

Academic Year: ( 2019 / 2020 )

Review date: 21-04-2020

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: ALVAREZ CALDAS, CAROLINA

Type: Basic Core ECTS Credits : 6.0

Year : 1 Semester : 2

Branch of knowledge: Engineering and Architecture

**REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)**

Students are expected to have completed Technical Drawing in the high school  
Students will use a CAD software that is in Spanish.

**OBJECTIVES**

Upon successful completion of this subject, students will be able to:

1. Know, interpret and use the representation systems, their geometric foundation and the conventions and standardized symbols that underlie industrial design and computer-aided design.
2. Apply your knowledge and understanding to read, interpret and correctly develop industrial drafts.
3. Understand and use different methods to graphically express ideas, designs and projects in a precise, clear, unambiguous and standardized manner.
4. Develop technical level and computer-aided design laboratory tasks.
5. Select and use appropriate tools and methods to graphically document industrial designs.
6. Combine theory and practice to solve problems of engineering graphics.
7. Work effectively both individually and as a team

**DESCRIPTION OF CONTENTS: PROGRAMME**

1. Standardized representation systems.
  - 1.1. Ortographic projection
  - 1.2. Isometric projection
2. Representation of industrial assemblies
  - 2.1. Representation of parts
  - 2.2. Dimensioning
  - 2.3. Standardized representation of basic industrial elements
  - 2.4. Representation of industrial assemblies
3. Dimensional and geometric tolerances
4. Computer Aided Design

**LEARNING ACTIVITIES AND METHODOLOGY**

Magistral lectures, exercises in classroom and / or computer room, personal work and drafts elaboration.

**ASSESSMENT SYSTEM**

Continuous evaluation: 40%

Final Exam: 60%

A mark greater or equal than 2.5 (over the 6 points of the final exam) will be needed to pass the subject.

<b>% end-of-term-examination:</b>	60
<b>% of continuous assessment (assignments, laboratory, practicals...):</b>	40

**BASIC BIBLIOGRAPHY**

- J. Félez y M. L. Martínez Dibujo industrial, Síntesis.
- Meneses, Álvarez, Rodríguez Introducción al Solid Edge, Paraninfo.

#### ADDITIONAL BIBLIOGRAPHY

- B. Ramos Barbero y E. García Maté Dibujo Técnico, AENOR.
- C. Preciado y F.J. Moral Normalización del dibujo técnico, Ed. Donostiarra.
- F. J. Rodríguez de Abajo y R. Galarraga Normalización del dibujo industrial, Ed. Donostiarra, 1993
- Izquierdo Asensi Geometría Descriptiva, Autor.
- Varios autores Normas UNE, UNE.