Year Semester Group(s) Language Theory App Lab. Credit ECTS	Code: INS2222		Course Name: Fluid Mechanics								
Course Type Basic Sciences Engineering Technical Elective Elective	Year	Semester	Group(s)	Language		Theory	App	Lab.	Credit	ECTS	
Course Type Sciences Prerequisite Coordinator Prof. Dr. Esin Çevik Instructor(s) Dog. Dr. H.Anil Güner, Prof. Dr. Esin Çevik The purpose of fluid mechanics is to give basic principal and fluid properties and behavior of fluid Course Goals Fluid Properties/ Fluid Statics / Fluid Kinematics / Fluid Dynamics; Behavior of Ideal and Real Fluids, Drag and Lift / Introduction to Potential Flow Theory / Dimensional Analysis Knowledge and Skills Basic knowledge of principal equations on fluid structure interaction, and how to reach and use knowledge 1) Fundamentals of Fluid Mechanics (Third Ed. John Wiley&Sons, 1998), Munson, Young, Okishi 2) Fluid Mechanics, Frank White (Mc Graw Hill) 3) Fluid Mechanics, Frank White (Mc Graw Hill) 3) Fluid Mechanics Lecture Notes, Y. Yüksel and E. Çevik 4) Akışkanlar Mekaniği ve Hidrolik (Beta Yayınevi, 6.Baskı, 2020), Y. Yüksel Lab 2: Drag Coefficient Experiment Lab 2: Drag Coefficient Experiment Contribution Of The Course Towards Providing Professional Education Prof. Dr. Esin Çevik 1 Purd Droperties And Denaities of Fluid Statics / Fluid Kinematics / Fluid Dynamics; Behavior of Fluids. 2. Learns the properties and behavior of fluids. 2. Learns the basic behavior of fluid flow and their basic equations. 3. Solves fluid mechanics problems and understands its applications in engineering. 4. Learns to make experiments and to interpret the results of the behavior of fluids. 5. Solve complex problems.	2023-2024	Spring	3, 4	English		2	1	1	3	5	
Prerequisite Coordinator Coordinator Prof. Dr. Esin Çevik Doc, Dr. H.Anıl Güner, Prof. Dr. Esin Çevik The purpose of fluid mechanics is to give basic principal and fluid properties and behavior of fluid Fluid Properties / Fluid Statics /Fluid Kinematics / Fluid Dynamics; Behavior of Ideal and Real Fluids, Drag and Lift / Introduction to Potential Flow Theory / Dimensional Analysis Knowledge and Skills References Basic knowledge of principal equations on fluid structure interaction, and how to reach and use knowledge 1)Fundamentals of Fluid Mechanics (Third Ed. John Wiley&Sons, 1998), Munson, Young, Okishi 2) Fluid Mechanics, Frank White (Mc Graw Hill) 3) Fluid Mechanics, Frank White (Mc Graw Hill) 3) Fluid Mechanics Lecture Notes, Y. Yüksel and E. Çevik 4) Akrışkanlar Mekaniği ve Hidrolik (Beta Yayınevi, 6.Baskı, 2020), Y. Yüksel Assignments and Projects Lab 1: Venturimeter Experiment Computer codes Other Activities 1) Video and slide shows Contribution Of The Course Towards Providing Professional Education Course Learning Outcomes Course Learning Outcomes Course Learning Outcomes Course Learning Outcomes/Program Outcomes/Program Outcomes Matrix	Course Type			Engineerin	ng	_					
Prof. Dr. Esin Çevik	Prerequisite		-								
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Course Learning Outcomes/ Program Outcomes Matrix Döc 1	Outcomes/ Program			P C		21 27	5.2	5.2	<i>5.4</i>		
Outcomes Matrix 2				DÖÇ 1.2	1.3	2.1 2.2	5.2	5.3	5.4		
Outcomes/ Program Outcomes Matrix 2				1 x	X						
Outcomes Matrix 3				2		x X					
4			[3 x				x			
5 x				4			х	Х	x		
				5		х					

Date: 16.02.2024

		Success	Evaluation					
Theoretical Courses			Projects					
	Number	Weight (%)		Number	Weight (%)			
Midterms	2	(2×25)=50	Midterm(s)					
Quizzes	-	-	Controls					
Assignments	-	-	Mid-submission(s)					
Laboratory	2	(2×5)=10	Oral Exam					
Other	-	-	Other					
Final Exam	1	40	Final Exam					
Make-up Exam	1	40	Make-up Exam					
Subjects	•		•	•				
Week 1 (19-23.02.24)	Fluid Properties / Introduction, Definition of continuity, density, specific weight, specific gravity							
Week	Viscosity, surface tension, vapor pressure							
(26.01-01.03.24)	Fluid Statics / Pressure, basic principles							
Week 3 (04-08.03.24)	Plane surfaces							
Week 4 (11-15.03.24)	Curved surfaces, Euler equation							
Week 5 (18-22.03.24)	Relative equilibrium, stability of floating body							
Week 6 (25-29.03.24)	Fluid Kinematics / Analyzing of fluid mechanics, fundamental concepts							
Week 7 (01-05.04.24)	Motion of a fluid element, fluid acceleration LAB 1							
Week 8 (08-12, 04.24) Ramadan	Fluid Dynamics / Inviscid fluid dynamics, continuity equation							
Week 9 (15-19 04.24)	MIDTERM 1 (preliminary date)							
Week 10 (22-26 04.24)23 Apri	Equation of motion, energy equation							
Week 11 (29.04-03 05.24)	Impuls-Momentum equation and angular momentum							
Week 12 (06-10.05.24)	Flow of viscous fluid, Navier-Stokes equations, Boundary layer MIDTERM 2 (preliminary date)							
Week 13 (13-17.05.23)	Hydrodynamics of submerged bodies, Introduction to Irrotational Flow LAB2							
Week 14 (20-24.05.23)	Dimension	al Analysis						

Date: 16.02.2024

FORM 2: LECTURER COMMUNICATION INFORMATION

Course Code: INS2222		Course Name: FLUID MECHANICS						
Groups	Course hours and locations	Course Lecturer	Lecturer office	Student meeting hours	email	Web address		
3	TUESDAY 10 ⁰⁰ -11 ⁵⁰ THURSDAY 10 ⁰⁰ -11 ⁵⁰	Doç. Dr. H.A. Güner	H Blok Hidrolik ve Kıyı Liman Lab. Oda No: 4	WEDNESDAY 14 ⁰⁰ -16 ⁰⁰	aari@yildiz.edu.tr	www.inm. yildiz.edu.tr		
4	TUESDAY 10 ⁰⁰ -11 ⁵⁰ THURSDAY 10 ⁰⁰ -11 ⁵⁰	Prof. Dr. Esin Çevik	H Blok Hidrolik ve Kıyı Liman Lab. Oda No: 8	WEDNESDAY 13 ⁰⁰ -14 ⁰⁰	cevik@yildiz.edu.tr	www.inm. yildiz.edu.tr		

Date: 16.02.2024