Times: MWF 1:00 – 2:15 PM SENSQ 5313


Course Group Home Page: http://piazza.com/pitt/spring2018/cs2150

I will use this group for general announcements about the course. This group should be used for questions of general interest. The course group is the best place to ask general questions (e.g., a question about a particular homework problem). This group will be monitored by the instructor and the TA, but often other students can provide a quicker answer than the TA or instructor.

Instructor: Kirk Pruhs
Office: 6415 Sennott Square
Phone: 624-8844
Email: kirk@cs.pitt.edu (Please use the course group for general questions about assignments, etc. I do not monitor any other email address.)
Office hours: 10:45 - 11:30 MWF and 2:15-2:45 MW

TA: Max Bender
Office: 6406 Sennott Square
Email: MCB121@pitt.edu
Office Hours: Tuesday, Thursday, Friday 3 - 5 PM

Text: The official text is Introduction to Algorithms, 3rd Edition by Cormen, Leiserson, Rivest, and Stein. I will only loosely follow the text. Having a hard copy of the text may be helpful, but it probably isn’t critical. Although I will assign some problems from the text, so you will need to arrange to have some access to the text.

Prerequisites: CS 1510, and CS 1502. Or more generally, a solid knowledge of mathematical proofs, and an undergraduate algorithms class that involves proofs. Most students that take the course without such prerequisite knowledge struggle.

Course Content: In approximate order of importance: (1) learn how to think algorithmically, (2) learn how to be your own adversary (3) learn a little about the research process (4) learn how to think on many levels at the same time, especially on the program and algorithm levels, (5) learn widely applicable algorithms design and analysis techniques, and (6) learn some of the more commonly used algorithms. We will concentrate more on understanding the basics at a reasonably mature level rather than on more advanced material. This is NOT a survey class of useful algorithms, nor will we discuss many lower level implementation issues. The class is targeted toward PhD/professional computer scientists. The goal is to prepare all students to be able to read and understand reasonably sophisticated algorithms papers, and to prepare some students to be able to design and analyze new algorithms on their own. My goal is to get as many people to the A level as possible.

There will be homework assignments due almost every class. It is expected that most of your learning will come from the process of solving the homework problems. The main purpose of the lectures is to prepare you for the homework. The final exam will in large part be based on the homework.

Grading: Grades will be based on homework, classroom attendance/participation, and a final exam. The final exam is 60% of the grade. Homework will constitute 30% of the final grade. Attendance will be taken, and attendance and participation in discussions and the class group will count for 10% of the grade.
But students who have high attendance, high class participation, and who have made a good faith effort to solve essentially all of the homework assignments, will have the option to skip taking the final exam, and instead accept a grade of B. Students must receive prior permission of the instructor if they wish to choose this option.

I will subjectively set the grading scale at the end of the semester. You are not in competition with other students. I have no set numbers of A’s, B’s etc. I strongly suggest you cooperate with each other to understand the material. This is in all students’ best interests. If a student’s homework scores are conspicuously/suspiciously higher than a student’s exam grades, I reserve the right to base the course grade on only the exam scores, and classroom participation. Students that attend the regularly, and are doing the homework regularly, should expect to get a grade of at least B. To earn a higher grade, students need to demonstrate mastery of the material on the final exam.

**Homework Policy:** You should do homework in groups of 2 or 3 people. Other groups sizes (including 1) are possible with instructor approval. Each group need only provide one write-up. Write-ups must use \LaTeX, [http://en.wikipedia.org/wiki/LaTeX](http://en.wikipedia.org/wiki/LaTeX). You may discuss problems with any student in the class with the provisos that you shouldn’t feed others complete solutions, and you must acknowledge collaborations in the write-up. You may not seek solutions on the www, in other books, former students, from friends outside the class, etc.

All homework is due at the start of class on the date due in hardcopy. Figures may be hand drawn. No late homework is accepted. The homework will be graded by the TA. Many students will find some problems demanding. It is not expected that all students will be able to answer all the homework questions.

**Disability Policy:** If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services, 216 William Pitt Union, (412) 648-7890/(412) 383-7355 (TTY), as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.

**Missing tests:** If you are going to miss a test for unavoidable reasons then before the exam (or as soon as possible) you must contact me. If this is not possible, contact the computer science departmental secretary at 624-8490.

**Cheating Policy:** I have no tolerance for cheating. If you are caught cheating, you will receive an F grade for the course.