

## SUBJECT TEACHING GUIDE

### G440 - PHYSICS II

#### Degree in Marine Engineering

#### First Degree in Marine Engineering

Academic year 2024-2025

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	G440 - PHYSICS II				
Number of ECTS credits allocated	6	Term	Semester based (2)		
Knowledge Field					
Web	<a href="http://www.personales.unican.es/fernancv/fisica">http://www.personales.unican.es/fernancv/fisica</a>				
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. FISICA APLICADA
Name of lecturer	VIDAL FERNANDEZ CANALES
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Other lecturers	JOSE ANGEL MIER MAZA

#### 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. SUBJECT PROGRAM	
CONTENTS	
1	Electromagnetism
1.1	Electric field
1.2	Direct current
1.3	Magnetic field
1.4	Electromagnetic induction
2	Waves
3	Thermodynamics
3.1	Introduction to thermodynamics and zero principle
3.2	First principle of thermodynamics
3.3	Second principle of thermodynamics

7. ASSESSMENT METHODS AND CRITERIA				
Description	Type	Final Eval.	Reassessn	%
Laboratory	Laboratory evaluation	No	No	20,00
Periodic exams	Written exam	No	Yes	40,00
Final exam	Written exam	Yes	Yes	30,00
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 who can not attend the laboratory ordinary sessions can ask for a laboratory exam in order to obtain the corresponding mark (20%) .				

8. BIBLIOGRAPHY AND TEACHING MATERIALS
<b>BASIC</b>
Física para la ciencia y la tecnología, P. Tipler y G. Mosca (Reverté)
Física para ciencias e ingeniería, Serway y Jewett (Paraninfo)
Física Universitaria, Young Freedman/Sears Zemansky, (Pearson)
Material didáctico en curso moodle y web de la asignatura <a href="http://personales.unican.es/fernancv/Fisica">http://personales.unican.es/fernancv/Fisica</a>