uc3m Universidad Carlos III de Madrid

Engineering Graphics

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

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: MENESES ALONSO, JESUS

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, or the curso0 "Dibujo Técnico en Ingeniería"

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

Standardized representation systems, dihedral and axonometric system in greater depth.

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, teamwork for mechanical modeling, assemblying and drafting.

ASSESSMENT SYSTEM

Continuous evaluation: 40%

Final Exam: 60%

A mark greater or equal than 2,4 (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...):

BASIC BIBLIOGRAPHY

- B. Ramos Barbero y E. García Maté Dibujo Técnico, AENOR, 2006
- C. Preciado y F.J. Moral Normalización del dibujo técnico, Donostiarra, 2009
- F. J. Rodríguez de Abajo y R. Galarraga Normalización del dibujo industrial, Donostiarra, 1993
- González Monsalve y Palencia Cortés Geometría Descriptiva., Autores., 1991
- Izquierdo Asensi Geometría Descriptiva, Paraninfo, 2000
- J. Félez y M. L. Martínez Dibujo Industrial, Síntesis., 2000