COURSE DATA

DATA SUBJECT

Code: 36896
Name: Project development in the Chemical Industry-Dual Mention
Cycle: Undergraduate Studies
ECTS Credits: 18
Academic year: 2026-27

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

1110 - Degree in Chemistry

Act autonomously in learning, making informed decisions in different contexts, forming judgements based on experimentation and analysis, and transferring knowledge to new situations.

At the end of the course, the student will be able to address new problems and develop strategies to solve them.

At the end of the course, the student will be able to apply metrology in chemical processes, including quality management.

At the end of the course, the student will be able to assess risks in the use of chemical substances and laboratory procedures.

At the end of the course, the student will be able to distinguish between qualitative and quantitative aspects of chemical problems.

At the end of the course, the student will be able to distinguish the principles, procedures and techniques used for the determination, separation, identification and characterisation of chemical compounds.

At the end of the course, the student will be able to identify chemical elements and compounds, including their production, structure, reactivity, properties and applications.

At the end of the course, the student will be able to identify chemical processes in everyday life.

At the end of the course, the student will be able to identify the main types of chemical reactions and their key characteristics.

At the end of the course, the student will be able to identify the unit operations of chemical engineering.

At the end of the course, the student will be able to implement sustainable and environmentally friendly methodologies.

At the end of the course, the student will be able to prepare reports, expert assessments and industrial and environmental projects in the field of chemistry.

At the end of the course, the student will be able to relate theory and experimentation.

At the end of the course, the student will be able to solve problems effectively.

At the end of the course, the student will demonstrate inductive and deductive reasoning skills.

At the end of the course, the student will demonstrate the ability to analyse, synthesise and apply critical reasoning.

At the end of the course, the student will interpret the relationship between the variation of the characteristic properties of chemical elements and the periodic table.

At the end of the course, the student will relate chemistry to other disciplines.

Collaborate effectively in teams, assuming responsibilities and leadership roles and contributing to collective improvement and development.

Communicate effectively, both orally and in writing, adapting to the characteristics of the situation and the audience.

Contribute to the design, development and implementation of solutions that address social needs, taking the Sustainable Development Goals as a reference.

Demonstrate critical and self-critical reasoning within the field of study, considering aspects such as professional ethics, moral values and the social implications of the different activities undertaken.

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

Propose creative and innovative solutions to complex situations or problems within the field of study, in order to respond to diverse professional and social needs.

Understand and recognise, from within the discipline, inequalities based on sex and gender in society; integrate different needs and preferences related to sex and gender 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,

4ª 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.