(B) Course information in english

General course information:

Course title:	Maritime Hydraulics and Harbour Engineering	**Course code:**	CE08_H01
Credits:	5	**Work load (hours):**	120
Course level:	Undergraduate ☑	Graduate ☐	
Course type:	Mandatory ☑	Selective ☐	
Course category:	Basic ☑	Orientation ☐	
Semester:	8th	**Hours per week:**	4
Course objectives (capabilities pursued and learning results):			
Introduction to marine hydraulic and wave theory. Port design projects with technical, social and economic views. Basic principles of coastal hydrodynamics. Introduction to sediment transport mechanism and coastal protection works and design.			
Prerequisites:			
Fluid Mechanics			

Instructor's data:

Name:	Vasiliki Katsardi
Level:	Lecturer
Office:	113A
Tel. – email:	24210 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	Introduction to Linear Wave Theory	4	3
3	Introduction to Linear Wave Theory	4	3
4	Wave Transformations	4	3
5	Wave Transformations	4	3
6	Generation of Real Waves	4	3
7	Nonlinear Wave Theories	4	3
8	External Harbor Works: Seawalls	4	3
9	External Harbor Works: Breakwaters Presentation of a case study in the Hellenic area	4	3
10	Internal Harbor Works	4	3
11	Construction of Harbor Works:	4	3
12	Topics in Harbour Works	4	3
13	Maintenance and upgrading of Harbor Works	4	3
14	Revision	4	0

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

Suggested literature:
• Μέμος, Κ., «Μαθήματα Λιμενικών Έργων», ΕΜΠ, ISBN 960-266-057-0, Αθήνα: Εκδόσεις Συμμετρία, 2005 (Διατίθεται από το ΤΕΙ ως βασικό σύγγραμμα) • Κουτίτας, Κ., «Εισαγωγή στην Παράκτια Τεχνική και τα Λιμενικά Έργα», ISBN 960-431-289-8, Θεσσαλονίκη: Εκδόσεις Ζήτη, 1998 • 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	☑	65%
Seminars	☐	5%
Demonstrations	☑	…….%
Laboratory	☐	.....%
Exercises	☑	30%
Visits at facilities	☐	…….%
Other *(describe):* ……	☐	…….%
Total		100%

Evaluation method *(select)*- **weight:**				
	written	*%*	*Oral*	*%*
Homework	☑	5%	☑	5%
Class project	☑	10%	☐	
Interim examination	☐		☐	
Final examinations	☑	80-100%	☐	
Other *(describe):* ……	☐		☐	