

MCS 501 – Computer Algorithms II

Syllabus

Lev Reyzin

Fall 2020

Time and location: M-W-F, 10:00-10:50am. *Online.*

Instructor: Lev Reyzin, lreyzin@uic.edu (SEO 418, 312-413-3745)

Prerequisite background: CS 401 / MCS 401 or equivalent

Office hours: TBD

Website: http://homepages.math.uic.edu/~lreyzin/f20_mcs501/

Required textbook: D. P. Williamson and D. B. Shmoys. *The Design of Approximation Algorithms*

Topics: This course will introduce students to the fundamental ideas underlying modern algorithmic techniques. Students will be taught how to design and analyze approximation algorithms, randomized algorithms, and streaming algorithms, as well as other advanced topics. Knowledge of topics covered in CS 401 / MCS 401 is required.

Grading: Course grades will be determined according to the following breakdown:

- 40% take-home problem sets
- 25% midterm exam
- 35% final exam

The exams will either be in-class or take-home, at the instructor's discretion. Grades may also be adjusted upward or downward depending on class participation.

Problem set collaboration policy: Unless otherwise specified on an assignment, students may discuss problem sets with one another, but they *must write the solutions on their own*. Collaborators (people you speak to about an assignment) must be named at the top of the assignment. No collaboration is allowed on the exams.

Late work policy: In general, late work will not be accepted. Problem sets are to be turned in via Gradescope by 10:00 am the day they are due. Any exceptions will be handled on a case-by-case basis.

Disability policy: Students with disabilities who require accommodations for access and participation in this course must be registered with the Office of Disability Services (ODS). Please contact ODS a 312/413/-2183 (voice) or 312/413-0123 (TTY).