

30003 - Graphic expression and computer-assisted design

Syllabus Information

Academic year: 2024/25

Subject: 30003 - Graphic expression and computer-assisted design

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

Degree: 436 - Bachelor's Degree in Industrial Engineering Technology

ECTS: 6.0

Year: 1

Semester: 434-First semester o Second semester

107-First semester

Subject type: Basic Education

Module:

1. General information

This subject aims to develop the student's spatial vision, as well as to provide them with graphic representation tools that will allow them to communicate with third parties through a universal language, according to ISO standards. This will not only allow students to represent geometric figures and industrial parts, but also to interpret technical information that they will encounter in the future professional environment.

It is recommended to have a previous general knowledge of the contents of Technical Drawing of Bachillerato.

2. Learning results

- Master the resolution of graphic problems that may arise in engineering.
- Develop skills and abilities that allow expressing graphic solutions with precision, clarity and objectivity.
- Acquire the capacity of abstraction to be able to see objects from different positions in space.

3. Syllabus

Topic 1.- System of Dimensioned Plans:

- Representation of roofs
- Land representation

Topic 2.- Dihedral System:

- Changes of plane, turns and abatissements
- Surfaces, intersections and developments

Topic 3.- Standardization in Technical Drawing:

- Views and cuts
- Annotation
- Execution of plans

4. Academic activities

Master classes (14 h): sessions in which the different systems of representation and the rules of technical drawing will be explained.

Problem solving (28 h): sessions in which specific exercises of each topic will be presented to work and solve in class.

Laboratory practices (18 h): sessions in which you will learn how to use a CAD tool to solve exercises of each topic.

Exams, deliverables, tutorials and personal work (90 h): includes hours of individual work, study, tutorials and evaluation.

5. Assessment system

a) Graphic Expression (75%)

Deliverables (20%): Throughout the semester, it will be necessary to periodically submit a series of Exercises from each Topic, with a minimum grade of 4.0 on each and an average grade of 5.0. If this requirement is not met, new exercises of the same type and level as the pending ones must be submitted on the day of the Global Exam (ordinary or extraordinary exam session).

Global Exam (55%): A practical exercise from each topic will be conducted, requiring a minimum grade of 4.0 on each and an average grade of 5.0. This 55% of the grade is divided into 15% for Topic 1, 15% for Topic 2, and 25% for Topic 3. If this exam is not passed in the regular session, it will not be necessary to retake those topics in the extraordinary session where a minimum grade of 4.0 has been achieved.

Additionally, a **Partial Exam** will be conducted during the semester, covering Topic 1 and Topic 2. It is possible to exempt material from the Global Exam for those topics where a minimum grade of 4.0 is obtained. These grades will be retained until the end of the course.

b) Computer Aided Design (25%)

The preferred assessment system will be the weighting of the grades of the deliverables at the end of each session of DAO practices. This grade will be valid for both calls.

If a student does not achieve a minimum grade of 5.0 in the weighted submissions, or if they prefer and notify in advance, they will do a specific practical DAO exercise on the day of the Global Exam.

6. Sustainable Development Goals

- 4 - Quality Education
- 5 - Gender Equality