# uc3m Universidad Carlos III de Madrid

### **Engineering Graphics**

Academic Year: (2019 / 2020) Review date: 07-05-2020

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: MUÑOZ SANCHEZ, ANA

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

#### **OBJECTIVES**

By the end of this subject, students will be able to have:

- 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**

Standardized representation systems.

Standardized representation of basic industrial elements

Dimensioning. Dimensional and geometric tolerances

Geometric bases of 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

% end-of-term-examination: 60

% of continuous assessment (assignments, laboratory, practicals...): 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.