

340053 - EXG2-M5017 - Graphic Expression II

Coordinating unit:	340 - EPSEVG - Vilanova i la Geltrú School of Engineering
Teaching unit:	717 - EGE - Department of Engineering Presentation
Academic year:	2019
Degree:	BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory) BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
ECTS credits:	6
Teaching languages:	Catalan, Spanish

Teaching staff

Coordinator:	JOAN JOSEP ALIAU PONS
Others:	- JOAN JOSEP ALIAU PONS - GERARD SANZ COLLADO - DANIEL ESPÍN AGÜERO

Prior skills

Knowing the rules of Industrial Design in the following contents:

- Views, Cortes i Sections.
- Dimensioning.
- Interpretation i representation of sets.
- Notions of Tolerancies and Surface Finishes.

Requirements

Is required to have taken and passed EXGR

Degree competences to which the subject contributes

Specific:

1. CE12. Knowledge of fundamental automatism and control methods.
2. CE13. Knowledge of theatrical basics of machines and mechanisms
3. CE15. Basic knowledge of production and fabrication systems.

Transversal:

4. SELF-DIRECTED LEARNING - Level 1. Completing set tasks within established deadlines. Working with recommended information sources according to the guidelines set by lecturers.
5. 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.
6. 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.
7. SELF-DIRECTED LEARNING. Detecting gaps in one's knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one's knowledge.
8. ENTREPRENEURSHIP AND INNOVATION - Level 3. Using knowledge and strategic skills to set up and manage projects. Applying systemic solutions to complex problems. Devising and managing innovation in organizations.

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Teaching methodology

Introduction of each area of knowledge.
Justification and examples of practical application.
Class exercises consolidation of content.
Exercise at home with CAD.

Learning objectives of the subject

Industrial components correctly represent to:
- To achieve the purpose for which it was designed.
- Manufacture and fit it correctly.

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%

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Content

- Dimensional Tolerances	Learning time: 2h 30m Theory classes: 1h Laboratory classes: 1h Self study : 0h 30m
- Geometric Tolerances	
Degree competences to which the content contributes:	
- Surface Finishes	
Degree competences to which the content contributes:	
- Design of components f = (Manufacturing Process)	Learning time: 150h Theory classes: 15h Practical classes: 15h Laboratory classes: 30h Self study : 90h

Qualification system

Partial 1st Test	20%
Final Exam	40%
Individual practice	40%

Regulations for carrying out activities

Be assessed individually each area of knowledge:

Representation (i Vistes Cortes)	40%
Dimension	25%
Tolerances	30%
Surface Finishes	5%

These percentages may vary depending on the exercise to be solved.

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Bibliography

Basic:

Félez, Jesús. Dibujo industrial. 3a ed. Madrid: Síntesis, 1999. ISBN 8477383316.

Auria Apilluelo, José M. Dibujo industrial : conjuntos y despieces. 2a ed. Madrid [etc.]: Paraninfo, 2005. ISBN 8497323904.

Hernández Abad, Francisco [et al.]. Ingeniería gráfica : introducción a la normalización. 3a ed. Terrassa: ETSEIAT. Departamento de Expresión Gráfica en la Ingeniería, 2006. ISBN 8460946592.

Rodríguez de Abajo, Francisco Javier. Normalización del dibujo industrial. San Sebastián: Donostiarra, 1993. ISBN 8470631810.

Others resources:

Computer material

Unigrafix NX

Resource