



## Course guide

# 330335 - MARG - Modelling and Assessment of Geological Resources

Last modified: 30/06/2023

**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:** 2023    **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:

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

### Transversal:

3. 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

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## BIBLIOGRAPHY

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### 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

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### Other resources:

SGems software  
Vulcan software