MCS 401 – Computer Algorithms I
Syllabus

Lev Reyzin

Spring 2017

Time and location: M-W-F, 11:00-11:50pm, Lecture Center Building A (LCA) 007

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

Prerequisites: MCS 360 or CS 202. See instructor with any concerns.

Office hours: to be announced

Website: `http://homepages.math.uic.edu/~lreyzin/s17_mcs401/`

Textbook: J. Kleinberg and É. Tardos. *Algorithm Design*, 1st ed.

Topics: This course will cover the important principles behind the design and analysis of computer algorithms. We will study techniques such as divide-and-conquer, dynamic programming, and greedy methods, as well as algorithms for sorting, searching, graph computations, and pattern matching. We will also discuss the theory of NP-completeness.

Grading: problem sets: 25%, and in-class midterm: 30%, and a final exam: 45%. All material covered in lecture, assigned in the readings, or included in the problem sets is "fair game" for the exams. Graduate students may be assigned different problems from undergraduates on some assignments.

Attendance and participation: In addition to the grading policies outlined above, a student's grade might be adjusted *slightly* upward for positive contributions through class participation or downward for repeated absences. Moreover, students are responsible for all material covered and problem sets and readings assigned in lecture.

Problem set collaboration policy: You may discuss the homework problems with other students, but you must write up your solutions by yourself. If you work on the problem sets with other students, you must put the names of your group at the top of your problem set. However, consulting any online sources, including websites, blogs, forums, mailing lists, etc. to seek answers to the problems is strictly forbidden. If you have questions or need help, please come to office hours.

Late work policy: Problem sets are to be turned in by 11am the day they are due, either in class or via my mailbox (on the 3rd floor of SEO). In general, late work will not be accepted. Exceptions must be asked for in advance of the due date and will be made 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).