Chemical Engineering 150A
TRANSPORT PROCESSES
Spring Semester 2015

Instructor:
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Office Hours: Mon 3-4 p; Tues 3-4 p

Teaching Assistants:
Gina Noh (271A Tan, gnoh@berkeley.edu)
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Office hours: (Chem Library 100F): Mon 5-6 p; Wed 3-4 p.

Objective:
To introduce the basic concepts of fluid mechanics and heat transfer necessary for solution of engineering problems.

Text:
Required:
Welty, Rorrer, and Foster, "Fundamentals of Heat, Mass, and Momentum Transfer," 6th ed., John Wiley (2015).

Recommended:
Bird, Stewart, and Lightfoot, "Transport Phenomena," 2nd ed., John Wiley, NY (2002).
Denn, "Process Fluid Mechanics," Prentice-Hall, NJ (1980).
White, "Fluid Mechanics," 2nd ed., McGraw-Hill, NY (1986).
Middleman, "An Introduction to Fluid Dynamics," Wiley, NY (1998).

Description:
Chemical Engineering 150A discusses fluid mechanics and introduces heat transfer: two processes which together with mass transfer (ChE 150B) comprise the field of transport phenomena. Since the movement of momentum, heat, and mass is indigenous to all chemical processing, this course is basic to what follows in the curriculum. Text coverage is Chapters 1 – 22, excluding Chapter 10. However, lecture material will not necessarily follow the text either in order or in style. Students are expected to have a working knowledge of simple ordinary differential equations.

Course Grade:
The course grade will be determined by the following:

Homework:	15% (lowest 2 scores will be dropped if course evaluations submitted)
Unannounced Quizzes:	6 %
Midterm Exams (2):	22 % each (ca. February 25 and April 13)
Final:	35%

Homework: Homework will be assigned at the beginning of each week and will be due at the beginning of the Wednesday class period one week later. No late homework will be accepted. Assignments, solutions, and handouts will be posted at the class website: https://bcourses.berkeley.edu/courses/1299235 go to Chem Eng 150A and then to Files.