

**COURSE DATA****DATA SUBJECT**

**Code:** 36894  
**Name:** Professional seminars-Dual Mention  
**Cycle:** Undergraduate Studies  
**ECTS Credits:** 19.5  
**Academic year:** 2026-27

**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	Professional seminars-Dual Mention	ELECTIVES

**COORDINATION**

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**SUMMARY**

The course Professional Seminars corresponds to the 4th year of Chemical Engineering Dual Mention. The objective of the course is to train students in advanced techniques and knowledge of processes, services or projects in companies of the chemical engineering sector, specifically, in those companies subscribed by agreement to the Dual Mention of the Degree in Chemical Engineering. With this course the student will also learn how work is organized and structured in a company.

**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

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

Know and understand, within the area of the degree, inequalities based on sex and gender in society; integrate different needs and preferences based on sex and gender into the design of solutions and problem-solving.

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

Recognise and apply the basic principles of the various subjects within this applied and professional field to deepen the learning outcomes already covered in the core subjects.

## DESCRIPTION OF CONTENTS

### HEALTH AND SAFETY:

- Hygienic measurements, preparation of safety data sheets, determination of product and mixture hazards, applicable Spanish and European legislation on health and safety issues. Audits.

### QUALITY:

- Inspection and evaluation of raw materials and finished products. Physical and chemical tests to ensure compliance with quality standards. Applicable legislation. Audits.

### ENVIRONMENT:

- Actions to improve and guarantee environmental protection and sustainability.

### MANAGEMENT SYSTEMS:

- Management systems in industry: Quality, Environment, Health and Safety, Energy Efficiency and R+D+i. Control of documentation

### ENGINEERING AND PROCESSES. PRODUCT DEVELOPMENT:

- Process control, such as PDI and SCADA software. Monitoring of indicators in industrial plant. Data processing for plant information and statistical purposes. Process optimization. Product design. Prototyping / validation / testing / calculations / manufacturing. Energy efficiency.

### WATER QUALITY, SUPPLY AND TREATMENT:

- Water purification. Urban and industrial wastewater treatment. Desalination. Integral water management.

### INSTRUMENTAL TECHNIQUES CHEMICAL ANALYSIS:

- Physical, chemical and biological analysis in liquid, solid and gaseous samples. Maintenance and calibration of equipment, inventories, drafting of protocols and technical instructions.

### RESEARCH AND DEVELOPMENT:

- Laboratory scale tests. Scaling of conditions for transfer to industrial plant. Definition of operating



## 1. CONTENTS

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### MANAGEMENT SYSTEMS:

- Management systems in industry: Quality, Environment, Health and Safety, Energy Efficiency and R+D+i. Control of documentation conditions in production processes.

- Experimental data collection, analysis and interpretation. Reporting of results.

### MARKETING:

- Preparation of studies and technical presentations of products. Market studies. Operation of purchasing, sales and logistics departments.

## WORKLOAD

### PRESENCIAL ACTIVITIES

Activity	Hours
Internship	195,00
<b>Total hours</b>	<b>195,00</b>

### NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	40,00
Independent study and work	252,50
Preparation of lessons	0,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
<b>Total hours</b>	<b>292,50</b>

## 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

- The bibliography will be specific to the field in which the student performs the stay and selected



by the tutors at the suggestion of the company.