

SUBJECT TEACHING GUIDE

527 - Theoretical and Practical Bases for Risk Assessment

Master's Degree in Coasts and Ports

Academic year 2024-2025

1. IDENTIFYING DATA					
Degree	Master's Degree in Coasts and Ports			Type and Year	Optional. Year 1
Faculty	School of civil Engineering				
Discipline					
Course unit title and code	527 - Theoretical and Practical Bases for Risk Assessment				
Number of ECTS credits allocated	4	Term	Semester based (2)		
Web					
Language of instruction	Spanish	English Friendly	Yes	Mode of delivery	Face-to-face

Department	DPTO. CIENCIAS Y TECNICAS DEL AGUA Y DEL MEDIO AMBIENTE				
Name of lecturer	PEDRO DIAZ SIMAL				
E-mail	pedro.diaz@unican.es				
Office	Edificio IH Cantabria. Planta: + 2. DESPACHO (228)				
Other lecturers	SAUL TORRES ORTEGA				

3.1 LEARNING OUTCOMES

- To understand and be able to make an appropriate use of the fundamental concepts to be applied in risk assessment
- To identify the different approaches, methods and tools to be used in risk assessment studies
- To be able to assess and quantify the different risk levels
- To learn the problems in decision making in a risk framework

4. OBJECTIVES

The course aims at providing the necessary knowledge and skills to assess risks, considering the different multidisciplinary problems to be addressed.

6. SUBJECT PROGRAM	
CONTENTS	
1	Risk. Introduction and fundamental concepts
2	Terminology and applied methodologies (sectorial analysis)
3	Probabilistic risk assessment
4	Evaluation of consequences
5	Economic assessment of risk
6	Risks governance, communication and management

7. ASSESSMENT METHODS AND CRITERIA				
Description	Type	Final Eval.	Reassessn	%
Written exam on concepts	Written exam	No	Yes	40,00
Exercises to presented in class	Work	No	Yes	30,00
Online Test	Work	No	Yes	30,00
TOTAL				100,00
Observations				
Only for duly justified reasons (e.g. health restrictions) may assessment tests be organised at a distance, with the prior authorisation of the Centre's management.				
Observations for part-time students				
The same assessment criteria will be applied to part-time students as to full-time students. The distribution of activities over time will be adapted to the particular conditions of each student when deemed necessary.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS
BASIC
Risk Analysis in Engineering and Economics, 2nd Edition, Bilal M. Ayyub CRC Apuntes de clase elaborados por los profesores