Universidad Zaragoza

Academic Year/course: 2024/25

60811 - Industrial and R&D project management

Syllabus Information

Academic year: 2024/25
Subject: 60811 - Industrial and R&D project management
Faculty / School: 110 - Escuela de Ingeniería y Arquitectura
Degree: 330 - Complementos de formación Máster/Doctorado
532 - Master's in Industrial Engineering
ECTS: 6.0
Year: 532 - Master's in Industrial Engineering: 1
330 - Complementos de formación Máster/Doctorado: XX

Semester: First semester o Second semester
Subject type: 532 - Compulsory
330 - ENG/Complementos de Formación
Module:

1. General information

The main objective of the subject is for the student to acquire the necessary knowledge and skills to effectively manage industrial and R&D projects.

2. Learning results

The student, in order to pass this subject, must demonstrate the following results:

- To be able to define the scope of a project, identifying the deliverables and tasks to be developed to meet its objectives, as well as to manage its changes.
- To be able to plan and control project deadlines and costs, estimating the duration of activities and allocating the necessary resources, using techniques such as the Gantt chart, PERT, critical chain and earned value analysis.
- To be able to select, when there is a need for a product or service for a project, the most suitable type of contract.
- To be able to identify, assess and manage the most important risks of a project, proposing response strategies to minimize their impact on the project's objectives.
- To have knowledge about management systems in projects.
- To be able to use motivation, leadership, and negotiation techniques for project team management.
- To know what the specific occupational risks of the projects and the applicable regulations are.
- To understand the unique characteristics of R&D project management and be able to manage the complexity and uncertainty associated with them.

3. Syllabus

1. Introduction to project management and project life cycle.
2. Project scope management.
3. Management of R&D+i projects.
4. Project deadline management.
5. Project cost management.
6. Project risk management.
7. Management of project supplies.
8. Prevention of occupational hazards in projects.
9. Management of human resources in projects.
10. Agile project management methodologies.
11. Quality and closure in projects.

4. Academic activities

Master classes. Weekly sessions of two hours of duration: 30 hours.

Laboratory practices with specific project management software and project implementation: 30 hours.

Carrying out practical application or research works: 69 hours.

Effective personal study: 8pm.

Assessment tests: 1h.

5. Assessment system

Both in the first and second call, the assessment will consist of a comprehensive test made up of two parts:

- Multiple choice test. This exam will make up 30% of the student's grade.
- Practical work(s). Based on one or several practical group works, which must be handed in and presented on the day of the test. The quality of the documentation and its defence will be valued, and will represent 70% of the student's grade. For this assessment, peer review systems can be proposed.

To pass the subject, a minimum of 5 is required in each of the parts. During the theory sessions, quizzes may be proposed that can account for up to an additional point in the theoretical part, as long as this is higher than 4.0.

During the teaching period, teamwork competence will be evaluated as it has been designated as a Control Point Subject (CPS). However, this assessment will not be part of the final grade for the subject and will be evaluated independently.

6. Sustainable Development Goals

9 - Industry, Innovation and Infrastructure