

SUBJECT TEACHING GUIDE

G641 - Industrial and Ornamental Rocks

Degree in Mining Resources Engineering First Degree in Mining Resources Engineering

Academic year 2024-2025

1. IDENTIFYING DATA					
Degree	Degree in Mining Resources Engineering First Degree in Mining Resources Engineering			Type and Year	Optional. Year 3 Optional. Year 3
Faculty	School of Mines and Energy Engineering				
Discipline	Optional Subjects: Mine Exploitation Module: Optional Training				
Course unit title and code	G641 - Industrial and Ornamental Rocks				
Number of ECTS credits allocated	6	Term	Semester based (2)		
Web					
Language of instruction	Spanish	English Friendly	Yes	Mode of delivery	Face-to-face

Department	DPTO. CIENCIAS DE LA TIERRA Y FISICA DE LA MATERIA CONDENSADA				
Name of lecturer	PABLO CRUZ HERNANDEZ				
E-mail	pablo.cruz@unican.es				
Office	Facultad de Ciencias. Planta: + 2. DESPACHO PROFESORES (2019)				
Other lecturers	JORGE CARRIEDO VECI				

3.1 LEARNING OUTCOMES

- Student acquired knowledge of industrial mineral, ornamental and industrial rocks, tests to characterize the rocks and exploitation and environmental problems

4. OBJECTIVES

The aim of this course is to provide the student with the basic knowledge about the characteristics, properties and use of industrial minerals, industrial and ornamental rocks, as an important potential mining resources

6. SUBJECT PROGRAM	
CONTENTS	
1	1-Industrial minerals: classification, properties and uses. 2- Characteristics and properties of industrial minerals: clays. Applications. 3- Characteristics and properties of industrial minerals: Carbonates, sulfates and halides. Applications. 4-Characteristics and properties of industrial minerals: Silicates. Applications
2	Ornamental Rocks: classification, properties and uses. Characterization tests.
3	Aggregates: classification and properties. Characterization tests. Applications.
4	Exploitation of the industrial and ornamental rocks.Environmental problems.

7. ASSESSMENT METHODS AND CRITERIA				
Description	Type	Final Eval.	Reassessn	%
Attendance at practices. Reports about them.	Laboratory evaluation	No	No	20,00
Group work and delivery reports.	Work	No	Yes	30,00
Theoretical written test	Written exam	Yes	Yes	20,00
Exam and laboratory dossier	Work	Yes	Yes	30,00
TOTAL				100,00
Observations				
In September, the same evaluation criteria are applied.				
Observations for part-time students				
The part-time student assessment will be according to the regulations that this respect has the University of Cantabria.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS
BASIC
López Jimeno, C. et al. (1996). MANUAL DE ROCAS ORNAMENTALES:PROSPECCIÓN, EXPLOTACIÓN Y COLOCACIÓN/Editor López Jimeno, Carlos. Madrid. LOEMCO,D.L.
Gobierno de Aragón (2003). GUÍA PRÁCTICA PARA LA CARACTERIZACIÓN DE ROCAS ORNAMENTALES. DEPARTAMENTO DE INDUSTRIA, COMERCIO Y TURISMO. GOBIERNO DE ARAGÓN.
Bustillo Revuelta, M. (2001). ROCAS INDUSTRIALES: TIPOLOGÍA, APLICACIONES EN LA CONSTRUCCIÓN Y EMPRESAS DEL SECTOR. Ed. ROCAS Y MNERALES. MADRID.