Course guide
330434 - MIPO - Potash Mining

Last modified: 04/05/2023

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). (Optional subject).
BACHELOR'S DEGREE IN MINERAL RESOURCE ENGINEERING AND MINERAL RECYCLING (Syllabus 2021). (Optional subject).

Academic year: 2023 **ECTS Credits:** 6.0 **Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer: Sánchez Comellas, Alberto

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
1. (ENG) Geologia.
2. (ENG) Mecànica de roques.
3. (ENG) Explotació.
4. (ENG) Sosteniment.
5. (ENG) Subsidencias.
6. (ENG) Integritat de les barreres geològiques davant l'aigua.
7. (ENG) Col·lapses.
8. (ENG) Plantes de flotació de potassa.
9. (ENG) Productors i mercats.

Transversal:
10. SUSTAINABILITY AND SOCIAL COMMITMENT - Level 3. Taking social, economic and environmental factors into account in the application of solutions. Undertaking projects that tie in with human development and sustainability.
11. 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.
12. 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.
13. 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.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

.

STUDY LOAD

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

Total learning time: 150 h

CONTENTS

title english

Description:
content english

Full-or-part-time: 8h
Practical classes: 8h

title english

Description:
content english

Full-or-part-time: 20h
Practical classes: 20h

title english

Description:
content english

Full-or-part-time: 16h
Practical classes: 16h

title english

Description:
content english

Full-or-part-time: 4h
Practical classes: 4h

title english

Description:
content english

Full-or-part-time: 4h
Practical classes: 4h

title english

Description:
content english

Full-or-part-time: 4h
Practical classes: 4h

title english

Description:
content english

Full-or-part-time: 3h
Practical classes: 3h

title english

Description:
content english

Full-or-part-time: 1h
Practical classes: 1h

ACTIVITIES

name english

Full-or-part-time: 6h
Practical classes: 6h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- Pariseau, William G. Design analysis in rock mechanics. London: Taylor & Francis, 2007. ISBN 9780415403573.
- Amadei, Bernard ; Stephansson, Ove. Rock stress and its measurement. New York: Chapman & Hall, 1997. ISBN 0412447002.
- Cristescu, N. D. Rock rheology. Dordrecht: Kluwer Academic, 1989. ISBN 9024736609.
- Jeremic, M.J.. Rock mechanics in salt mining. Rotterdam: A.A. Balkema, 1994. ISBN 9054101032.
- Ayala Carcedo, F.J. [et al.]. Introducción a los usos industriales y urbanos del espacio subterráneo y su tecnología. Madrid: Instituto Geológico y Minero de España, 1986.
- Cristescu, N.; Hunsche, U.. Time effects in rock mechanics. New York: Wiley, 1997. ISBN 0471955175.
- Cristescu, N. D.; Gioda, G.. Visco-plastic behaviour of geomaterials [on line]. Wien: Springer-Verlag, 1994 [Consultation: 07/10/2022]. Available on: https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?docID=6867710. ISBN 9783211825860.
- Darling, Peter, ed. SME Mining engineering handbook [on line]. 3rd ed. Littleton: Society for Mining, Metallurgy and Exploration, 2011 [Consultation: 24/05/2022]. Available on: https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?pq-origsite=primo&docID=655790. ISBN 9780873352642.

Complementary:

- Campos de Orellana, J. A. Trabajos en minas de potasa [documentació d'Iberpotash]. Súria: Iberpotash, [200?].
- Somerton, W. H., ed. Rock mechanics: theory and practice: proceedings: Eleventh Symposium on Rock Mechanics, held at the University of California, Berkeley, California, June 16-19, 1969. New York: Society of Mining Engineers, American Institute of Mining, Metallurgical, and Petroleum Engineers, 1970.
- Laboratorio Oficial J. M. Madariaga. Guia sobre control geotécnico en minería subterránea [on line]. Madrid: Gobierno de España, Ministerio de Industria, Energía y Turismo, 2015 [Consultation: 17/12/2020]. Available on: https://energia.gob.es/mineria/Seguridad/Guias/Gu%C3%ADas/Guia-control-geotecnico-mineria-subterranea.pdf.
- RocScience [programes informàtics] [on line]. Melissia: Geosysta, 2018 [Consultation: 17/12/2020]. Available on: http://geotechpedia.com/Software/Publisher/2/RocScience.
- Laín, R. Consideraciones geotécnicas [documentació d'Iberpotash]. Súria: Iberpotash, [200?].
- Treballs de reologia [apunts]. Valencia: Universitat Politecnica de Valencia, [200?-].
- Herrera Herbert, J.; Gómez Jaén, J. P. Diseño de explotaciones e infraestructuras mineras subterráneas [on line]. Madrid: Universidad Politécnica de Madrid, Escuela Tecnica Superior de Ingenieros de Minas, 2007 [Consultation: 17/12/2020]. Available on: http://oa.upm.es/21841/1/071101_L3_labores_subterraneas_2.pdf.
- Obert L.; Duvall, W. I.; Merrill, R. H. Design of underground openings in competent rock [on line]. Washington: U.S. Department of the Interior, Bureau of Mines, 1960 [Consultation: 17/12/2020]. Available on: https://digital.library.unt.edu/ark:/67531/metadc12741/m2/1/high_res_d/Bulletin0587.pdf.
- The Mechanical behavior of Salt Vol. I-VIII. Boca Raton: CRC Press/Balkema, [1981?-].
- Bibliografia d'Iberpotash [recull bibliogràfic]. Súria: ICL Iberia, [200?-].