CSE 6331: Algorithms
Autumn 2012
MWF 1:50-2:45 pm, BO313

Instructor: Ten H. Lai  
Office: 581 Dreese Labs
Office Hours: MWF 3:00-3:50 pm
Email: lai@cse.ohio-state.edu
http://www.cse.ohio-state.edu/~lai/

Course Summary: Algorithm design paradigms; mathematical analysis of algorithms.

Objectives: Students will:
1. Augment their “tool box” of algorithm design techniques.
2. Learn how to analyze the efficiency of algorithms.


Prerequisites: Prereq: 2331 (680) or 5331. Not open to students with credit for 780.

Topics (tentative):
1.5 weeks Mathematical foundations  Sections 1.1, 1.2, 2.2, 3.1
2.0 weeks Divide-and-conquer  Chapter 4, Sections 2.3, 3.4
2.5 weeks Dynamic programming  Chapter 15, 25.2
1.5 weeks Greedy algorithms  Section 16.1–16.3, Chapter 23
1.5 weeks Elementary graph algorithms  Chapters 22
1.5 weeks Maximum flow  Chapter 26
1.0 week Linear programming  Chapter 29
1.0 weeks Randomized algorithm  Notes
1.5 weeks Number-theoretic algorithms  Chapter 31

Grading: Homework 20%, Quiz 10%, Midterm 30%, Final 40%. Attendance: bonus.

Exam Schedule:
Quiz: Wednesday, September 12.
Midterm: Friday, October 5.
Final Exam: Monday, December 10, 4:00pm-5:45pm

General Policy:
• Late homework will not be accepted.