

Course guide

330400 - M - Mathematics

Last modified: 04/05/2023

Unit in charge: Manresa School of Engineering
Teaching unit: 749 - MAT - Department of Mathematics.

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

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

LECTURER

Coordinating lecturer: Gimenez Pradales, Jose Miguel

Others: Alsina Aubach, Montserrat - Cors Iglesias, Josep M. - Domenech Blazquez, Margarita - Freixas Bosch, Josep - Palacios Quiñero, Francisco - Pons Valles, Montserrat - Puente Del Campo, M. Albina - Rossell Garriga, Josep Maria - Rubió Massegú, Josep - Ventura Capell, Enric

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

1. (ENG) Capacitat per a la resolució dels problemes matemàtics que puguin sorgir en l'enginyeria. Aptitud per aplicar els coneixements sobre: àlgebra lineal, geometria, geometria diferencial, càlcul diferencial i integral i equacions diferencials ordinàries.

Transversal:

2. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 1. Planning oral communication, answering questions properly and writing straightforward texts that are spelt correctly and are grammatically coherent.

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.

4. SELF-DIRECTED LEARNING - Level 1. Completing set tasks within established deadlines. Working with recommended information sources according to the guidelines set by lecturers.

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: 10h

Theory classes: 2h

Laboratory classes: 2h

Self study : 6h

title english

Description:

content english

Full-or-part-time: 30h

Theory classes: 6h

Laboratory classes: 6h

Self study : 18h

title english

Description:

content english

Full-or-part-time: 30h

Theory classes: 6h

Laboratory classes: 6h

Self study : 18h

title english

Description:

content english

Full-or-part-time: 30h

Theory classes: 6h

Laboratory classes: 6h

Self study : 18h

title english

Description:

content english

Full-or-part-time: 20h

Theory classes: 4h

Laboratory classes: 4h

Self study : 12h



title english

Description:

content english

Full-or-part-time: 30h

Theory classes: 6h

Laboratory classes: 6h

Self study : 18h

ACTIVITIES

name english

Full-or-part-time: 14h

Theory classes: 2h

Self study: 12h

name english

Full-or-part-time: 14h

Theory classes: 2h

Self study: 12h

name english

Full-or-part-time: 18h

Theory classes: 3h

Self study: 15h

GRADING SYSTEM



BIBLIOGRAPHY

Basic:

- Smith, Robert T.; Minton, Roland B.; Rafhi, Ziad A. T. Cálculo de una variable: trascendentes tempranas [on line]. 5a. McGraw Hill, 2019 [Consultation: 13/02/2023]. Available on: https://www-ingebook-com.recursos.biblioteca.upc.edu/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=8726. ISBN 9781456272340.
- Nakos, George; Joyner, David. Álgebra lineal con aplicaciones. México, D.F. [etc.]: International Thomson, cop. 1999. ISBN 9687529865.
- Stewart, James. Cálculo multivariable. 4a ed. México: International Thomson, 2001. ISBN 9706861238.
- Lay, David C. Álgebra lineal y sus aplicaciones [on line]. 5a ed. México: Pearson Educación, 2016 [Consultation: 07/06/2022]. Available on: https://www-ingebook-com.recursos.biblioteca.upc.edu/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=6765. ISBN 9786073237451.
- Larson, Roland ; Edwards, Bruce H. Cálculo [on line]. 9a ed. Madrid: McGraw-Hill, 2010 [Consultation: 07/06/2022]. Available on: https://www-ingebook-com.recursos.biblioteca.upc.edu/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=5686. ISBN 9786071502735.
- Stewart, James. Cálculo de una variable: trascendentes tempranas. 6ª ed. México: International Thomson, 2008. ISBN 9789706866530.