



Course guide

330335 - MARG - Modelling and Assessment of Geological Resources

Last modified: 25/04/2024

Unit in charge: Manresa School of Engineering
Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering.
Degree: MASTER'S DEGREE IN MINING ENGINEERING (Syllabus 2013). (Compulsory subject).
Academic year: 2024 **ECTS Credits:** 5.0 **Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer: MARIA PURA ALFONSO ABELLA
Others: Bascompta Massanès, Marc

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

- (ENG) Coneixement adequat de modelització i avaluació de recursos geològics, incloses les aigües subterrànies, minerals i termals.
- (ENG) Explorar, investigar, modelitzar i avaluar jaciments de recursos geològics.

Transversal:

- EFFECTIVE USE OF INFORMATION RESOURCES: Managing the acquisition, structuring, analysis and display of data and information in the chosen area of specialisation and critically assessing the results obtained.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

Type	Hours	Percentage
Self study	80,0	64.00
Hours medium group	45,0	36.00

Total learning time: 125 h

CONTENTS

(ENG) 1. Eines de la modelització de recursos geològics

Full-or-part-time: 17h
Theory classes: 4h
Laboratory classes: 2h
Self study : 11h



(ENG) 2. Mètodes tradicionals de càlculs de reserves

Full-or-part-time: 17h
Theory classes: 4h
Laboratory classes: 2h
Self study : 11h

(ENG) 3. Mètodes geoestadístics de càlcul de reserves

Full-or-part-time: 22h
Theory classes: 4h
Laboratory classes: 4h
Self study : 14h

(ENG) 4. Modelització de les reserves dels jaciments minerals

Full-or-part-time: 33h
Theory classes: 2h
Laboratory classes: 10h
Self study : 21h

(ENG) 5. Modelització i simulació en temàtiques hidrològiques

Full-or-part-time: 36h
Theory classes: 3h
Laboratory classes: 10h
Self study : 23h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- Annels, A. E. Mineral deposit evaluation: a practical approach [on line]. London: Chapman & Hall, 1991 [Consultation: 17/01/2023]. Available on : <https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?pq-origsite=primo&docID=6505837>. ISBN 0412352907.
- Orche, E. Manual de evaluación de yacimientos minerales. Madrid: Carlos López Jimeno, 1999. ISBN 8492170891.
- Rossi, M. E.; Deutsch, C. V. Mineral resource estimation [on line]. Dordrecht: Springer, 2014 [Consultation: 31/05/2022]. Available on: <https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?docID=6314881>. ISBN 1402057164.

RESOURCES

Other resources:

SGems software
Vulcan software