Course Information

Welcome to CS424.001 and CS524.001, Theory of Computing. We meet 1:00pm to 2:15pm Mondays and Wednesdays in White Hall 110. Since our first meeting was snowed out, that leaves 27 scheduled meetings: 14 before spring break, and 13 afterwards. The meeting just before break (Wednesday March 7) will be a midterm exam. We will also have a cumulative final exam at 3:00pm Thursday May 3 (a time set by the registrar). The remaining meetings will be lectures. Lecture attendance is not required, but you certainly ought to attend, in order to keep up with the material.

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 and models. The material is mathematical. Much of your work will be written, including some “proofs”. You need to be comfortable talking about algorithms and computation, in a high level way. This is traditionally a “blackboard” course, we’ll have to adapt that in White Hall.

Online Support: Most course resources will be available via our public page:

http://mathcs.emory.edu/~cs424001/

In particular there should be a subdirectory with files relevant to each lecture. This will include some notes, slides, and “blackboard” images. On Math/CS lab machines, the same materials are in directory /home/cs424001/share/.

We will also use the Emory Canvas service, mainly for announcements, discussions, and the submission of homework. I will attempt to add all CS524 students to the CS424 Canvas roster, so we can all use the same Canvas course page. (Students in CS524 will have some extra work, but it will be largely the same.)

Book: Our book is Sipser’s Introduction to the Theory of Computation (3rd edition). We will cover most of Chapters 1 to 5 and Chapter 7, roughly two weeks per chapter. You should read the book, preferably ahead of lectures; this will make the lectures easier to follow. The book is an excellent example of mathematical writing.

Staff: Your instructor (writing this!) is Michelangelo Grigni. You may contact me via Canvas, by email as mic@mathcs.emory.edu, or in my office (MSC W426). My office hours are posted on the web. We may get a grader (not sure yet).

Graded Work: as mentioned above, will have a midterm exam and a final exam. Compared to homeworks, the exams will be relatively “fact-based”, not creative. The two exams will count for half of your course grade (20% and 30%). Each exam will be curved so that the median mark is at least a B (85 of 100, possibly higher in CS524). We will also have a series of homework assignments (probably five) counting for the remainder of your grade. Some homework problems will be challenging, but I expect the CS424 homework grading will be rather lenient, simply because there is too much to check it all carefully. (I’ll be more careful with the assignments in CS524.) So, it should be relatively easy to get good marks on the homework, compared to the exams. In case I add any additional graded elements (such as quizzes, scribing, canvas participation, etc.) then they will altogether count as at most one more homework assignment.
Policies: It is your responsibility to know what has been covered in class, to read along in the book, to turn in your work, and to attend the exams. Having missed a class is not a sufficient excuse for late work. Undergraduates need an OUE dean’s note to makeup a missed examination.

Unless I instruct you otherwise, you should have no outside help on homeworks. You should not share solutions with other students, nor seek solutions from other sources. On the other hand, the following kinds of collaboration are allowed: interpreting the statement of a problem, understanding an error message, learning features of a language or software tools, reviewing the textbook and course notes. If you are in doubt about what is allowed, ask your instructor.

Your work for this class is governed by the Emory College Honor Code[^1] or the Emory LGS Honor Code[^2] as appropriate. You should take care to protect the confidentiality of your homework files. See also the OUE Addendum[^3] for further information on college policies.

[^1]: http://catalog.college.emory.edu/academic/policies-regulations/honor-code.html