COURSE DATA

DATA SUBJECT

Code: 36892
Name: Technical Office Menció Dual
Cycle: Undergraduate Studies
ECTS Credits: 6
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1401 - Degree in Chemical Engineering	Escola Tècnica Superior d'Enginyeria	4	Annual

SUBJECT-MATTER

Degree	Subject-matter	Character
1401 - Degree in Chemical Engineering	Projects	COMPULSORY

COORDINATION

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SUMMARY

Compulsory subject for students studying the Degree in Chemical Engineering - Dual Mention.

The subject Technical Office is part of the subject Projects, whose general objective is that each student obtains the ability to adequately apply all previously acquired knowledge to the preparation, development and evaluation of projects and reports, applying the appropriate methodology and the basic principles of economics, management, quality and business organization, as well as legislation, regulations and standardization in the field of industrial chemical engineering.

As for the subject Technical Office, it is a compulsory subject, of a four-monthly nature, which is taught in the fourth year of the Dual Mention of the Degree in Chemical Engineering. In the curriculum it consists of a total of 6 ECTS credits.

The aim of this course is to give each student an overview of the great complexity involved in the realization of an engineering project in the field of chemical industry. For this purpose, the methodology to

be followed in the elaboration of such a project will be provided, with special emphasis on some of its stages: from the conception of the original problem, the study of different plausible alternatives, the development and design of the process equipment of the most suitable alternative, to its economic evaluation to determine the feasibility of the project.

This course will also introduce each student to concepts related to the different activities that make up the organization and management of industrial projects. In addition, aspects related to the documentation to be presented, and the applicable legislation and regulations, in the development of such projects will be discussed. Finally, basic knowledge about the organizational structure and functions of a technical office will be provided.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

In order to successfully take the course, it is advisable that the student has passed the previous courses of the degree.
In order to be able to take the course, the student must have been selected to enroll in the option of Degree in Chemical Engineering- Dual Mention.

COMPETENCES / LEARNING OUTCOMES

1401 - Degree in Chemical Engineering

Act autonomously in learning, make informed decisions in different contexts, issue judgements based on experimentation and analysis and transfer knowledge to new situations.

Analyse and evaluate the social and environmental impact of technical solutions.

Be able to understand and apply the legislation required for the practice of the profession of technical industrial engineer.

Capacidad para la dirección, de las actividades objeto de los proyectos de ingeniería descritos en el epígrafe anterior.

Collaborate effectively in work teams, assume responsibilities and leadership roles, and contribute to collective improvement and development.

Contribute to the design, development and implementation of solutions that respond to social demands, guided by the Sustainable Development Goals.

Demonstrate critical and self-critical thinking, considering professional ethics, moral values and social implications of the different activities carried out throughout the degree.

Demonstrate knowledge and understanding of social inequalities based on sex and gender within this

specific field of study; integrate the different needs and preferences based on sex and gender into the design of solutions and problem solving.

Draft, sign and develop projects within the field of industrial engineering, aimed at constructing, renovating, repairing, maintaining, demolishing, manufacturing, installing, assembling or operating structures, mechanical equipment, energy systems, electrical and electronic installations, industrial facilities and plants, and manufacturing and automation processes, in accordance with the knowledge acquired through the specific technology of industrial chemistry.

Organise and manage projects, and understand the organisational structure and functions of a project office.

Propose creative and innovative solutions to complex situations or problems, typical of the area of ¿¿¿¿connection, to donate responses to the various professional and social needs

Solve problems with initiative, make decisions, think creatively and critically, and communicate and convey knowledge, skills and competences in the field of industrial engineering.

Work in a multilingual and multidisciplinary environment.

