

SUBJECT TEACHING GUIDE

G634 - Mining Engineering II

Degree in Mining Resources Engineering

Academic year 2023-2024

1. IDENTIFYING DATA					
Degree	Degree in Mining Resources Engineering			Type and Year	Compulsory. Year 3
Faculty	School of Mines and Energy Engineering				
Discipline	Subject Area: Technology of Mine Exploitation Module: Training in Exploitation of Mines				
Course unit title and code	G634 - Mining Engineering II				
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. TRANSPORTES Y TECNOLOGIA DE PROYECTOS Y PROCESOS				
Name of lecturer	NOEMI BARRAL RAMON				
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Other lecturers	LUIS VEJO FERNANDEZ				

3.1 LEARNING OUTCOMES

- O- To know all the data and practical rules for a good technical management of an exploitation throughout the different phases of the mining project, as well as the most characteristic mining terminology.
- To know the techniques and methods of interior and exterior exploitation as well as the machinery to be used in each case , which allow a deposit to be exploited in the most economical way and with the greatest safety.
- Know the auxiliary work that must be taken into account fundamentally in interior exploitations, such as ventilation, drainage, transport, support, electrification, etc.

4. OBJECTIVES

The main objectives are listed next:

Acquisition of knowledge of data and practical rules for a good technical direction throughout the various phases of the mining project and the characteristic terminology.

Learning the techniques and methods for the development of open-pit and underground sites, as well as the equipment used in each case, improving both safety and incomes.

Knowing the auxiliary tasks underground sites, such as ventilation, drainage, transportation, maintenance, electricity, etc.

6. COURSE ORGANIZATION

CONTENTS

1	DEFINITIONS AND GENERAL MATTERS. STAGES OF A MINING PROJECT. Definitions and general issues. Stages of a Mining Project.
2	MINING METHODS. Open-pit mining methods Underground mining methods
3	MINING MACHINERY AND TECHNOLOGY. Machinery for open-pit mining Machinery for underground mining Mining Technology: preparatory works (galleries, tunnels, shafts, chimneys, etc ...), mine ventilation, mine drainage, maintenance, transportation, extractive machinery.
4	ELECTRIFICATION OF MINES. Types of electric installations applied in mining. Legal requirements for underground mining. Electric specifications for the equipment. Requirements for electrical installations in open pit mining.

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Final exam	Written exam	Yes	Yes	60,00
Group Essay	Work	No	Yes	20,00
Tests	Written exam	No	Yes	20,00
TOTAL				100,00
Observations				
If justified circumstances impede the application of these criteria to the evaluation of a certain student, other alternatives will be studied and proposed for the continuous evaluation. The continuous evaluation score will be kept for september.				
Observations for part-time students				
Part-time students will be evaluated according to the Regulations of the University of Cantabria.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Curso sobre explotaciones a Cielo abierto de la Fundación Gómez Pardo. Autores: Fernando Pla, Luciano Mencía, y Carlos López Jimeno.

Manual de arranque, carga y transporte en minería a Cielo abierto. Autor: Carlos López Jimeno.

Explotaciones a Cielo abierto. Autor: A. Novizky

Manual de ventilación de Minas. Autor: Vicente Luque

Curso de laboreo de Minas. Autor. Luis de la Cuadra Irizar.

Tratado de laboreo de Minas. Autor: Fritzche

Apuntes de la asignatura proporcionados al comienzo del curso. Autores: Rubén Pérez Álvarez y Raúl Husillos Rodríguez.