

## Fall 2013 CE35000 Fluid Mechanics

**Description:** Study of behavior of viscous and non-viscous fluids at rest and in motion through development and application of the principles of fluid statics, continuity, energy, momentum, similitude, and dimensional analysis. Applications include flow in open and closed conduits, the boundary layer, dynamics of drag and measurement of velocity and discharge.

**Code and Section:** 0422, D

**Prerequisites:** CE23100 (min. C grade), CSC10200; pre- or coreq.: MATH 39100 (min. C grade).

**Textbook:** C. T. Crowe, D. F. Elger, and J. A. Roberson, Engineering Fluid Mechanics, 8<sup>th</sup> ed., John Wiley & Sons, Inc., 2005 (ISBN 978-0-470-08639-1)

**Reference book:** 1) B. R. Munson, D. F. Young, and T. H. Okiishi, Fundamentals of Fluid Mechanics, 5th ed., John Wiley & Sons, Inc., 2006  
2) Pijush K. Kundu, Fluid Mechanics, Academic Pr (September 1990)

**Time and location:** M, W, 12:30-1:45 pm, BH106

**Instructor:** Prof. Hansong Tang

**Office hours:** M and W 3:00-5:00 pm

**Office:** Steinman Hall-CCNY, T-122, Tel: 212-650-8006

**Email:** htang@ccny.cuny.edu

**Grading:**

Homework (attendance):	10%
Quizzes:	15%
Three exams:	30%
Project:	15%
Final:	30%

## Schedule

Week 1	Introduction, Fluid Properties, Fluid Statics
Week 2	Fluid Statics
Week 3	Fluid Statics
Week 4	Flowing Fluids
Week 5	Continuity Principle exam 1
Week 6	Project (Software Fluent)
Week 7	Momentum Principle
Week 8	Momentum Principle
Week 9	Energy Principle exam 2
Week 10	Energy Principle
Week 11	Dimensional Analysis
Week 12	Surface Resistance, Flow in Conduits
Week 13	Drag and Lift, Others exam 3
Week 14	Review