

## KMM 26122 FLUID MECHANICS IN CHEMICAL ENGINEERING, 2020

### Instructors:

Prof. Dr. Hasan Sadıkođlu (dr.hasansadikoglu@gmail.com), Section III

Assoc. Prof. Dr. Nil Acaralı (nilbaran@gmail.com), Section IV

**Course Objectives:** By the end of the course the students should be able to understand fundamentals of the fluid mechanics and its applications in process engineering.

**Course Hours:** Monday 09:00-12:50

**Attendance:** 70% attendance is required.

**Grading:** %30 Quizes, %30 Mid-Term, %40 Final

Week	Date	Content	Textbook
1	12/02	Introduction to Fluid Mechanics and Basic Concepts	Çengel Chapter 1
2	19/02	Classification and Properties of Fluids	Çengel Chapter 1,2
3	26/02	Pressure and Fluids Hydrostatics	Çengel Chapter 3
4	05/03	Continuity Equation, Momentum Equation	Çengel Chapter 4 Geankoplis Chapter 2
5	12/03	Bernoulli and Energy Equations	Çengel Chapter 5
6	19/03	Bernoulli and Energy Equations	Çengel Chapter 5
7	26/03	Laminar and Turbulent Flows in Pipes	Çengel Chapter 8
8	02/04	Pumping of Liquids and Pumps	Çengel Chapter 8
9	09/04	<b>MIDTERM EXAM I</b>	
10	16/04	Compressible Flow	Geankoplis Chapter 2
11	23/04	Grand National Assembly Day	
12	30/04	Measurement of Flow of Fluids	Geankoplis Chapter 3
13	07/05	Momentum and Dimensional Analysis of Flow Systems	Çengel Chapter 7
14	14/05	Differential Analysis of Fluid Flow and Navier-Stokes Equation	Çengel Chapter 9
15		<b>FINAL EXAM</b>	

### Textbook:

- Yunus Çengel, John M. Cimbala, Fluid Mechanics: Fundamentals and Applications, 3e, McGraw Hill.
- Christie J. Geankoplis, Transport Processes and unit operation, 3e, Prentice Hall International.