Engineering Graphics

Academic Year: (2019 / 2020) **Review date: 21-04-2020**

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: CALVO RAMOS, JOSE ANTONIO

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 supposed to have studied Technical Drawing in the High School

OBJECTIVES

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.- Normalized representation systems:
 1.1.- Descriptive Geometry (Monge's system): geometric basis, revolutions, plane changing, distances, angles, etc.
 1.2.- Axonometric system: basis, isometric system, representation of industrial parts.
2.-Normalized representation of basic industrial elements.
 2.1. - Industrial drawing rules.
 2.2.- Axiliary views, cross sections.
 2.3.- Assembly and part drawings.
 2.4.- annotation rules.
 2.5.- Dimensional and geometrical tolerances.
3.-Computed assisted design
 3.1.- modeling
 3.2.- assembling
 3.3.- drafting

LEARNING ACTIVITIES AND METHODOLOGY

Theoretical presentations
Drawing exercises
Computer exercises by CAD
Personal and group working.
Drawing mechanism design
Drawing Development

ASSESSMENT SYSTEM

Final Exam for the course: 60%

Continuous Assessment: 40%

2.5 points over 6 points are required in the ordinary exam to pass the subject

% end-of-term-examination:	60
% of continuous assessment (assigments, laboratory, practicals…):	40

BASIC BIBLIOGRAPHY

- Jesús Félez; Mª Luisa Martínez Dibujo Industrial, Síntesis, 1996
- Meneses, Álvarez, Rodríguez Introducción al Solid Edge, Thomson Paraninfo, 2007

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.