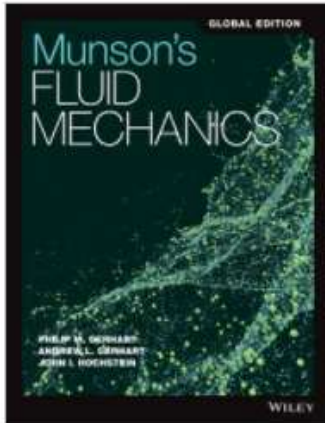


Course description: Fundamental principles of fluid mechanics and their application to engineering problems. Fluid statics. Fluid flow concepts. Control-volume analysis. Conservation equations and applications. Dimensional analysis and similitude. Flow of viscous fluids, simple laminar flow systems, turbulence, internal and external flow applications.

Prerequisites: Math 201 & Math 202

Textbook:



Munson's Fluid Mechanics, Global Edition

Philip M. Gerhart, Andrew L. Gerhart, John I. Hochstein

List of topics:

- Introductory Topics (Chapter 1)
- Fluid Statics (Chapter 2)
- Introduction to Fluid Dynamics (Chapter 3)
- Fluid Kinematics (Chapter 4)
- Control-Volume Analysis (Chapter 5)
- Differential Analysis (Chapter 6)
- Dimensional Analysis and Similitude (Chapter 7)
- Internal Flow (Chapter 8)
- External Flow (Chapter 9)

Grading:

Midterm Exam (date announced the 1st day of lectures) – 30 points

Pop Quizzes – 4 points each (10 “unannounced” quizzes) – 40 points in total

Final Exam – 30 points

- Lecture attendance is required. If your overall lecture-day attendance is less than 70 %, you may not get any partial credits in the Final Exam.
- Announcements made during lectures will be assumed "posted" to all students.
- No make-up for the quizzes.
- You may take a make-up midterm exam if you submit a medical document right after your recovery and if your medical document covers at least 7 days of illness and if your overall lecture-day attendance is higher than 70 %. The make-up exam will be on all the topics, later in the term.
- ME Department Policy on cell phones: Prior to the start of all exams and quizzes, all cell phones must be turned off and stored out of sight inside your coats or bags. Please note that any device found on your person or desktop during the exam/quiz will be treated as an attempt to cheat. This "cell phone" policy also applies to smartwatches and other electronic devices."