

SUBJECT TEACHING GUIDE

G1123 - Fluids Mechanics II

Degree in Maritime Engineering

Academic year 2024-2025

1. IDENTIFYING DATA					
Degree	Degree in Maritime Engineering			Type and Year	Compulsory. Year 4
Faculty	School of Maritime Engineering				
Discipline	Subject Area: Fluid Mechanics Module: Specific Technology Propulsion and Ship Services				
Course unit title and code	G1123 - Fluids Mechanics II				
Number of ECTS credits allocated	6	Term	Semester based (1)		
Web	https://personales.unican.es/reneDOC/docencia.htm				
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. INGENIERIA ELECTRICA Y ENERGETICA
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3.1 LEARNING OUTCOMES

- Acquisition of basic engineering knowledge of design and calculation of hydraulic facilities installation
- Apply knowledge to the calculation and control of vibration and noise on board ships and artifacts

4. OBJECTIVES

Acquire knowledge of hydraulics and pneumatics for the design and improvement of facilities within a ship

Get knowledge in the vibration behavior of simple mechanical systems. Knowing the instrumentation and currently existing tests in the dynamic and monitored design of machines and components.

6. SUBJECT PROGRAM

CONTENTS

1	Pneumatics
2	Hydraulic
3	Vibrations

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Exam of Blocks 1 and 2.	Written exam	No	Yes	60,00
Exam of Block 3.	Written exam	No	Yes	30,00
Lab for Blocks 1 and 2.	Work	No	No	6,70
Lab for Block 3.	Work	No	No	3,30
TOTAL				100,00

Observations

Partial marks are not saved for next year course.

IT IS EXPECTED THAT, IN THE EVENT THAT THE SOCIAL DISTANCE MEASURES ESTABLISHED BY THE SANITARY AUTHORITIES DO NOT ALLOW TO DEVELOP PRESENTIALLY: THE LABORATORY PRACTICES AND / OR THE PRACTICAL EXAMS, THE ASSESSMENT WILL BE CARRIED OUT:

- A) THROUGH MOODLE FOR THEORETICAL-PRACTICAL EXAMS. IN THIS PLATFORM THE SPECIFIC CONDITIONS OF REALIZATION WITH THE SUFFICIENT ADVANCE WILL BE EXPLAINED.
- B) THROUGH COMPUTER SIMULATIONS FOR PRACTICES
- C) STUDENTS WILL NEED TO HAVE THE DAY OF THE EXAMINATION OF: INTERNET CONNECTION, COMPUTER AND SCANNER OR CAMERA OF PHOTOS.

Observations for part-time students

The part-time students will be evaluated of the whole subject (100%) in an exam in the ordinary call; the exam may contain theoretical, practical and laboratory parts. If they do not pass the subject, they will be able to recover it in the extraordinary exam, in which they will re-evaluate the whole subject.

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Moodle de la asignatura

Neumática. A. Serrano. Ed. Paraninfo

Prontuario de hidráulica industrial. J. Roldán. Ed. Paraninfo

Oleohidráulica. A. Serrano. Ed. McGrawhill

Benson H. Principles of vibration. Oxford University Press, 2002

Argyris J. Dynamics of structures. North-Holland, 1991

Bottega W.J. Engineering vibration. Taylor & Francis, 2006

Neumática industrial. J. Pelaez. Ed. Dossat, 2000