Course Information

Welcome to CS424, undergraduate Theory of Computing. In this course we take an abstract view of computation: we study models of computation, and their ability to solve fundamental problems. We will also work on how to write and talk about such problems. The material is mathematical; much of your work will be written, including some “proofs”. You also need to be comfortable talking about algorithms and computation, in a high level way. Most of our lectures will use the blackboard.

Instructor: I am Michelangelo Grigni. Reach me at mgrigni@emory.edu or 7-7922. My office is W426; my office hours are posted on the web. There is no TA, I'll grade your work myself.

Meetings: We meet 11:30am to 12:45pm Tuesdays and Thursdays in room W301. There is no lab. Our meetings will be mostly lecture (this semester the class is so large, I don’t think a more interactive seminar format will work). Attendance is not required, but you certainly ought to attend, in order to keep up with the material. Our final exam is 8am to 10:30am on Wednesday, May 4.

Work and Grading: We will have (probably) five graded homework assignments, and a final exam worth the same as two homeworks; these will all be curved so that the median non-zero mark is at least 83% (B). The homework assignments will be challenging, with some problems requiring mathematical expression and creativity. There may also be exercises where you design an automaton, and for some homeworks I may require you to come to my office to go over your work. The final exam instead will be relatively easy: it will simply check that you know the definitions and results of the semester, without requiring much creativity. If anything else is graded (class participation, quizzes, in-class solutions); that will count as equivalent to at most one more homework mark.

Book and Syllabus: Our book is Sipser’s Introduction to the Theory of Computation. We will cover most of the content of Chapters 1 to 5, and Chapter 7, roughly two weeks per chapter. If time allows, we may look at a few topics from Chapters 6 or 8 as well. You should read the book, preferably ahead of the lectures; this will make the lectures easier to follow, and the book is an excellent example of mathematical writing.

Online Support: We will have a class mailing list and a web page:

http://mathcs.emory.edu/~cs424000/

The web page will have our handouts, an archive of email sent to our mailing list, and possibly some other resources. In particular, I intend to post blackboard images from each lecture.

Policies and Advice: Late work may be refused or arbitrarily penalized. Your work should be your own! Do not share solutions with anyone, and do not seek solutions from other sources (such as past students, or the web). On the other hand, it is OK to collaborate with other students in order to review the course material, or to clarify problem statements. Start early, so if you get stuck on something, you can come talk to
me; I’m often willing to offer hints to the class. Your work for this class is governed by the Emory Honor Code. If you need clarification of some point of the honor policy, ask me.