Last update: 23-04-2019

320154 - DPBE - Practical Design of Goods and Equipment

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 Optional)

ECTS credits: 6 Teaching languages: Catalan

Teaching staff

Coordinator: Francisco Bermúdez Rodríguez

Others: Tomeu Ventayol Femenías

Degree competences to which the subject contributes

Specific:

1. DES: Capability to interface design
2. DES: Ability to identify the language of shapes, their values and their relations with the cultural setting.
3. DES: Knowledge of basic animation and 3D simulation.
4. DES: Knowledge of anthropometry.
5. DES: Knowledge of the design methodology
6. DES: Knowledge of design tools for their use in design projects and product redesign.
7. DES: Advanced knowledge in 3D modeling.
8. DES: Knowledge of ergonomic needs.
9. DES: Knowledge of the types of design and products, and their presentation.

Transversal:

10. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.
11. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.
12. 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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320154 - DPBE - Practical Design of Goods and Equipment

Teaching methodology

· Face-to-face sessions of contents.
· Face-to-face practical sessions.
· Self study study and performance of exercises.
In the sessions of exhibition of the contents the professor will introduce the theoretical bases of the Subject matter, concepts, methods and results illustrating them with convenient examples to facilitate them your understanding.
In the practical work sessions the teacher will guide students in product analysis and the resolution of Problems applying theoretical techniques, concepts and results. In a second phase, students will work in the project guided by the teacher.
The students, independently, will have to study to assimilate the concepts, solve the exercises proposed and develop the project.

Learning objectives of the subject

Study load

Total learning time: 150h	Hours large group:	30h	20.00%
	Hours medium group:	0h	0.00%
	Hours small group:	30h	20.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

Last update: 23-04-2019

320154 - DPBE - Practical Design of Goods and Equipment

Content

(ENG) TEMA 1: Gestió i planificació de projectes	Learning time: 10h Laboratory classes: 4h Self study : 6h
(ENG) TEMA 2: Disseny de subsistemes	Learning time: 80h Laboratory classes: 32h Self study : 48h
(ENG) TEMA 3: Prototips	Learning time: 36h Laboratory classes: 12h Self study : 24h
(ENG) TEMA 4: Documentació	Learning time: 22h Laboratory classes: 12h Self study : 10h

Planning of activities

(ENG) PLANIFICACIÓ DE PROJECTES	Hours: 12h Laboratory classes: 4h Self study: 8h
(ENG) DISSENY DE SUBSISTEMES	Hours: 80h Laboratory classes: 32h Self study: 48h
(ENG) GENERACIÓ DE PROTOTIPS	Hours: 36h Laboratory classes: 12h Self study: 24h

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320154 - DPBE - Practical Design of Goods and Equipment

Qualification system

A continuous assessment model will be applied with the basic purpose of pondering both self-employment and teamwork from students.

The evaluation of the acquisition of knowledge, skills and abilities will be carried out from scheduled deliveries, according to the following criteria:

25% Delivery activity 1
25% Delivery activity 2
25% Delivery activity 3
15% Self-employed work
10% Attendance

Bibliography

Basic:

Melton, T.; Iles-Smith, P.; Yates, J. Project benefits management: linking your project to the business [on line]. Amsterdam: Butterworth-Heinemann, 2008 [Consultation: 09/07/2013]. Available on: <http://www.sciencedirect.com/science/book/9780750684774>. ISBN 9780750684774.

Larburu, Nicolás. Máquinas: prontuario: técnicas, máquinas, herramientas. 4ª ed. Madrid: Paraninfo, 1992. ISBN 8428319685.

Norton, Robert L. Design of machinery: an introduction to the synthesis and analysis of mechanisms and machines. 5th ed. New York: McGraw-Hill, 2012. ISBN 9780073529356.

Complementary:

Félez, J.; Martínez, M.L. Ingeniería gráfica y diseño. Madrid: Síntesis, 2008. ISBN 9788497564991.

Others resources: