

CP312: Algorithm Design and Analysis I

Course Outline

Course Summary

Analysis of the best, average, and worst case behaviors of algorithms. Algorithmic strategies: brute force algorithms, greedy algorithms, divide-and-conquer, dynamic programming, backtracking. Fundamental computing algorithms: $O(n \log n)$ sorting, depth-and breadth-first search of graphs.

Prerequisite: CP213 (MA238 recommended)

Lectures: M W F 9:30-10:20am, Room: BA 102

Instructor: Eugene Zima

Office: N2087

Phone: x2796

Office Hours: M W 10:30-11:30 or by appointment

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Textbook: Cormen, Leiserson, Rivest, and Stein. **Introduction to Algorithms** (3rd ed.), MIT Press, 2009.

Grading:

- Assignments: 30%
- Tests and quizzes: 40%
- Final exam: 30%

Students must pass the tests in order to pass the course.

Important Dates:

Assignment 1 due: September 28

Assignment 2 due: October 15

Test 1 (in class): October 19

Assignment 3 due: November 2

Test 2 (in class): November 16

Assignment 4 due: November 16

Assignment 5 due: December 3

Assignments

- No late assignment will be accepted.
- Students may request a reassessment of their assignments in writing and specify the reasons for such requests. Their entire assignment will be reassessed and the reassessment may result in raising or lowering of the original marks.

- Assignments submission will be via MyLearningSpace.
- Assignments are to be your own work and collaboration is not permitted.
- More details will be given in the course web page.

Regulations

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