

## 330402 - QA - Applied Chemistry

Coordinating unit: 330 - EPSEM - Manresa School of Engineering  
 Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering  
 Academic year: 2019  
 Degree: BACHELOR'S DEGREE IN MINING ENGINEERING (Syllabus 2016). (Teaching unit Compulsory)  
 ECTS credits: 6 Teaching languages: Catalan

### Teaching staff

Coordinator: Busquets Rubio, Pere  
 Others: Gorchs Altarriba, Roser  
 Heras Cisa, Francesc Xavier De Las  
 Lao Luque, Concepcion  
 Sole Sardans, M. Montserrat  
 Torra Bitlloch, Immaculada

### Degree competences to which the subject contributes

#### Specific:

- (ENG) Capacitat per a comprendre i aplicar els principis de coneixements bàsics de la química general, química orgànica i inorgànica i les seves aplicacions a l'enginyeria minera.

#### Transversal:

- SUSTAINABILITY AND SOCIAL COMMITMENT - Level 1. Analyzing the world's situation critically and systemically, while taking an interdisciplinary approach to sustainability and adhering to the principles of sustainable human development. Recognizing the social and environmental implications of a particular professional activity.
- TEAMWORK - Level 1. Working in a team and making positive contributions once the aims and group and individual responsibilities have been defined. Reaching joint decisions on the strategy to be followed.

### Learning objectives of the subject

### Study load

Total learning time: 150h	Hours large group:	0h	0.00%
	Hours medium group:	60h	40.00%
	Hours small group:	0h	0.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

## 330402 - QA - Applied Chemistry

### Content

title english	Learning time: 38h Theory classes: 6h Laboratory classes: 10h Self study : 22h
Description: content english	
title english	Learning time: 48h Theory classes: 10h Laboratory classes: 10h Self study : 28h
Description: content english	
title english	Learning time: 64h Theory classes: 14h Laboratory classes: 10h Self study : 40h
Description: content english	

### Planning of activities

name english	Hours: 40h Laboratory classes: 15h Self study: 25h
name english	Hours: 24h Laboratory classes: 4h Self study: 20h
name english	Hours: 16h Theory classes: 4h Self study: 12h

## 330402 - QA - Applied Chemistry

### Bibliography

#### Basic:

Chang, Raymond; Goldsby, Kenneth A. Química. 11ª ed. México: McGraw-Hill / Interamericana, 2013. ISBN 9786071509284.

Kotz, J. C.; Treichel, P. M.; Harman, Patrick A. Química y reactividad química. 5ª ed. México: International Thomson, 2003. ISBN 9706863079.

Petrucci, Ralph H; Harwood, William S; Herring, F. Geoffrey. Química general [on line]. 10ª ed. Madrid: Prentice Hall, 2011 [Consultation: 02/07/2019]. Available on: <[https://discovery.upc.edu/iii/encore/record/C\\_\\_Rb1510237?lang=cat](https://discovery.upc.edu/iii/encore/record/C__Rb1510237?lang=cat)>. ISBN 9788483226803.

Atkins, Peter William; Jones, Loretta. Principios de química: los caminos del descubrimiento. 3ª ed. Buenos Aires: Médica Panamericana, 2006. ISBN 9789500600804.

Reboiras, M. D. Química: la ciencia básica. Madrid: International Thomson Editores, 2006. ISBN 8497323475.

Bell, Jerry, et al. Química: un proyecto de la American Chemical Society. Barcelona: Reverté, 2005. ISBN 8429170014.

Orozco Barrenetxea, Carmen; González Delgado, María Nieves; Pérez Serrano, Antonio. Problemas resueltos de química aplicada. Madrid: Paraninfo, 2011. ISBN 9788428380928.

Reboiras, M. D. Problemas resueltos de química: la ciencia básica. Madrid: Thomson, 2007. ISBN 9788497325417.

UPCommons: vídeos. Tècniques bàsiques al laboratori [on line]. Grup de Recursos per a la Didàctica de la Química, 2009 [Consultation: 16/06/2017]. Available on: <<http://upcommons.upc.edu/handle/2099.2/1241>>.

#### Complementary:

American Chemical Society. Chemistry in the community: ChemCom: a project of the American Chemical Society. 5th ed. New York: W.H. Freeman and Co., 2006. ISBN 9780716789192.

American Chemical Society. QuimCom: química en la comunidad. 2ª ed. México: Addison Wesley Longman, 1998. ISBN 9684443072.

#### Others resources: