

**Related activities:**
- Reading and analysis of sample material
- Solving on concret exercices
- Layout of own proposals models.

**Specific objectives:**
- Setup of animation environments
- Do 3d animations of products to be presented

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### TEMA 6: Advances animation

<table>
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<tr>
<th><strong>Description:</strong></th>
<th><strong>Learning time:</strong> 20h</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1. Particles animation</td>
<td>Laboratory classes: 8h</td>
</tr>
<tr>
<td>6.2. Fisics</td>
<td>Self study: 12h</td>
</tr>
</tbody>
</table>

**Related activities:**
- Reading and analysis of sample material
- Solving on concret exercices
- Layout of own proposals models.

**Specific objectives:**
- Add realism at product presentations using particle animation and fisics.
The course is graded on the following areas:
- Presentation of individual works
- Presentation of projects
- Theory
30% Exams
15% Exam 1
15% Exam 2
Practices and deliverables along course: 70%
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.

Qualification system

TEMA 7: Integración

Learning time: 20h
- Laboratory classes: 8h
- Self study: 12h

Description:
- 7.1. Camera matching
- 7.2. Integration
- 7.3. Rendre elements
- 7.4. Editing and composition

Related activities:
- Reading and analysis of sample material
- Solving on concrete exercises
- Layout of own proposals models

Specific objectives:
- Mixing real and virtual models on product presentations

Qualification system

The course is graded on the following areas:
- Presentation of individual works
- Presentation of projects
- Theory
30% Exams
  - 15% Exam 1
  - 15% Exam 2
Practices and deliverables along course: 70%
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.

Regulations for carrying out activities

Assistance at practices is compulsory.
The evaluation methodology will be:
- Questionnaires
- Evaluation of all the deliveries
- Correction process and participation by students
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**Bibliography**

**Basic:**

