

**COURSE DATA****DATA SUBJECT****Code:** 36896**Name:** Project development in the Chemical Industry-Dual Mention**Cycle:** Undergraduate Studies**ECTS Credits:** 18**Academic year:** 2025-26**STUDY (S)**

Degree	Center	Acad. year	Period
1110 - Degree in Chemistry	Facultat de Química	4	Annual

SUBJECT-MATTER

Degree	Subject-matter	Character
1110 - Degree in Chemistry	Química Industrial Aplicada	ELECTIVES

COORDINATION

MONLEON VENTURA ALICIA

SUMMARY

The subject ¿Project Development in the Chemical Industry¿ is an optional subject of Dual Mention , of 18 ECTS, which is taught in the fourth year.

The general objective is that students obtain the ability to adequately apply all the knowledge previously acquired in the preparation, development and evaluation of projects and reports in the field of Chemical Industry, applying the appropriate methodology and the basic principles of economics, management and business organization.

Upon completion of the course, students should develop sustainable and environmentally friendly methodologies and acquire a lifelong awareness of quality and the environment, sustainable development, and occupational risk prevention.

PREVIOUS KNOWLEDGE**RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE**

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

**OTHER REQUIREMENTS**

Relationship with other subjects of the same degree program.

No enrollment restrictions have been specified with other subjects in the curriculum.

Other types of requirements

The subject, given its general nature, does not require specific prior knowledge, although it is recommended to have taken the courses of Computer Applications in Chemistry and Chemical Engineering, in order to have a first perception of the more industrial area surrounding the Chemical Sciences.

In order to be able to take the course, students must have been selected to enrol in the Bachelor's Degree in Chemistry - Dual Mention option.

COMPETENCES / LEARNING OUTCOMES

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Act autonomously in learning, making well-founded decisions in various contexts, forming judgements based on experimentation and analysis, and applying knowledge to new situations.

Address new problems and propose strategies to solve them.

Apply metrology in chemical processes, including quality management.

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

Communicate effectively both orally and in writing, adapting to the context and audience.

Contribute to the design, development and implementation of solutions that respond to social demands, using the Sustainable Development Goals as a reference.

Demonstrate both inductive and deductive reasoning skills.

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

Demonstrate the ability to analyse, synthesise and reason critically.

Distinguish between the qualitative and quantitative aspects of chemical problems.

Distinguish the principles, procedures and techniques used in the determination, separation, identification and characterisation of chemical compounds.

Evaluate the risks involved in the use of chemical substances and laboratory procedures.

Express ideas correctly, both orally and in writing, in any of the official languages of the Valencian Community.

Identify chemical elements and their compounds, including their extraction, structure, reactivity, properties and applications.



Identify chemical processes in everyday life.

Identify the main types of chemical reactions and their associated key characteristics.

Identify the unit operations of chemical engineering.

Implement sustainable and environmentally friendly methodologies.

Interpret the relationship between the variation in the characteristic properties of chemical elements and the Periodic Table.

Prepare reports, assessments, and industrial and environmental projects in the field of chemistry.

Propose creative and innovative solutions to complex situations or problems in the field, addressing diverse professional and social needs.

Relate chemistry to other disciplines.

Relate theory to experimentation.

Solve problems effectively.

Understand and analyse, from the perspective of the degree programme, social inequalities based on sex and gender; integrate gender-sensitive approaches into problem-solving and solution design.

DESCRIPTION OF CONTENTS

The subject ¿Project Development in the Chemical Industry¿ is based on the realization of an autonomous and individual work that each student must carry out under the supervision of a tutor from the Company, supervised by the academic tutor, and according to the training plan agreed between the tutors and the student.

In particular, the following aspects will be dealt with:

The theory of the project. Typology and phases of a project. Basic legislation. Project design. Problem solving. Documents. Budgeting. Project management. Quality and risk management. Management indicators. Project management. Project stakeholders. Management skills. Human resources. Notion of gender and performance with a gender perspective. Management techniques. Project implementation. Project organization. Contracting, purchasing and procurement.

Practical contents: use of computer programs for the elaboration of projects.

WORKLOAD

**PRESENCIAL ACTIVITIES**

Activity	Hours
Internship	180,00
Total hours	180,00

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

Each student will be assigned a company tutor and an academic tutor. The company tutor will be assigned by the collaborating entity and the academic tutor will be assigned by the faculty of chemistry at the proposal of the Dual Mention Committee. Both tutors will coordinate the development of the activities established in the training project and will be in contact to solve any doubt or problematic situation.

Within the program of the subject the types of teaching activities that can be developed will be mainly:

- Lecture class.
- Practical class.
- Participative class.
- Field trip/guided visit.
- Exercise resolution.
- Reading/commentary of texts.
- Seminar.
- Debate.
- Search for information.
- Attendance at external events.
- Problem-based learning.
- Case study/analysis.
- Oral presentations.

Certain activities such as tutorials with the academic tutor, independent work by the student, seminars and activities related to the acquisition of transversal competences could be carried out both in the company and in the Faculty of Chemistry.

EVALUATION



The evaluation will be carried out by means of 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 competences, skills and knowledge acquired by the students.

The activity developed can be evaluated by means of:

- Surveys and follow-up reports that allow to know the acquisition of knowledge, skills and competences of the students.
- A rubric agreed between the company tutor and the academic tutor that will be specified in the training plan.
- Follow-up meetings and 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.
- A written or oral exam if required by the activities carried out in the company.

In order to pass the subject, the competences acquired will be evaluated using as indicators the reports of the company and/or University tutors, with a weight of 30% of the final grade.

In addition, the evaluation meetings, tests and reports of the work done during the dual training will be evaluated, with a weight of 70% of the final grade.

REFERENCES

- PROJECT MANAGEMENT INSTITUTE, A Guide to the Project Management Body of Knowledge, 4^a edició, Project Management Institute (2008), ISBN: 19-33890517
- DOMINGO AJENJO, A., Dirección y Gestión de Proyectos, un enfoque práctico. Editorial Rama, (2005). ISBN: 9701511301.
- PEREÑA, J. Dirección y Gestión de Proyectos. Editorial Díaz de Santos (1991). ISBN: 8479782498
- GRASHINA M.N y NEWELL M.W, Preguntas y Respuestas Sobre La Gestión de Proyectos,



Editorial Gestión 2000, (2005). ISBN: 9788480886864

- GOMEZ, J. F y CORONEL, A.J; MARTINEZ DE IRUJO y LORENTE, A. Gestión de proyectos. FC Editorial. Madrid, (2000). ISBN: 84-28317747.