UAB
Universitat Autònoma de Barcelona

Bachelor's Degree Final Project

Code: 106058
ECTS Credits: 12

2024/2025

Degree	Type	Year
2500897 Chemical Engineering	OB	4

Contact

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Teaching groups languages

You can view this information at the end of this document.

Prerequisites

According to the regulations on permanence in official undergraduate and master's studies at the UAB (June 2011-Agreement 18/2011), in order to enroll in fourth-year undergraduate courses, you must have passed at least all first-year subjects and a total number of credits that is at least two-thirds of the total credits of the Degree (ie having passed 160 credits)

The recommendation to be able to do the final degree thesis (TFG) is to have first and second all passed and in third the subjects: Reactors, Separation Operations, Heat Transmission, Control, instrumentation and automatisms, Design of equipment and resistance of materials , Process and product engineering, Chemical process simulation and Environmental engineering.

Having completed or been enrolled in the subject Projects and Security.

YOU CANNOT REGISTER FOR THIS SUBJECT WITHOUT FIRST SPEAKING WITH THE CHEMICAL ENGINEERING DEGREE COORDINATOR

Objectives and Contextualisation

The objective of the Final Degree Work is to carry out a Chemical Engineering project, that is to say, to analyze, evaluate, design and operate a certain chemical process in accordance with certain requirements, rules and specifications under the principles of sustainable development . All the knowledge acquired in the basic and compulsory subjects taken throughout the Chemical Engineering Degree will be applied.

Competences

- Analyse, evaluate, design and operate the systems or processes, equipment and installations used in chemical engineering in accordance with certain requirements, standards and specifications following the principles of sustainable development.
- Apply one's knowledge when performing measurements, calculations, estimations, evaluations, assessments, studies, reports and other similar tasks.
- Communication
- Develop personal attitude.

- Develop personal work habits.
- Develop thinking habits.
- Direct specific projects in the field of chemical engineering.
- Gender.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.
- Work in a team.

Learning Outcomes

1. Apply and manage time and resources available to a work team in order to satisfactorily undertake a chemical engineering project.
2. Apply the knowledge required to produce engineering reports and diagrams required for a chemical engineering project.
3. Apply unitary operations to environmental processes.
4. Communicate efficiently, orally and in writing, knowledge, results and skills, both professionally and to non-expert audiences.
5. Design and calculate engineering solutions to environmental problems.
6. Develop a capacity for analysis, synthesis and prospection.
7. Develop critical thinking and reasoning
8. Develop curiosity and creativity.
9. Develop independent learning strategies.
10. Efficiently use ICT for the communication and transmission of ideas and results.
11. Generate innovative and competitive proposals in professional activity.
12. Integrate the variables of sex and gender as important elements in the problem or topic to be addressed in the assigned projects.
13. Make one's own decisions.
14. Manage available time and resources. Work in an organised manner.
15. Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
16. Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.
17. Take account of gender differences and inequalities in the design of product safety measures and in the the impacts on personal safety that products can have.
18. Work autonomously.
19. Work cooperatively.

Content

The contents of this subject are ALL the main ones of the Bachelor's degree since this subject encompasses all the knowledge acquired throughout the studies of the Degree in Chemical Engineering.

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Lectures	30	1.2	2, 3, 5, 7

Type: Supervised			
Tutorials	30	1.2	1, 2, 3, 5, 6, 7, 8, 10, 11, 15
Type: Autonomous			
Individual work	120	4.8	1, 2, 4, 6, 7, 9, 13, 14, 16, 18
Work as team	115	4.6	1, 2, 3, 4, 5, 6, 7, 13, 14, 15, 16, 19

The TFG will be made in groups of 4-7 people made BY DRAW.

There will be two hours of class per week during the semester of the project, where the student will be shown basic concepts and techniques to be able to carry out the project.

At the same time, a weekly one-hour meeting with the tutor will be held in which the progress status of the project and the problems that have arisen will be reviewed.

1. In order to detect possible cases of a student not meeting work expectations, three follow-up surveys will be conducted in which students who are part of a group will be asked to rate their work colleagues anonymously.
2. In the case of detecting a student below the required level of work in accordance with the surveys provided by the classmates themselves, a committee headed by the Degree coordinator will decide whether or not this student can continue in the subject.
3. Weekly follow-up meetings between the tutor and group members will be mandatory. If a student is not present in two meetings without justification, a committee headed by the Degree coordinator will decide whether or not this student can continue in the subject.
4. Tutoring meetings must fit within the School of Engineering's school hours. On the part of the tutors, they will try to have flexible schedules within this schedule.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Exam	10%	2.5	0.1	2, 13, 14, 17, 18
Grade of the colleagues	25%	0	0	1, 2, 3, 5, 6, 7, 14, 15, 16
Memory and oral presentation	45%	2.5	0.1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19
Tutor grade	20%	0	0	1, 3, 5, 6, 11, 12, 13, 14, 17, 19

The grade percentages are:

- 25% memory (the memory grade can be weighted by the personal assessment of the tutor, so not all group members must have the same memory grade)
- 20% oral presentation

- 10% theoretical exam to be proposed by the teacher responsible for the subject
- 20% tutor personal assessment
- 25% peer assessment by students. Students will evaluate their peers. This is a good way to prevent people in the group from losing interest in the project. This peer review will take place after the public presentation.

Due to the eminently practical nature of this subject it is a non-retrievable subject.
A student will be considered non-evaluable if he has not presented himself at the oral defense of the project or has not handed in the report.
The defense of the TFG will be oral and public before a university court.

Bibliography

The main bibliography of all the subjects of the Chemical Engineering Degree studies

Software

All software used in the degree, especially HYSYS.

Language list

Name	Group	Language	Semester	Turn
(TE) Theory	1	Catalan	second semester	afternoon