SUBJECT TEACHING GUIDE

G438 - PHYSICS 1

Degree in Marine Engineering
First Degree in Marine Engineering

Academic year 2023-2024

1. IDENTIFYING DATA					
Degree	Degree in Marine Engineering First Degree in Marine Engineering			Type and Year	Core. Year 1 Core. Year 1
Faculty	School of Maritime Engineering				
Discipline	Subject Area: Physics Basic Training Module				
Course unit title and code	G438 - PHYSICS 1				
Number of ECTS credits allocated	6	Term		Semester based (1)	
Web	https://personales.unican.es/fernancv/Fisica/index.htm				
Language of instruction	Spanish	English Friendly	Yes	Mode of delivery	Face-to-face

Department	DPTO. FISICA APLICADA
Name of lecturer	VIDAL FERNANDEZ CANALES
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Other lecturers	MARIA DOLORES ORTIZ MARQUEZ

3.1 LEARNING OUTCOMES

- Be able to solve problems related with general physics laws, and apply this ability to:
  - write technical reports
  - develop a physical model of a process
  - design and perform experiments
  - identify the key points in a physical process, and perform graphical, numerical, analytical and experimental analysis
  - check results according to the accuracy of the experimental set up

4. OBJECTIVES

Acquire basic Physics knowledge
Explain usual phenomena by using simple models
Use experimental and mathematical tools
Analyze diverse physical phenomena
Perform experiments acquire data, analyze results and derive conclusions
Write precisely technical reports
Solve qualitatively and quantitatively related problems

6. COURSE ORGANIZATION

CONTENTS	
1	Introduction to Physics
1.1	Matter structure
1.2	Measuring.
1.3	Vectors
2	Mechanics
2.1	Cinematics
2.2	Dynamics
2.3	Work and energy
2.4	Applications: Oscillations and Fluids

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Laboratory	Laboratory evaluation	No	No	20,00
Periodics exams	Written exam	No	Yes	40,00
Final exam	Written exam	Yes	Yes	30,00
Assigned tasks	Work	No	Yes	10,00
TOTAL				100,00

Observations

The pupils can discard those assigned tasks and periodic exams with a low mark, and retake their percentage in the final exam.

Observations for part-time students

Part-time students can ask for a laboratory exam in order to obtain the corresponding mark (20%) if they can not attend the laboratory ordinary sessions.

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Física para la ciencia y la tecnología, P. Tipler y G. Mosca (Reverté)
Física para ciencias e ingeniería, R. Serway y J. Jewett (Paraninfo)
Fisica Universitaria, Sears y Zemansky / Young y Freedman, 13 ed., (Pearson)
Material didáctico en curso moodle y web de la asignatura http://personales.unican.es/fernancv/Fisica