(B) Course information in english

General course information:

Course title:	Coastal Engineering – Coastal Protection Works	**Course code:**	ΥΔ3802
Credits:	6	**Workload (hours):**	120
Course level:	Undergraduate ☑	Graduate ☐	
Course type:	Mandatory ☐	Selective ☑	
Course category:	Basic ☐	Orientation ☑	
Semester:	9th	**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:	Vanessa Katsardi
Level:	Assistant Professor
Office:	113A
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**
24	3	24	2

Suggested literature:

- Dean R.G. & Dalrymple R.A., "Water Wave Mechanics for Engineers and Scientists", 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
- Καραμπάς, Θ., Κρεστενίτης, Ι., Κουτίτας, Χ., 2015. Ακτομηχανική - έργα προστασίας ακτών. [ηλεκτρ. βιβλ.] Αθήνα: Σύνδεσμος Ελληνικών Ακαδημαϊκών Βιβλιοθηκών. Διαθέσιμο στο: http://hdl.handle.net/11419/2095.
- 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

Teaching method *(select and describe if necessary -* **weight***):*		
Teaching	☑	60%
Seminars	☑	5%
Demonstrations	☑	5%
Laboratory	☐	.....%
Exercises	☑	30%
Visits at facilities	☐	…….%
Other *(describe):* ……	☐	…….%
Total		100%

Evaluation method *(select)*- **weight:**				
	written	*%*	*Oral*	*%*
Homework	☑	5%	☑	5%
Class project	☑	20%	☐	
Interim examination	☐		☐	
Final examinations	☑	70-100%	☐	
Other *(describe):* ……	☐		☐	