Technical office: mechanical engineering projects

Academic Year: (2019 / 2020) **Review date: 11-12-2019**

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: RUBIO ALONSO, HIGINIO

Type: Compulsory ECTS Credits : 3.0

Year : 4 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

No prerequisites.

OBJECTIVES

To develope, execute and manage mechanical engineering projects, according to good practises, standards and regulations. 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.
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. Engineering Projects. Competencies of the Mechanical Engineer. Documents signed by mechanical engineers.
2. Selection, adjustment and tuning of machinery and mechanical elements. Mechanical installations.
3. Documentation, Standardization and laws. Law of Industry. Technical regulation.
4. Supervision and inspection.
5. Safety and Health. Directive of Safety in Machines.
6. Environmental Impact.
7. Project Management.
8. Research &Development &Innovation Projects. Intellectual Property.

LEARNING ACTIVITIES AND METHODOLOGY

Classroom lectures, practical exercises and personal assignment.
Additionally, the student will make parts of projects to fix and demonstrate abilities.
Furthermore, the student will participate in conferences, seminars and debates on project management and labor insecurity for the mechanical engineer.

ASSESSMENT SYSTEM

Assignments (for classroom and for home).
Exercises and project practices and participation in conferences, debates and seminars.
Project work.
Final exam.

Note.- To pass the subject it is necessary:
- Obtain a score equal to or greater than 40% of the Final Exam and Project Work.
- Attend seminars or, alternatively, do the substitute work.

% end-of-term-examination:	25
% of continuous assessment (assigments, laboratory, practicals…):	75

BASIC BIBLIOGRAPHY

- Sebastián Pérez, M.A.; Arenas Reina, J.M.; Claver Gil, J. OFICINA TECNICA Y PROYECTOS, UNED, 2017

ADDITIONAL BIBLIOGRAPHY

- Arenas Reina, J.M. OFICINA TECNICA, S. P. Universidad Politécnica de Madrid, 3ª ed., 2010
- Brusola Simón, F. OFICINA TECNICA Y PROYECTOS, S. P. Universidad Politécnica de Valencia, 1999