

Degree	Type	Year
2500897 Chemical Engineering	OT	4

## Contact

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## Teachers

(External) JORDI MALLA NUALART

## Teaching groups languages

You can view this information at the [end](#) of this document.

## Prerequisites

No requirements are needed.

## Objectives and Contextualisation

The overall objective of the course is to familiarize students with the day-to-day running of an operations department.

Production systems from different sectors of the chemical industry will be analysed to study short- and long-term strategies, providing a global view of the organisation and production stages.

The Supply Chain will be worked on in a practical way, analyzing a real production process and providing a long-term strategic vision.

## Competences

- Apply quality principles and methods.
- Apply the techniques for analysing and synthesising systems to process and product the engineering.
- Develop personal work habits.
- Objectively compare and select different technical options for chemical processes.
- Work in a team.

## Learning Outcomes

1. Apply knowledge to the preparation of related documentation, organised by work processes and procedures.
2. Create models of the dynamic behaviour of compound systems for a variety of operations.
3. Describe the different work methodologies in relation to quality management systems.
4. Display a clear vision of engineering as a profession, encompassing both the tasks intrinsic to it and its responsibility to society.
5. Show understanding of the integration of quality management in improved production.
6. Show understanding of the structure of a quality management system and its implantation in process engineering.
7. Specify the different technical options in production processes for the main inorganic and organic products, in the different sectors of industrial chemistry.
8. Work autonomously.
9. Work cooperatively.

## Content

- Introduction to operations management
- Productive systems and quality management
- Data management
- Stock management
- Operations planning
- Needs planning
- Operations scheduling
- Industry 5.0

## Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Problems solving	10	0.4	1, 2, 3, 5, 6, 7, 8, 9
Seminars	5	0.2	7, 8, 9
Theoretical	35	1.4	1, 2, 3, 4, 5, 6, 7, 8, 9
Type: Autonomous			
Autónomes	90	3.6	1, 2, 3, 4, 5, 6, 7, 8, 9

Directed activities:

Theoretical classes: Magistral lectures to introduce the concepts

Problem classes: Resolution of cases corresponding to the subject. Discussion with students about solution strategies and their execution.

Seminars on the use of simulators: Seminars on the use of process simulators.

Autonomous activities:

Individual study. Preparation of outlines and summaries.

Autonomous problem-solving work.

Using the process simulator software

Research for documentation and bibliography: Consultation of the bibliographical and documentary sources essential for the course.

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

### Continuous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Retaken exam	85%	3	0.12	1, 2, 3, 4, 5, 6, 7, 8
Simulation work	15%	1	0.04	1, 2, 3, 4, 5, 6, 7, 8, 9
Test 1	40%	3	0.12	1, 2, 3, 4, 5, 6, 7, 8
Test 2	45%	3	0.12	1, 2, 3, 4, 5, 6, 7, 8

Continuous assessment:

1st partial test (PP1): 40% grade.

2nd partial test (PP2): 45% grade.

Practical work with software (TR): 15% grade

Final recovery test:

There will be a final recovery test (PF) for those students who have not passed the continuous assessment (grade < 5).

The final test will include an evaluation of the entire subject, and it will be avoided to recovery only the failed partial tests. The final grade will be obtained from 85% of the recovery test and 15% of the work (TR)

General aspects:

Without prejudice to other disciplinary measures that are deemed appropriate, irregularities such as the student who may lead to a change in the qualification of an assessment act.

Therefore, copying, plagiarism, telling lays, allowing to copy, etc. any of the assessment activities will involve failing it with a zero.

The exam review schedule will be made public at the time of publishing the qualifications through the virtual teaching platform. In this context, complaints may be made about the grade for the activity, which will be evaluated by the teacher responsible for the subject. If the student does not attend this review, he/she will not subsequently review this activity.

Honors. Awarding an honours degree is the decision of the professor responsible for the subject. UAB regulations indicate that MH may only be awarded to students who have obtained a final grade equal to or greater than 9.00. It is possible to grant funds to 5% of MH of the total number of enrolled students.

A student will be considered non-evaluable (NA) if he or she has not taken the midterm tests or the final exam.

## Bibliography

"Manual de direcció de operacions" F.J. Miranda et al. Thomson-Paraninfo. Madrid (2005) (84-9732-258-4)

"Direcció de la Producció. Decisions Tàcticas" Heizer J. Render B.. 6ª ed. Prentice Hall, Madrid (2001). (84-205-3036-0)

## Software

HYSYS

## Language list

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	1	Catalan	second semester	morning-mixed
(SEM) Seminars	1	Catalan	second semester	morning-mixed
(TE) Theory	1	Catalan	second semester	morning-mixed