uc3m Universidad Carlos III de Madrid

Technical Office

Academic Year: (2022 / 2023) Review date: 31-03-2022

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: REVILLA TORREJON, ANTONIO JAVIER

Type: Compulsory ECTS Credits: 3.0

Year: 4 Semester: 2

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

No prerequisites.

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.
- 2. 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.
- 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

- Project concept
- Project management methodology
- Project phases
- Project planning and control
- Project evaluation
- Project supply management
- Project organization types
- Classic documentary project organization
- Organizational structure and functions of a project office
- Legislation. Environmental Aspects

LEARNING ACTIVITIES AND METHODOLOGY

Lectures, exercises, practical sessions, cases and assignments to be carried out by the students and discussed during the sessions, complementary readings.

ASSESSMENT SYSTEM

60% Final written exam

40 % Continuous evaluation. One partial exam will be held.

Attendance to the practical sessions.

% end-of-term-examination: 60

% of continuous assessment (assigments, laboratory, practicals...): 40

BASIC BIBLIOGRAPHY

- Carrasco, J.; Ramos, R. Manual de planificación y gestión de proyectos administrativos, Instituto Nacional de Administración Pública, 1986

ADDITIONAL BIBLIOGRAPHY

- Kerzner, H. Project management: a systems approach to planning, scheduling and controlling, John Wiley & Sons,
- Heredia, R. Dirección integrada de proyecto -DIP- : Project Management, Escuela Técnica Superior de Ingenieros Industriales, 1999
- Project Management Institute A guide to the project management body of knowledge: PMBOK guide, Project Management Institute, 2008