# uc3m Universidad Carlos III de Madrid

# **Technical Office**

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

Department assigned to the subject: Electronic Technology Department

Coordinating teacher: PLEITE GUERRA, JORGE

Type: Compulsory ECTS Credits: 3.0

Year: 4 Semester: 2

# REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Since students must face the preparation of a project document for industrial engineering in electronics, the student will have an easier time developing this course and get better use of it if you have passed all the subjects of the specialty of 1, 2 and 3 of the degree.

#### **OBJECTIVES**

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

- 1. knowledge and understanding to develope, execute and manage industrial engineering projects, according to good practises, standards and regulations
- awareness of the wider multidisciplinary context of engineering.
- 3. the ability to apply their knowledge and understanding to analyse engineering products, processes and methods;
- 4. the ability to apply their knowledge and understanding to develop and realise designs to meet defined and specified requirements;
- 5. the ability to conduct searches of literature, and to use data bases and other sources of information:
- 6. an awareness of the non-technical implications of engineering practice.
- 7. function effectively as an individual and as a member of a team;
- 8. demonstrate awareness of the health, safety and legal issues and responsibilities of engineering practice, the impact of engineering solutions in a societal and environmental context, and commit to professional ethics, responsibilities and norms of engineering practice;
- 9. demonstrate an awareness of project management and business practices, such as risk and change management, and understand their limitations

#### **DESCRIPTION OF CONTENTS: PROGRAMME**

- 1. INDUSTRIAL PROJECT.
- ¿ DEFINITION.
- ¿ PHASES.
- ¿ LIFE CYCLE OF A PROJECT.
- 2. PROJECT FLOWCHARTS.
- ¿ ORGANIZATION TECHNICAL OFFICE.
- ¿ RESPONSIBILITIES.
- 3. DESIGN PHASE PREVIOUS STUDIES. PROJECT FEASIBILITY.
- ¿ TECHNICAL FEASIBILITY
- ¿ ECONOMIC FEASIBILITY
- 4. DEFINITION PHASE. PROJECT DOCUMENTS.
- ¿ MEMORY.
- ¿ FLAT.
- ¿ SPECIFICATION.
- ¿ BUDGET.
- 5. IMPLEMENTATION PHASE I.
- ¿ PROJECT LEGALIZATION AND TRAMITACIONES.
- ¿ NORMATIVE.
- ¿ VISAS
- ¿ PERMITS

- 6. THE DIRECTOR OF THE PROJECT.
- ¿ CONTROL OF DEADLINES. TOOLS
- ¿ COST CONTROL. TOOLS.
- ¿ QA. TOOLS

# 7. IMPLEMENTATION PHASE II. ACTUAL IMPLEMENTATION

- ¿ RECRUITMENT AND SHOPPING
- ¿ TECNICAL MANAGEMENT
- ¿ THE MAIN CONTRACTOR
- ¿ OVERRIDE PROJECT
- 8. HEALTH AND SAFETY.
- ¿ STUDY HEALTH AND SAFETY
- ¿ COORDINATOR OF SAFETY AND HEALTH
- ¿ LEGALIZATION
- 9. DISABLING THE PROJECT
- ¿ SUPPLIES
- ¿ LEGALIZATIONS
- ¿ TESTS

# LEARNING ACTIVITIES AND METHODOLOGY

Master-classes, classes resolve doubts in small groups, student presentations, individual tutorials and personal work; aimed at the acquisition of theoretical knowledge (1.5 ECTS credits).

Practices, small group classes, individual tutorials and personal work; towards the development of a project document in Electronics Engineering (1.5 ECTS credits).

# ASSESSMENT SYSTEM

Intermediate Exam 20 % Practice Sessions 10 %

Project Document 25 % (minimmum 5/10)
Project Presentation 20 % (minimmum 5/10)
Final Exam 25 % (minimmum 5/10)

% end-of-term-examination: 25

% of continuous assessment (assignents, laboratory, practicals...): 75

# BASIC BIBLIOGRAPHY

- Manuel de Cos Castillo Dirección de Proyectos, Project Management., Sintesis.