

## 28767 - Maritime and Coastal Engineering

### Información del Plan Docente

Academic Year	2016/17
Academic center	175 - Escuela Universitaria Politécnica de La Almunia
Degree	423 - Bachelor's Degree in Civil Engineering
ECTS	6.0
Course	4
Period	Second semester
Subject Type	Optional
Module	---

### 1. Basic info

#### 1.1. Recommendations to take this course

#### 1.2. Activities and key dates for the course

### 2. Initiation

#### 2.1. Learning outcomes that define the subject

#### 2.2. Introduction

### 3. Context and competences

#### 3.1. Goals

#### 3.2. Context and meaning of the subject in the degree

#### 3.3. Competences

#### 3.4. Importance of learning outcomes

### 4. Evaluation

### 5. Activities and resources

#### 5.1. General methodological presentation

**The learning process designed for this subject is based on the following:**

Strong interaction between the teacher/student. This interaction is brought into being through a division of work and responsibilities between the students and the teacher. Nevertheless, it must be taken into account that, to a certain degree, students can set their learning pace based on their own needs and availability, following the guidelines set by the teacher.

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The current subject is conceived as a stand-alone combination of contents, yet organized into three fundamental and complementary forms, which are: the theoretical concepts of each teaching unit, the solving of problems, at the same time supported by other activities.

The organization of teaching will be carried out using the following steps:

– **Theory Classes** : Theoretical activities carried out mainly through exposition by the teacher, where the theoretical supports of the subject are displayed, highlighting the fundamental, structuring them in topics and or sections, interrelating them.

– **Practical Classes** : The teacher resolves practical problems or cases for demonstrative purposes. This type of teaching complements the theory shown in the lectures with practical aspects.

– **Individual Tutorials** : Those carried out giving individual, personalized attention with a teacher from the department. Said tutorials may be in person or online.

### 5.2.Learning activities

**The programme offered to the student to help them achieve their target results is made up of the following activities...**

Involves the active participation of the student, in a way that the results achieved in the learning process are developed, not taking away from those already set out, the activities are the following:

– **Face-to-face generic activities** :

– **Theory Classes** : The theoretical concepts of the subject are explained and illustrative examples are developed as support to the theory when necessary.

– **Practical Classes** : Problems and practical cases are carried out, complementary to the theoretical concepts studied.

– **Generic non-class activities** :

– Study and understanding of the theory taught in the lectures.

– Understanding and assimilation of the problems and practical cases solved in the practical classes.

– Preparation of seminars, solutions to proposed problems, etc.

– Preparation of the written tests for continuous assessment and final exams.

The subject has 6 ECTS credits, which represents 150 hours of student work in the subject during the trimester, in other words, 10 hours per week for 15 weeks of class.

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A summary of a weekly timetable guide can be seen in the following table. These figures are obtained from the subject file in the Accreditation Report of the degree, taking into account the level of experimentation considered for the said subject is moderate.

### 5.3.Program

#### Program

Topic 1. General concepts

Topic 2. The wind

Topic 3. Characterization of the waves

Topic 4. Harbor hydrodynamics

Topic 5. Coastal hydrodynamics and geomorphology

Topic 6. Vertical dykes

Topic 7. Breakwaters

Topic 8. Dredges

Topic 9. Analysis and implementation of marine works projects plan

### 5.4.Planning and scheduling

#### Calendar of sessions and presentations

Then the contents are displayed at each week teaching. These correspond to the issues presented in the content of the subject. (They may be subject to change to adapt to changes and unforeseen events in the school calendar).

Week 1: Topic 1.

Week 2: Topic 2.

Week 4: Topic 3.

Week 6: Topic 4.

Week 8: Topic 5.

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Week 10 Topic 6.

Week 12: Topic 7.

Week 14: Topic 8.

Week 15: Evaluation.

Final exams dates will be published formally in <http://www.eupla.es/secretaria/academica/examenes.html>. The final calendar of the corresponding academic year can be viewed on the website of the school <http://www.eupla.es>.

### Contents of the subjects essential to getting the results of learning.

Guidelines followed to elaborate the contents were as follows:

- respect the contents in memory of verification
- developed an agenda whose chapters generally match the titles of the specified program. When it was not thus made was because its extension and/or correlation was included in another
- selected a large bibliography of recognized technical, classical and current editions.

The program of the course is structured around two complementary content components:

- theorists
- practical

### 5.5. Bibliography and recommended resources

- Esteban Chapapría, Vicent. Obras marítimas / Esteban Chapapría Vicent. - 2ª edc Valencia : Editorial de la UPV, DL 2004
- Negro Valdecantos, Vicente. Diseño de diques verticales / Vicente Negro Valdecantos.... - 2 ed. amp. y rev Madrid : Colegio Oficial de Ingenieros de Caminos, Canales y Puertos, D. L. 2008
- Copeiro del Villar Martínez, E.. Diques de escollera / Enrique Copeiro del Villar Martínez, Miguel Ángel García Campos. - 1 edición Madrid] : Díaz de Santos, D.L. 2008
- Medina Villaverde, José María. Hidrodinámica del perfil de playa / José María Medina Villaverde. - 1ªedic Madrid : Colegio Oficial de Ingenieros de Caminos, Canales y Puertos, 1998
- Negro Valdecantos, Vicente. Puertos obras : conceptos básicos y casos reales de estudio / Vicente Negro Valdecantos. - 2a ed Madrid : Universidad Politécnica de Madrid. E.T.S. de Ingenieros de Caminos, Canales y Puertos, 2001
- Piñeiro Díaz, Emilio.. Guía de buenas prácticas para la ejecución de obras marítimas /[coordinación y diseño, Emilio Piñeiro Díaz]. - 2ª ed Madrid : Puertos del Estado, 2009