

Course: CEE 435

COASTAL ENGINEERING

GENERAL INFORMATION

2nd semester

Credits: 4CU-6UC

Lectures: T 08:30-10:30; R 08:30-10:30

INSTRUCTOR(S)

RAÚL MEDINA

Catedrático de Universidad. Departamento de Ciencias y Técnicas del Agua y del Medio Ambiente.

COURSE OBJECTIVE

The aim of this course is to provide the student with the knowledge for the design, construction and management of coastal works, and more specifically those devoted to coastal protection against erosion and beach nourishment and restoration. The course is divided into three main sections. The first one is focused on the understanding of coastal processes, the second is devoted to the conceptual models and formulations used in engineering designs, the third one deepens on several hot topics related with shore protection and coastal management

TEXTBOOK

[Introduction to Coastal Engineering & Management.](#)

J. W. Kamphuis,

ISBN: 981-02-4417-7

Publisher: World Scientific, 2000

Advanced series on Ocean Eng- Vol.15

437 Pages

GRADING

Homework:	20%
Exam Prelim 1:	25 %
Exam Prelim 2:	25%
Final Exam:	30%

COURSE SYLLABUS

Week	Day	Date	Class	Topic	Comments
1	Tu		Th	Introduction, course overview	
	Th		Th+Pr	Water Waves	
2	Tu		Th+Pr	Water Waves	
	Th		Th+Pr	Short-Term Wave Analysis	
3	Tu		Th+Pr	Short-Term Wave Analysis	
	Th		Th+Pr	Long-Term Wave Analysis	
4	Tu		Th+Pr	Long-Term Wave Analysis	
	Th		Th+Pr	Wave Generation	
5	Tu		Th+Pr	Wave Generation	
	Th		Th+Pr	Tides and Water Levels	
6	Tu		Th+Pr	Tides and Water Levels	
	Th		Th+Pr	Wave Transformation and Breaking	
7	Tu		Th+Pr	Wave Transformation and Breaking	
	Th		Pr	Problems	
8	Tu		Pr	Problems	
	Th		Exam	Exam. Prelim 1	
9	Tu		Th+Pr	Design of Coastal Structures	
	Th		Th+Pr	Breakwaters and jetties	
10	Tu		Th+Pr	Breakwaters and jetties	
	Th		Pr	Problems	
11	Tu		Th+Pr	Coastal Sediment Transport	
	Th		Th+Pr	Basic Shore Processes	
12	Tu		Th+Pr	Basic Shore Processes	
	Th		Pr	Problems	
13	Tu		Th+Pr	Coastal Design and Shore Protection	
	Th		Th+Pr	Coastal Design and Shore Protection	
14	Tu		Th+Pr	Coastal Design and Shore Protection	
	Th		Pr	Problems	
15	Tu		Th+Pr	Coastal Management	
	Th		Exam	Exam - Prelim 2	