



## Course guide

# 820526 - EEQ2Q - Experimentation in Chemical Engineering II

Last modified: 08/08/2024

**Unit in charge:** Barcelona East School of Engineering  
**Teaching unit:** 713 - EQ - Department of Chemical Engineering.

**Degree:** BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Compulsory subject).

**Academic year:** 2024    **ECTS Credits:** 6.0    **Languages:** Catalan, Spanish

## LECTURER

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**Coordinating lecturer:** MARGARITA SÁNCHEZ JIMÉNEZ

**Others:**

Primer quadrimestre:

NÚRIA BORRÀS CRISTÒFOL - Grup: M1, Grup: T1  
AGUSTÍN CORRUCHAGA GUERRERO - Grup: M1, Grup: T1  
JAIME FOLCH BELTRAN - Grup: M1, Grup: T1  
VICENÇ MARTI GREGORIO - Grup: M1, Grup: T1  
NEUS PAGÈS HERNANDO - Grup: M1, Grup: T1  
MÒNICA REIG I AMAT - Grup: M1, Grup: T1  
ALEXANDRA ROA TORRES - Grup: M1, Grup: T1  
MARGARITA SÁNCHEZ JIMÉNEZ - Grup: M1, Grup: T1  
NURIA SAPERAS PLANA - Grup: M1, Grup: T1  
DAVID ZANUY GOMARA - Grup: M1, Grup: T1

## REQUIREMENTS

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EXPERIMENTACIÓ EN ENGINYERIA QUÍMICA I - Prerequisit

## DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

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**Specific:**

1. Design and manage applied experimentation procedures, particularly for determining thermodynamic and transport properties, and the modelling of phenomena and systems in the field of chemical engineering, such as fluid flow systems, heat and mass transfer operations and the kinetics of chemical reactions and reactors.

**Transversal:**

2. TEAMWORK - Level 3. Managing and making work groups effective. Resolving possible conflicts, valuing working with others, assessing the effectiveness of a team and presenting the final results.

## TEACHING METHODOLOGY

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## LEARNING OBJECTIVES OF THE SUBJECT

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## STUDY LOAD

Type	Hours	Percentage
Hours small group	60,0	40.00
Self study	90,0	60.00

Total learning time: 150 h

## CONTENTS

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### Description:

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**Full-or-part-time:** 10h

Theory classes: 4h

Self study : 6h

### Experimental sessions

### Description:

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### Related activities:

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**Full-or-part-time:** 100h

Laboratory classes: 40h

Self study : 60h

### Design and evaluation of a pilot project

### Description:

It is about developing a specific practice including objectives, experimental design, data collection from all the groups of the course, data processing, elaboration/application of models, conclusions, discussion of results. It includes the follow-up meetings of the project and the public presentation of work and common discussion of the results obtained in two sessions.

### Related activities:

Continuous assessment 2

**Full-or-part-time:** 40h

Laboratory classes: 8h

Guided activities: 8h

Self study : 24h



## ACTIVITIES

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### Continuous assessment 1 (Practices)

**Description:**

Each practice will involve the presentation of a corresponding group report with a weekly delivery periodicity. The evaluation of the report is joint for the whole group. The non face-to-face work of each group is reflected in the delivery of a weekly group summary document as well.

**Material:**

Notes, Digital Campus material.

**Delivery:**

Written report and Summary document per group. Weekly delivery.

**Full-or-part-time:** 100h

Laboratory classes: 40h

Self study: 60h

### Continuous Assessment 2 (Project)

**Description:**

Each project group will present a final report focused on an experiment (experimental project).

**Material:**

Notes, Digital Campus material

**Delivery:**

Written report by group + presentation

**Full-or-part-time:** 40h

Theory classes: 8h

Guided activities: 8h

Self study: 24h

### Final Examen

**Description:**

Evaluation of the knowledge acquired at the individual level through a final exam.

**Material:**

Practice reports, notes, etc.

**Full-or-part-time:** 2h 30m

Theory classes: 2h 30m

## GRADING SYSTEM

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## BIBLIOGRAPHY

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### Basic:

- McCabe, Warren L. [et al.]. Operaciones unitarias en ingeniería química. 7ª ed. Madrid [etc.]: McGraw-Hill, cop. 2007. ISBN 9701061748.
- Coulson, J. M. [et al.]. Ingeniería química, vol. 2. Barcelona [etc.]: Reverté, 1979-1984. ISBN 8429171347.
- Levenspiel, Octave. Ingeniería de las reacciones químicas. 3a ed. México: Limusa Wiley, 2004. ISBN 9681858603.
- Perry, Robert H.; Green, Don W.; Maloney, James O. Manual del ingeniero químico [on line]. Madrid: McGraw Hill, 2001 [ Consultation: 30/04/2020]. Available on : [http://www.ingebook.com/ib/NPcd/IB\\_BooksVis?cod\\_primaria=1000187&codigo\\_libro=6572](http://www.ingebook.com/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=6572). ISBN 9788448612788.

## RESOURCES

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### Other resources:

Practice scripts; document templates; presentation of the subject at ATENEA Digital Campus