(B) Course information in English

General course information:

Course title:	Maritime Hydraulics and Harbour Engineering	**Course code:**	ΓΚ3801
Credits:	5	**Workload (hours):**	135
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.			
Prerequisites:			
Fluid Mechanics			

Instructor's data:

Name:	Vanessa Katsardi
Level:	Assistant Professor
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 Harbour Works: Seawalls	4	3
9	External Harbour Works: Breakwaters Presentation of a case study in the Hellenic area	4	3
10	Internal Harbour Works	4	3
11	Construction of Harbour Works:	4	3
12	Topics in Harbour Works	4	3
13	Maintenance and upgrading of Harbour Works	4	3
14	Revision	4	0

Additional hours for:			
Class project	**Examinations**	**Preparation for examinations**	**Educational visit**
8	3	16	2

Suggested literature:
• 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 In Greek: • 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

Teaching method *(select and describe if necessary -* **weight***):*		
Teaching	☑	55%
Seminars	☑	3%
Demonstrations	☑	5%
Laboratory	☐	.....%
Exercises	☑	30%
Visits at facilities	☐	7%
Other *(describe):* ……	☐	…….%
Total		100%

Evaluation method *(select)*- **weight:**				
	written	*%*	*Oral*	*%*
Homework	☑	5%	☑	5%
Class project	☑	≤30%	☐	
Interim examination	☐		☐	
Final examinations	☑	60-100%	☐	
Other *(describe):* ……	☐		☐	