# Course guides
# 330166 - AEPP - Further Process and Product Engineering

**Last modified:** 05/05/2020

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

**Degree:** BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2016). (Optional subject).

**Academic year:** 2020 **ECTS Credits:** 6.0 **Languages:** Catalan

## LECTURER

**Coordinating lecturer:** Dorado Castaño, Antonio David

**Others:** Bonsfills Pedros, Anna

## DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

**Specific:**
1. (ENG) Calcular i dissenyar operacions bàsiques i unitats de reacció de processos industrials comuns. Resoldre problemes i aplicar els coneixements teòrics a la pràctica. Desenvolupar la capacitat d'anàlisi i síntesi.

**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. 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

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## STUDY LOAD

| Type | Hours | Percentage |
|---|---|---|
| Hours small group | 15,0 | 10.00 |
| Hours large group | 45,0 | 30.00 |
| Self study | 90,0 | 60.00 |

**Total learning time:** 150 h

## CONTENTS

### title english

**Description:**
content english

**Full-or-part-time:** 60h
Theory classes: 12h
Laboratory classes: 12h
Self study : 36h

### title english

**Description:**
content english

**Full-or-part-time:** 60h
Theory classes: 12h
Laboratory classes: 12h
Self study : 36h

### title english

**Description:**
content english

**Full-or-part-time:** 30h
Theory classes: 6h
Laboratory classes: 6h
Self study : 18h

## ACTIVITIES

### name english

**Full-or-part-time:** 44h
Laboratory classes: 30h
Self study: 14h

### name english

**Full-or-part-time:** 94h
Theory classes: 4h
Self study: 90h

**name english**

**Full-or-part-time:** 94h
Practical classes: 4h
Self study: 90h

## GRADING SYSTEM

## BIBLIOGRAPHY


**Basic:**
- Trambouze, P.; Landeghem, H. van; Wauquier, J. P. Chemical reactors: design, engineering, operation. Houston: Gulf Publising Company, 1988. ISBN 2710805421.
- Elias Castells, X., dir. Tratamiento y valorización energética de residuos. Madrid: Díaz de Santos, 2005. ISBN 8479786949.
- Mayer, L.; Tegeder, F. Métodos de la industria química: en diagramas de flujo coloreados. Barcelona: Reverté, 1987. ISBN 8429179607.
- Coulson, J. M.; Richardson, J. F. Chemical engineering. 3rd ed. Oxfort: Butterworth-Heinemann, 1994. ISBN 0080410030.
- Levenspiel, O. Chemical reaction engineering. 3rd ed. New York: John Wiley & Sons, 1999. ISBN 9780471254249.
- Levenspiel, O. Flujo de fluidos e intercambio de calor. Barcelona: Reverté, 1993. ISBN 8429179682.
- McCabe, W. L.; Smith, J. C.; Harriott, P. Unit operations of chemical engineering. 7th ed. Boston: McGraw-Hill, 2005. ISBN 0071247106.
- Wankat, P. C. Ingeniería de procesos de separación. 2ª ed. México: Pearson Educación, 2008. ISBN 9789702612810.

**Complementary:**
- Perry, R. H.; Green, D. W., eds. Perry's chemical engineers' handbook [on line]. 8th ed. New York: McGraw-Hill, 2008 [Consultation: 22/06/2017]. Available on: https://discovery.upc.edu/iii/encore/record/C__Rb1324713?lang=cat. ISBN 9780071593137.
- Perry, R. H.; Green, D. W., eds. Perry's chemical engineers' handbook [CD-ROM]. New York: McGraw-Hill, 1999. ISBN 0071344128.