	COAST	AL HY	DRODYNAMICS						
1	Course Title:	COASTA	AL HYDRODYNAMICS						
2	Course Code:	INS5261							
3	Type of Course:	Optional							
4	Level of Course:	Second Cycle							
5	Year of Study:	1							
6	Semester:	1							
7	ECTS Credits Allocated:	7.50							
8	Theoretical (hour/week):	3.00							
9	Practice (hour/week):	0.00							
10	Laboratory (hour/week):	0							
11	Prerequisites:	None							
12	Language:	Turkish							
13	Mode of Delivery:	Face to face							
14	Course Coordinator:	Prof. Dr. Adem Akpınar							
15	Course Lecturers:								
16	Contact information of the Course Coordinator:	ademakpinar@uludag.edu.tr 0224 24 09 04							
17	Website:								
18	Objective of the Course:	To teach and develop basic understanding of the physical processes that are of engineering and environmental importance in coastal regions, and to acquire engineering skills needed to solve coastal problems, such as sediment transport and beach erosion, coastal protection, navigation and structure design, coastal floods and water quality control.							
19	Contribution of the Course to Professional Development:	To teach and develop basic understanding of the physical processes that are of engineering and environmental importance in coastal regions, and to acquire engineering skills needed to solve coastal problems, such as sediment transport and beach erosion, coastal protection, navigation and structure design, coastal floods and water quality control.							
20	Learning Outcomes:								
		1	Be able to learn the wave mechanics.						
		2	Be able to have general knowledge about computations and processes of wave transformation in near-shore.						
		3	Be able to learn the mechanism of wind-wave generation.						
		4	Be able to have general knowledge about applications regarding wave hydrodynamics.						
		5	Be able to learn the application studies regarding coastal protection.						
		6	Be able to have general knowledge about wave loadings on structures						
		7							
		8							
		9							
64	Course Content	10							
21	Course Content:		uneo Contente						
Course Content:									

Week	Theoretical		Practice							
1	Overview of coastal engineering and introduction to water waves, linear wa waves and wave theory; kinematics, pressure, wave energy and power, w celerity and group velocity									
2	Wave Transformation in Near-shore; shoaling, refraction, diffraction, reflec breaking, wave run-up and down	tion,								
3	Wave Transformation in Near-shore; shoaling, refraction, diffraction, reflec breaking, wave run-up and down	tion,								
4	Wave Transformation in Near-shore; shoaling, refraction, diffraction, reflec breaking, wave run-up and down	tion,								
5	Random waves; wave statistics									
6	Wind-wave generation; hindcast and of wind-wave characteristics	forecast								
7	Wind-wave generation; hindcast and of wind-wave characteristics	forecast								
8	Shallow-water Dynamics; longshore a cross-shore currents, storm surge, co water level fluctuations									
9	Wave loading on structures									
10	Wave loading on structures									
Activit	-			Number		(hour) Total Work Load (hour)				
-	ldatoral sediment transport			14	3.00	42.00				
Practic	als/Labs			0	0.00	0.00				
Self stu	dy and preperation		V		13.00 2000: Kuyi Mübendisliği İstanbu					
Homew			0.00 0.00 US Army Corps of Engineers, Coastal Engileeging							
Project			M	anual Part II - Coasta						
Field S			ne	0 aginoora 8 Scientista	0.00 2.00 and Coastal					
	n exams			H HOLTHULISEN	ers & Scientists, World Scientific. HOLTHULISEN Waves in Oceanic					
Others				0	0.00	0.00				
Final E Total W	kams /ork Load		E	ominic REEVE, Andre EMING_Coastal Engi	neering: Processes	230.00				
Total w	ork load/ 30 hr					7.60				
	Credit of the Course					7.50				
TERMIL	EARINING ACTIVITIES	R		EIGHT						
Midterm Exam 1				40.00						
Quiz 0				0.00						
Home work-project 0				0.00						
Final E	xam	1	60.00							
Total		2	100.00							
	ution of Term (Year) Learning Activitie s Grade	es to	40.00							
Contrib	ution of Final Exam to Success Grade)	60.00							
Total			100.00							
Measu Course	•	sed in the	Students are assessed with homework that must personally apply what they have learned in the course.							

24 EC	CTS / WORK LOAD TABLE															
25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16
ÖK1	0	4	0	0	0	0	0	0	0	5	0	0	0	0	0	0
ÖK2	0	4	5	0	0	0	0	0	0	5	0	0	0	0	0	0
ÖK3	0	4	0	0	0	0	0	0	0	5	0	0	0	0	0	0
ÖK4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	3	0	5	5	0	0	0	0	0	5	0	0	0	0	0	0
ÖK6	3	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib ution Level:	ution				2 low	3 Mediu			um	m 4 High			5 Very High			