

SUBJECT TEACHING GUIDE

524 - Hydrometeorological Risk Analysis: Coastal and River Flooding, Climatic Change

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	524 - Hydrometeorological Risk Analysis: Coastal and River Flooding, Climatic Change				
Number of ECTS credits allocated	3	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	FERNANDO JAVIER MENDEZ INCERA				
E-mail	fernando.mendez@unican.es				
Office	E.T.S. de Ingenieros de Caminos, Canales y Puertos. Planta: + 0. DESPACHO FERNANDO JAVIER MENDEZ INCERA (0054)				
Other lecturers					

3.1 LEARNING OUTCOMES
<ul style="list-style-type: none"> -- The student will know the different natural and technological risks that threat the different aquatic systems - The student will know and understand the components of risks: hazard, vulnerability, exposure,... - The student will know the main methodologies and tools for flooding risk assessment - The student will be able of discussing about flood risk management

4. OBJECTIVES

- To understand the different component of flooding risk at different spatial scales (Km, m) and temporal scales (events, hydrographs, seasonality, inter annual variability, trends, climate change)
- To be able of applying different data bases for flood risk assessment
- To understand ant to be able of using different mathematical, statistical and numerical models for flooding risk assessment.

6. SUBJECT PROGRAM

CONTENTS

1	Introduction. Methodologies for analysing the hazard, exposure, vulnerability and risk. Data and Tools
2	Practical case 1. Presentation + Conceptual Framework
3	Practical case 1. Development + Oral Presentation
4	Practical case 2. Presentation + Conceptual Framework
5	Practical case 2. Development + Oral Presentation

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Practice 1. 50%	Work	No	Yes	50,00
Practice 2. 50%	Work	No	Yes	50,00
TOTAL				100,00
Observations				
Only for duly justified causes (eg sanitary restrictions), the evaluations may be organized remotely, with prior authorization from the Center's Directorate.				
Observations for part-time students				
Part-time students will apply the same assessment criteria as full-time students. The temporary distribution of activities will be adapted to the particular conditions of each student when deemed necessary.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Birkmann, J. (2006) Measuring vulnerability to natural hazards: towards disaster resilient societies, United Nations University

Informes Ejemplos de Riesgo de Inundación realizados por IH Cantabria

Presentaciones de aplicaciones de proyectos realizados por IH Cantabria