Last update: 23-04-2019

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: 2019

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.

Last update: 23-04-2019

320147 - PP - Product Presentation

Study load

Total learning time: 150h	Hours large group:	15h	10.00%
	Hours medium group:	0h	0.00%
	Hours small group:	45h	30.00%
	Guided activities:	6h	4.00%
	Self study:	84h	56.00%

Last update: 23-04-2019

320147 - PP - Product Presentation

Content

TOPIC 1: Principles of animation

Learning time: 10h
Laboratory classes: 4h
Self study : 6h

Description:
1.1. Fotorealistic environments
1.2. Virtual cameras
1.3. Rendering

Related activities:
Reading and analysis of sample material.

TOPIC 2: Global lighting models

Learning time: 10h
Laboratory classes: 4h
Self study : 6h

Description:
2.1. Lighting photon map based
2.2. Lighting image based (IBL)

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

Specific objectives:
Rendering using photon map systems
Rendering using IBL systems

Last update: 23-04-2019

320147 - PP - Product Presentation

TOPIC 3: Textures	Learning time: 20h Laboratory classes: 8h Self study : 12h

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 concret exercices
Layout of own proposals models.

Specific objectives:
Applying textures
Using rendering engines

TOPIC 4: Indor and outdoor scenes	Learning time: 20h Laboratory classes: 8h Self study : 12h

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 concret exercices
Layout of own proposals models.

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

Last update: 23-04-2019

320147 - PP - Product Presentation

(ENG) TEMA 5: Introduction at 3D Animation	Learning time: 20h Laboratory classes: 8h Self study : 12h

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.

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

Specific objectives:
Setup of animation environemts
Do 3d animations of products to be presented

TEMA 6: Advances animation	Learning time: 20h Laboratory classes: 8h Self study : 12h

Description:
6.1. Particles animation
6.2. Fisics

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.

Last update: 23-04-2019

320147 - PP - Product Presentation

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 compositign

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

Last update: 23-04-2019

320147 - PP - Product Presentation

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.