

(B) Course information in english

General course information:

Course title:	Coastal Engineering – Coastal Protection Works	Course code:	CE09_H03
Credits:	6	Work load (hours):	120
Course level:	Undergraduate <input checked="" type="checkbox"/>	Graduate <input type="checkbox"/>	
Course type:	Mandatory <input type="checkbox"/>	Selective <input checked="" type="checkbox"/>	
Course category:	Basic <input type="checkbox"/>	Orientation <input checked="" type="checkbox"/>	
Semester:	9 th	Hours per week:	4
Course objectives (capabilities pursued and learning results):			
Basic principles of coastal hydrodynamics. Introduction to sediment transport mechanism and coastal protection works and design.			
Prerequisites:			
Fluid Mechanics, Maritime Hydraulics and Harbour Engineering			

Instructor's data:

Name:	Vasiliki Katsardi
Level:	Lecturer
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Tel. – email:	24210 7 74167 – vkatsardi@civ.uth.gr
Other tutors:	-

Specific course information:

Week No.	Course contents	Hours	
		Course attendance	Preparation
1	Introduction and presentation of the course	4	0
2	Nonlinear Wave Theories	4	3
3	Wave Transformations	4	3
4	Wave-induced currents	4	3
5	Sediment Transport – Bed Shear Stress	4	3
6	Sediment Transport – Bedload and sheet flow	4	3
7	Surf zone sediment transport	4	3
8	Morphodynamics	4	3
9	Introduction to coastal protection works	4	3
10	Works parallel to the shoreline	4	3
11	Works perpendicular to the shoreline	4	3
12	Beach nourishment	4	3
13	Mathematical study of shoreline evolution	4	3
14	Revision	4	0

Additional hours for:			
Class project	Examinations	Preparation for examinations	Educational visit
10	2,5	18	-

Suggested literature:

- Κουτίτας, Κ., «Εισαγωγή στην Παράκτια Τεχνική και τα Λιμενικά Έργα», ISBN 960-431-289-8, Θεσσαλονίκη: Εκδόσεις Ζήτη, 1998
- Μέμος, Κ., «Μαθήματα Λιμενικών Έργων», ΕΜΠ, ISBN 960-266-057-0, Αθήνα: Εκδόσεις Συμμετρία, 2005 (Διατίθεται από το ΤΕΙ ως βασικό σύγγραμμα)
- Ματσούκης, Π.Φ., «Μαθήματα Λιμενικών Έργων», ΔΠΘ, Ξάνθη, 1995
- Dean R.G. & Dalrymple R.A., “Water Wave Mechanics for Engineers and Scientistis”, World Scientific
- Mei, C.C., “The applied Dynamics of Ocean Surface Waves”, Advanced Series on Ocean Engineering - Volume 1, ISBN 9971-50-789-7, World Scientific, 1989
- Nielsen, P., 2009, “Coastal and Estuarine Processes”, World Scientific
- Coastal Engineering Manual (2007). U. S. Army Corps of Engineers
- Shore Protection Manual (1987). U. S. Army Corps of Engineers

Teaching method (select and describe if necessary - weight):

Teaching	<input checked="" type="checkbox"/>	65%
Seminars	<input type="checkbox"/>	5%
Demonstrations	<input checked="" type="checkbox"/>%
Laboratory	<input type="checkbox"/>%
Exercises	<input checked="" type="checkbox"/>	30%
Visits at facilities	<input type="checkbox"/>%
Other (describe):	<input type="checkbox"/>%
Total		100%

Evaluation method (select)- weight:				
	<i>written</i>	<i>%</i>	<i>Oral</i>	<i>%</i>
Homework	<input checked="" type="checkbox"/>	5%	<input checked="" type="checkbox"/>	5%
Class project	<input checked="" type="checkbox"/>	10%	<input type="checkbox"/>	
Interim examination	<input type="checkbox"/>		<input type="checkbox"/>	
Final examinations	<input checked="" type="checkbox"/>	80-100%	<input type="checkbox"/>	
Other (describe):	<input type="checkbox"/>		<input type="checkbox"/>	