Course guide
330402 - QA - Applied Chemistry

Last modified: 25/04/2024

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

Degree: BACHELOR'S DEGREE IN MINING ENGINEERING (Syllabus 2016). (Compulsory subject).

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

LECTURER

Coordinating lecturer: Busquets Rubio, Pere

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
1. (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:
2. 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.
3. 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.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

.

STUDY LOAD

Type	Hours	Percentage
Hours medium 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: 38h
Theory classes: 6h
Laboratory classes: 10h
Self study : 22h

title english

Description:
content english

Full-or-part-time: 48h
Theory classes: 10h
Laboratory classes: 10h
Self study : 28h

title english

Description:
content english

Full-or-part-time: 64h
Theory classes: 14h
Laboratory classes: 10h
Self study : 40h

ACTIVITIES

name english

Full-or-part-time: 40h
Laboratory classes: 15h
Self study: 25h

name english

Full-or-part-time: 24h
Laboratory classes: 4h
Self study: 20h

name english

Full-or-part-time: 16h
Theory classes: 4h
Self study: 12h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:
- Chang, Raymond; Overby, J. Química [on line]. 13ª ed. México: McGraw-Hill / Interamericana, 2021 [Consultation: 02/06/2022]. Available on: https://www-ingebook-com.recursos.biblioteca.upc.edu/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=10619. ISBN 9781456277161.
- 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: principios y aplicaciones modernas [on line]. 10ª ed. Madrid: Prentice Hall, 2011 [Consultation: 07/06/2022]. Available on: https://www-ingebook-com.recursos.biblioteca.upc.edu/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=6751. 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 [on line]. Barcelona: Reverté, 2005 [Consultation: 08/06/2022]. Available on: https://www-ingebook-com.recursos.biblioteca.upc.edu/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=8079. 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.
- Tècniques bàsiques al laboratori [on line]. Barcelona: Universitat Politècnica de Catalunya, 2009-2010 [Consultation: 13/11/2020]. Available on: http://hdl.handle.net/2099.2/1241.
- Atkins, P. W; Jones, Loretta. Principios de química: los caminos del descubrimiento. 5a ed. Madrid: Editorial Médica Panamericana, 2012. ISBN 9789500602822.

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.