CIVIL ENGINEERING FACULTY
2025-2026 Spring

FLUID MECHANICS
COURSE DESCRIPTION FORM

ISTANBUL TECHNICAL UNIVERSITY

Course	*Name*	**Fluid Mechanics**					
	Code	AKM-204E			*Type*		Mandatory
	Credit	3			*Hours*		3+0
	CRN	**Class**	**Time**	**Faculty**	**Office**	**Tel.**	**E-Mail**
	11195	A105	Wednesday 12.30-15.30	Abdüsselam Altunkaynak	Hid. Lab.222	2856846	altunkay@itu.edu.tr
	CRN	**Class**	**Time**	**Teaching asst.**	**Office**	**Tel.**	**E-Mail**
	11195	A105	Wednesday 12.30-15.30		Hid. Lab. 229	-	-
Course Book	*English*	D.F. Young, B. R. Munson, T. H. Okiishi, W. W. Huebsch, Introduction to Fluid Mechanics, SI Version, 5th Edition, November 2011, Wiley					
	Turkish	Hidrolik, B. Mutlu Sümer, İstemi Ünsal, Mehmetçik Beyazıt, Birsen Yayınevi					
Recommended Books		1. Robert W. Fox, Alan T. McDonald, Philip J. Pritchard, Fluid Mechanics, International Student Version, 8th Edition, October 2011, Wiley. 2. Clayton T. Crowe, Engineering Fluid Mechanics, International Student Version, 9th Edition, Wiley.					

In-term Evaluation Criteria			**Final Evaluation Criteria**	
Faaliyet / Item	**Number**	**Contribution to in-term**	**In-term Grade**	**Final Grade**
Quizzes	4	% 40	%50	%50
Midterms	2	% 60		
Requirement for Final Exam:	**Compulsory attendance to pass the course: 70%**			
	Minimum total score for in-term activities must be 35			

COURSE PLAN

Week	Date	Topics to be Covered
1	01.Oct.2025	Unit Systems, Dimensional Homogeneity, Physical Properties of Fluids
2	08.Oct.2025	Behaviour of Fluids under Stresses
3	15.Oct.2025	Hydrostatics, Pressure Concept
4	22.Oct.2025	Calculation of Pressure Forces
5	29.Oct.2025	Basic Equations of Fluid Statics, Relative Equilibrium
6	05.Nov.2025	Kinematics of Fluids
7	**12.Nov.2025**	**Midterm Exam 1**
8	09.Nov.2025	Basic Equations of One-Dimensional Flow
9	26.Nov.2025	One-Dimensional Flow of Ideal Fluids
10	03.Dec.2025	One-Dimensional Flow of Ideal Fluids: Applications
11	10.Dec.2025	One-Dimensional Flow of Real Fluids, Laminar and Turbulent Flow
12	17.Dec.2025	Two-Dimensional Flow of Ideal Fluids
13	**24.Dec.2025**	**Midterm Exam 2**
14	31.Dec.2025	Velocity Potential Flows and Boundary Layer and Separation Concepts