CSE 6331: Algorithms

Autumn 2017

TuTh 3:55PM-5:05PM, Caldwell Lab 171

Instructor: Ten H. Lai Office: 581 Dreese Labs
Office Hours: TuTh 11:30AM-12:30PM
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Grader: Dayu Shi, shi.384@osu.edu

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.

Text (required): *Introduction to Algorithms,* third (or second) edition, by Cormen, Leiserson, Rivest, Stein. 2009.

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
1.5 weeks	Divide-and-conquer	Chapter 4, Sections 2.3, 33.4
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
1.5 weeks	Number-theoretic algorithms	Chapter 31

Grading: Homework 20%, Midterm I 25%, Midterm II 25%, Final 30%.

Exam Schedule:

Midterm I: Thursday, September 28

Midterm II: Tuesday, November 7

Final Exam: Wednesday Dec 13, 4:00pm-5:45pm

General Policy:

- Late homework will not be accepted.