

## SUBJECT TEACHING GUIDE

### 551 - System of Coastal Modeling

### 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	551 - System of Coastal Modeling				
Number of ECTS credits allocated	4	Term	Semester based (2)		
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. CIENCIAS Y TECNICAS DEL AGUA Y DEL MEDIO AMBIENTE				
Name of lecturer	ERNESTO MAURICIO GONZALEZ RODRIGUEZ				
E-mail	mauricio.gonzalez@unican.es				
Office	E.T.S. de Ingenieros de Caminos, Canales y Puertos. Planta: + 0. ERNESTO MAURICIO GONZALEZ RODRIGUEZ (0046A)				
Other lecturers	ALEXANDRA TOIMIL SILVA				

3.1 LEARNING OUTCOMES
-- To know the methodology and tools in order to develop a beach restauration problem
-- To know numerical tolos and the data base included in the Coastal Modelling System (SMC)
-- To know the limitations and range of application of the numerical models included in the SMC
-- Be able to apply the methodologies, data and numerical tools included in SMC, in order to study coastal problems
-- To be familiar with the tools to develop morphodynamic studies in the coastal areas

#### 4. OBJECTIVES

The objective of the course is to provide students with methodological knowledge, data and tools contained in the SMC, for the design, construction and management of coastal actions, particularly those aimed at the protection of the coastline against erosion as well as the restoration and regeneration of beaches.

#### 6. SUBJECT PROGRAM

##### CONTENTS

1	Introduction to SMC
2	SMC-Tools
3	Beach Regeneration Manual
4	Short-Term study (Mopla/Petra)
5	Long-Term Study (Plan and Profile)
6	Terrain modeling and tools
7	Example real cases
8	Work in a real case

#### 7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Presentation in class practical case 2	Others	No	Yes	20,00
Presentation in class practical case 5	Others	No	Yes	20,00
Presentation in class practical case 6	Others	No	Yes	20,00
Presentation in class practical case 7	Others	No	Yes	20,00
Presentation in class practical case 8	Others	No	Yes	20,00
TOTAL				100,00

##### Observations

- For the presentation of the work, attendance to 80% of the classes will be mandatory.
- The students carry out practices on computer, which they work on in class and out of class, some of them individually and others in groups.
- Only for duly justified reasons (e.g. health restrictions) the evaluation tests may be organized remotely, with the prior authorization of the Direction of the Center.

##### 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

Los 4 Documentos temáticos del SMC (Playas, Oleaje, Nivel del mar, Impacto Cambio Climático)  
Los 6 Manuales de Usuario del SMC (SMC, SMC-Tools, Oluca, Copla, Petra,..)

