IYTE CIVIL ENGINEERING DEPARTMENT

CE 272 FLUID MECHANICS
2023-2024 SPRING SEMESTER

Instructor:
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Assistants:
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Objectives:
1)Identify fluid properties 2)Apply principles of hydrostatics to calculate pressure distribution and forces 3)Describe and classify fluid motion 4)Apply conservation principles for mass, momentum and energy 5)Apply principles of dimensional analysis and similitude

Reference Books:
Çengel, Y.A., Cimbala, J.M. Fluid Mechanics Mc Graw Hill , 2nd ed.New York , 2010
Munson, B. R., Young, D. F., and Okiishi, T. H., Fundamentals of Fluid Mechanics, John Wiley and Sons Inc., 7th edition, U.S.A., 2013.

week	Topic	week	Topic
1	Introduction, scope of fluid mechanics	8	RTT and conservation of mass principle
2	Fluid properties	9	Conservation of momentum principle
3	Fluid statics	10	Conservation of energy principle, Bernoulli
4	Fluid statics - continued	11	Measurement of velocity
5	Fluid kinematics	12	Midterm II
6	Fluid kinematics-continued	13	Dimensional analysis
7	Midterm I	14	Model similitude and principles of modeling

Tentative Course Outline:

Class Requirements
- 3 hours lecture/week
- Attendance (at least 50% not to get NA)
- Two mid-term examinations and a final examination

Grading:
2 Midterms: each 30%, Final Exam: 40%, attendance 5%
Announcements and lecture notes can be followed by visiting LMS