

Course guide

330456 - EEQ2 - Experimentation in Chemical Engineering II

Last modified: 04/05/2023

Unit in charge: Manresa School of Engineering
Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering.

Degree: **Academic year:** 2023 **ECTS Credits:** 6.0
Languages: Catalan

LECTURER

Coordinating lecturer: Gamisans Noguera, Javier
Others: Torra Bitlloch, Immaculada
Bonsfills Pedros, Anna
Dorado Castaño, Antonio David

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

1. Raise and test hypotheses. Treat and interpret experimental data correctly. Develop the capacity for analysis and synthesis.

Transversal:

2. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.
3. 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.
4. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

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

Total learning time: 150 h



CONTENTS

title english

Description:

content english

Full-or-part-time: 25h

Laboratory classes: 10h

Self study : 15h

title english

Description:

content english

Full-or-part-time: 25h

Laboratory classes: 10h

Self study : 15h

title english

Description:

content english

Full-or-part-time: 25h

Laboratory classes: 10h

Self study : 15h

title english

Description:

content english

Full-or-part-time: 25h

Laboratory classes: 10h

Self study : 15h

title english

Description:

content english

Full-or-part-time: 25h

Laboratory classes: 10h

Self study : 15h



title english

Description:

content english

Full-or-part-time: 25h

Laboratory classes: 10h

Self study : 15h

ACTIVITIES

name english

Full-or-part-time: 20h

Laboratory classes: 6h

Self study: 14h

name english

Full-or-part-time: 66h

Laboratory classes: 48h

Self study: 18h

name english

Full-or-part-time: 38h

Self study: 38h

name english

Full-or-part-time: 14h

Laboratory classes: 4h

Self study: 10h

name english

Full-or-part-time: 12h

Laboratory classes: 2h

Self study: 10h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- Gamisans, X.; Torra, I. Experimentació en enginyeria química II: guions de pràctiques. Manresa: EPSEM, 2017.

Complementary:

- Ingham, John. Chemical engineering dynamics: an introduction to modelling and computer simulation. 2nd compl. rev. ed. Weinheim: Wiley-VCH, 2000. ISBN 3527297766.
- McCabe, Warren L.; Smith, Julian C.; Harriott, Peter. Operaciones unitarias en ingeniería química. 7ª ed. Madrid: McGraw-Hill, 2007. ISBN 9701061748.
- Treybal, Robert Ewald. Operaciones de transferencia de masa. 2ª ed. México: McGraw-Hill, 1988. ISBN 9686046348.
- Perry, Robert H.; Green, Don W.; Maloney, James O. Manual del ingeniero químico [on line]. 7ª ed. Madrid: McGraw-Hill, 2001 [Consultation: 07/06/2022]. Available on: https://www-ingebook-com.recursos.biblioteca.upc.edu/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=6572. ISBN 9788448130084.
- Perry, Robert H.; Green, Don W. Perry's chemical engineers' handbook [on line]. 8th ed. New York: McGraw-Hill, 2008 [Consultation: 10/06/2022]. Available on: https://search-ebshost-com.recursos.biblioteca.upc.edu/login.aspx?direct=true&AuthType=ip,uid&db=nlebk&AN=219494&site=ehost-live&ebv=EB&ppid=pp_C. ISBN 9780071422949.
- Ollero de Castro, Pedro; Fernández Camacho, Eduardo. Control e instrumentación de procesos químicos. Madrid: Síntesis, 1997. ISBN 8477385173.
- Díaz Fernández, Mario. Ingeniería de bioprocesos. Madrid: Paraninfo, 2012. ISBN 9788428381239.
- Froment, Gilbert F.; Bischoff, Kenneth B. Chemical reactor analysis and design. 2nd ed. New York: John Wiley & Sons, 1990. ISBN 0471510440.
- Levenspiel, Octave. Ingeniería de las reacciones químicas [on line]. 3ª ed. México: Limusa Wiley, 2004 [Consultation: 27/05/2022]. Available on: <https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?docID=5758266>. ISBN 9681858603.