Course guide
220089 - EG2 - Graphic Expression II

Last modified: 08/05/2025

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 TECHNOLOGY ENGINEERING (Syllabus 2010). (Compulsory subject).

Academic year: 2025 **ECTS Credits:** 3.0 **Languages:** Spanish

LECTURER

Coordinating lecturer: Luís María Delgado Garoña

Others: Ricardo Villar
Roger Martinez Losada

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CE05-INDUS. Spatial vision and knowledge of graphic representation techniques, both by traditional methods of metric geometry and descriptive geometry, and through computer-aided design applications. (Basic training module)

TEACHING METHODOLOGY

The subjects will develop through theory and practical classes in suitable classrooms which are equipped with the software and the corresponding specific hardware.
Students will receive the knowledge and methodology for the deployment of the course in theory class. It will be put in their disposition the necessary information to consolidate this knowledge and to reinforce them.
Practices of laboratory are suitable for the concepts explained in theory class, taking into account the cumulative character of this type of knowledge.
To avoid collapse printing system and fraud, it will create a storage system controlled by teaching staff, which students will allow to print to later the work. This work will have to correspond with the file stored in the schedule of class.

LEARNING OBJECTIVES OF THE SUBJECT

- To develop vision and spatial intelligence.
- To develop imagination and transmitting it in concrete images.
- To know the form and essential characteristics of the mechanical elements.
- To determinate in shape and dimensions any piece or real mechanism.
- To conceive and represent mechanisms, graphs or outlines from ideas, functions or data.
- To carry out the graphic part of any project, so that it can be presented to an official organization.

STUDY LOAD

Type	Hours	Percentage
Hours small group	14,0	18.67
Hours large group	16,0	21.33
Self study	45,0	60.00

Total learning time: 75 h

CONTENTS

1. Representation normalized in the technicial drawings

Description:

Full-or-part-time: 37h
Theory classes: 8h
Laboratory classes: 7h
Self study : 22h

2. Graphic documentation of the projects. Mechanisms

Description:

Full-or-part-time: 38h
Theory classes: 8h
Laboratory classes: 7h
Self study : 23h

ACTIVITIES

ACTIVITY 1: REPRESENTATION NORMALIZED IN THE TECHNICIAL DRAWINGS

Description:

Full-or-part-time: 34h 30m
Self study: 22h
Theory classes: 5h 30m
Laboratory classes: 7h

ACTIVITY 2: PARTIAL EXAM

Description:

Full-or-part-time: 2h 30m
Theory classes: 2h 30m

ACTIVITY 3: MECHANISM DESIGN AND DEVELOPMENT OF CONSTRUCTION PROJECT DEVELOPMENT

Description:

Full-or-part-time: 35h 30m
Self study: 23h
Theory classes: 5h 30m
Laboratory classes: 7h

ACTIVITY 4: FINAL EXAM

Description:

Full-or-part-time: 2h 30m
Theory classes: 2h 30m

GRADING SYSTEM

The different parts will be evaluated according to the following scale:
- Works carried out in practical classes: 20%
- Examination of partial evaluation: 20%
- Final graphic project of course: 30%
- Examination of final evaluation: 30%

The final qualification will be obtained in the following way: (note that all marks are out of 10):
Nf = 0,2Ntr + 0,2Nep + 0,3Npg + 0,3Nef.
Nf: Final qualification
Ntr: Work of practical classes qualification
Nep: Partial qualification
Npg: Graphical project qualification
Nef: Final exam qualification

All those students that fail or can not attend to the partial exam, will have the opportunity to improve their mark at the final exam. If the qualification obtained at the final exam is superior to the partial's one, the mark will be substituted for a maximum qualification of 5.

EXAMINATION RULES.

One objective is to help the students to achieve the specific objectives of each module.
The teaching staff will orientate about the tool uses and about the application of the concepts explained in theory.
Practical questions of general character will be imparted. It will be required a computer with enough features and a projector with great visibility from all places.
The activity 1 will have to print it and do it handmade. Students will have to give them at the following week in paper format.
The proposed project of activity 2 will present in the specified date and duly bound in format DIN A3. The contents will be:
- Front page.
- Drawing of whole.
- Pieces list.
- Drawings of parts.

BIBLIOGRAPHY

Basic:
- Hernández Abad, Francisco [et al.]. Ingeniería gráfica: introducción a la normalización. 2a ed. Terrassa: ETSEIAT. Departamento de Expresión Gráfica en la Ingeniería, 2006. ISBN 8460946592.
- Félez, Jesús. Dibujo industrial. 3a ed. Madrid: Síntesis, 1999. ISBN 8477383316.
- Ramos Barbero, B.; García Maté, E. Dibujo técnico [on line]. 3a ed. Madrid: AENOR, 2016 [Consultation: 15/06/2022]. Available on: https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?pq-origsite=primo&docID=6774114. ISBN 9788417891237.

Complementary:
- Equip Tècnic Ediciones Don Bosco. Col.lecció Teoría de técnicas de expresión gráfica.
- Equip Tècnic Ediciones Don Bosco. Col·lecció Delineación Industrial.
- Dibujo técnico. 3a ed. Madrid: AENOR, 200. ISBN 8481434337.

RESOURCES

Audiovisual material:
- AENOR Dibujo Técnico: 3a ed. 2005, Ed. AENOR.