DESCRIPTION OF CONTENTS

1. CONTENTS

The objective of this subject is that the student obtains the ability to adequately apply all the knowledge previously acquired to the elaboration, development and evaluation of projects and reports.
The contents of this subject are:
Organizational structure and functions of a project office. Project methodology and organization. Obtaining and use of information. Project conception. Synthesis of alternatives. Calculation and design of equipment and installations. Economic evaluation of projects. Project management. Legislation and administrative procedures. Professional organization and basic procedures in the field of building and industry. Handling and application of specifications, regulations and technical standards.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Internship	60,00
Total hours	**60,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	0,00

Independent study and work	0,00
Preparation of lessons	0,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	**0,00**

TEACHING METHODOLOGY

Within the programming of the subjects of the Dual Mention, the types of teaching activities that will be developed will be mainly:

MD5.- Attendance to courses and seminars: optional activity proposed, where appropriate, by the student, the university tutor or the company tutor. In case it is not carried out, the dedication will be complemented with attendance to the internship center.

MD7.- Lectures on the contents of each subject. In them, the topics will be developed providing a global and integrating vision, analyzing in greater detail the key aspects and of greater complexity, encouraging at all times, the participation of the student.

MD8.- Seminars or workshops.

MD10.- Tasks in the center where the internship is performed, which should include an integration of the student in the work environment of the company, receiving training from the company and providing solutions and initiative.

MD11.- Scheduled tutorials (individual or group).

MD12.- Practical activities that complement the theoretical activities in order to apply the basic concepts and expand them with the knowledge and experience acquired during the realization of the proposed work. Some of these activities will be carried out in small groups.

The company will appoint a company tutor and in turn the ETSE-UV will appoint an academic tutor. The coordination will be:

- Company tutor-academic tutor

- Company tutor - student

- Academic tutor-student

It is proposed that meetings be held, preferably face-to-face, with the following frequency:

- Company tutor-academic tutor: meetings will be held at the beginning and end of the training period. During this period, at least one meeting per month will be planned.

- Company tutor-student: at least one meeting at the beginning of the training, one every two weeks and at the end of the training period.

- Academic tutor-student: at least one meeting at the beginning of the training, biweekly and at the end of the training period.

The tutor appointed by the company must have higher education (Bachelor, Engineering or Degree) and obtain the venia docendi by the Academic Committee of the Degree (CAT).

The tutor in the company will be responsible for coordinating the incorporation of the student, managing the planned training with the people in the company in charge of providing it, all with sufficient time in advance of the student's entry. In addition, he/she will ensure that the person to be trained receives the necessary equipment: PPE, work clothes, locker room assignment, etc.

The company tutor will meet, at least every two weeks, with the student to supervise his/her development and evaluate his/her work, indicating the points to be improved and his/her strong points. He/she will previously meet with the people who are providing his/her training to gather the necessary information for these follow-up meetings.

The academic tutor will ensure compliance with the training plan by the company and by the student and will mediate in case of conflict between the student and the company. Specifically, the academic tutor, through the coordination mechanisms, will ensure that the student acquires the learning outcomes foreseen in the training plan.

EVALUATION

The evaluation of the students of the Dual Mention will be carried out through a continuous evaluation system in which both the company tutor and the academic tutor will be involved. The system is based on the evaluation of knowledge, skills and competences acquired by the students.

The activity developed will be evaluated by means of:

1. Surveys and follow-up reports that allow to know the acquisition of knowledge, skills and competences of the students.

2. A rubric agreed upon by the company tutor and the academic tutor, which will be specified in the training plan.

3. The meetings and follow-up interviews carried out between the tutors and the student in which the degree of compliance with the training plan and the competencies acquired will be verified.

4. A written or oral exam if required by the activities carried out in the company.

The process involves the feedback of results to the evaluated student by his/her company and university tutors on his/her development and performance, establishing possible measures of action for a process of continuous improvement and growth.

REFERENCES

- - Teoría General del Proyecto. Vol. I: Dirección de Proyectos Cos Castillo, M.; Ed. Síntesis (1997)
- - Teoría General del Proyecto. Vol. II: Ingeniería de Proyectos Cos Castillo, M.; Ed. Síntesis (1997)
- - Analysis, Synthesis and Design of Chemical Processes Turton, R., Bailie, R.C., Whiting, W.B., Shaeiwitz, J.A., Bhattacharyya, D. 4th ed, Prentice Hall 2012.