

SUBJECT TEACHING GUIDE

G385 - Physics I

Degree in Mining Resources Engineering

Academic year 2019-2020

1. IDENTIFYING DATA					
Degree	Degree in Mining Resources Engineering			Type and Year	Core. Year 1
Faculty					
Discipline	Subject Area: Physics Basic Training Module				
Course unit title and code	G385 - Physics I				
Number of ECTS credits allocated	6	Term	Semester based (1)		
Web	https://ocw.unican.es/course/view.php?id=192				
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. FISICA APLICADA				
Name of lecturer	MARIA DOLORES ORTIZ MARQUEZ				
E-mail	dolores.ortiz@unican.es				
Office	E.P. de Ingeniería de Minas y Energía. Planta: + 0. SECRETARIA DE DIRECCION (061)				
Other lecturers	JOSE ANGEL MIER MAZA				

3.1 LEARNING OUTCOMES

- The student will acquire knowledge about the general laws of the Mechanics and its application for the resolution of problems in the engineering field.

4. OBJECTIVES

Acquisition of scientific and technical basis for the comprehension and development of other subjects of top courses.

Use of instruments to measure different physical magnitudes

Knowledge and understanding of the basic concepts related to the equilibrium, solid bodies movement and fluids.

6. COURSE ORGANIZATION	
CONTENTS	
1	INTRODUCTION 1. Systems of measurement 2. Vectors
2	MECHANICS 3. Motion in two and three dimensions 4. Newton`s laws and applications 5. Work and energy 6. Systems of particles 7. Rotation 8. Elasticity 9. Fluids 10. Fluids in motion

7. ASSESSMENT METHODS AND CRITERIA				
Description	Type	Final Eval.	Reassessn	%
Monitoring exam (10%): this test will be similar to the final exam.	Written exam	No	Yes	10,00
CLASS TASKS (10%): These taks include attendance and participation in class.	Work	No	No	10,00
LABORATORY (20%): The students will make three experiments in the lab and will do a presentation of one of them.	Laboratory evaluation	No	No	20,00
FINAL EXAM (60%): This exam is divided in two parts: a) questions (4 points over 10) and b) problems (6 points over 10).	Written exam	Yes	Yes	60,00
TOTAL				100,00
Observations				
Observations for part-time students				
The students with part time have to make the laboratory experiments and the monitoring exams.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS
BASIC
- Física para la ciencia y la tecnología. VOL 1. Paul A. Tipler Ed. Reverté - Física. VOL 1. Serway Jewett. Ed. Thompson.