Course Information

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Email   The course staff can be reached at cs103@cs.stanford.edu. Please don't hesitate to send us emails! We're here because we genuinely love this material and want to share it with you. If you have any questions on the material, or if you're interested in exploring more advanced content, please get in touch with us. We'd be happy to help out.

Lectures   Mondays, Wednesdays, and Fridays, 2:15PM – 3:30PM in Hewlett 201.

Units   If you are an undergraduate, you should be enrolled for five units. If you are a graduate student, you may enroll for anywhere between three and five units, depending on what best fits into your schedule. Regardless of how many units you are enrolled for, the course content and requirements will be the same.

Prerequisites   This course has CS106A as a prerequisite. We want you to have at least a familiarity with computer programming before taking the course, since many of the results we'll be exploring will be intimately connected to computers, computing, and programming. That said, this is not a programming-oriented course and there will be no actual programming assignments. If you have not taken CS106A but are still interested in taking this course, I would suggest dropping by office hours so that we can chat about whether the course is a good fit for you.

Website   The course website is cs103.stanford.edu and it's loaded with resources for this course. There, you'll find all the handouts for this course, lecture slides, and additional links that you may find useful. I would suggest periodically polling the website to stay abreast of any important developments in the course.

Office Hours   We will try to hold office hours for at least four hours a day, seven days a week. We will be announcing the office hours schedule later this week.

Problem Sessions This course will have an optional problem session that meets once a week to work through additional exercises. Although session attendance is not mandatory, we **strongly suggest** that you attempt to attend each section. The problems covered in these sessions will mirror what will be asked on the homeworks and exams.

Each week, we will distribute a handout containing section problems. The solutions will be distributed at the problem session, as well as on the course website.

Problem sessions will run on Mondays from 7:00PM – 8:00PM in 380-380W. There will be no problem session during the first week (we have a bit of ground to cover before we can get to the really exciting results!), so the first problem session will be **Monday, October 3**.

Readings This course has two required readings:

Chapter one of ***Discrete Mathematics and Its Applications, Sixth Edition*** by Kenneth Rosen. This book is an excellent introduction to the mathematical techniques that we will be using over the course of the quarter and we will use it extensively in the first few weeks of the class. You don't need the whole book for this course, and the chapter that we'll be using is available in the bookstore as the CS103 course reader.

Introduction to the Theory of Computation, Second Edition by Michael Sipser. Sipser's excellent introduction to computation, computability, and automata theory stands as one of the best textbooks on the subject. We will be using this textbook all through the quarter.

In addition to these readings, we'll be periodically distributing handouts in class. These handouts, which will also be available online, should help supplement the treatment of the material given in the other readings.

Grading CS103 is a course designed to teach you the mathematical foundations of computer science, along with the techniques necessary to reason about structures that appear throughout computer science. Accordingly, the assignments in this course are designed to give you the chance to play around with the material and sharpen your skills with mathematical proofs and computability theory. There will be **nine** homework assignments this quarter, each of which is weighted approximately evenly.

Additionally, there will be a midterm and a final exam. The midterm exam will be held on **Thursday, October 27** from **7:00PM – 10:00PM**, location TBA. The final exam will be held on **Monday, December 12** from **12:15PM – 3:15PM**, location TBA. If you have a conflict that will prevent you from taking the exam, we'd be happy to try to find an alternate time. However, you must let us know about this no later than **one week** in advance.

Overall, your grade for this course will be determined as

Written Assignments:	**65%**
Midterm:	**15%**
Final Exam:	**20%**

Late Policy   This course is fast-paced and we'll be moving through material quickly. Because of the diversity of the material we'll be exploring, you may find that some homework assignments are easier or harder than others. To give you some extra flexibility, you may submit up to **three** assignments 24 hours past the due date without penalty. You don't need to let us know that you'll be turning in the assignment late, though we'd appreciate a heads-up just so that we know to expect it.

That said, if you submit late homework (either because you've run out of late days or because you're using a late day but submitting more than a day late), we will assess a 33% penalty on your assignment per day late.

If you have any extenuating circumstances, such as a family or medical emergency, and need extra time to complete the assignments, please contact us. We're more than happy to help out. However, please let us know before the assignment comes due.

Regrade Requests   Everyone makes mistakes, and if we make a grading error on one of the homeworks or an exam, please let us know and we'll take a second look. Just hand the exam or problem set to one of us with a coversheet describing what error you believe we've made. However, if you submit an exam or assignment for a regrade, we reserve the right to regrade all problems on it, not just the ones you've indicated. Additionally, all regrade requests must be made within three days of when we return the graded exam or assignment.

Honor Code   One of the major goals of CS103 is to teach you to think mathematically rigorously. Just as you have to write a lot of code to become a good programmer, you need to work through a lot of problems to become a good mathematician. Consequently, when doing the homework assignments, it is extremely important that you do as much of the work as possible on your own without consulting anyone else or any other outside resources. It's surprisingly easy to fall into a trap where you learn to follow proofs without having any idea how to synthesize them on your own. As much as possible, please try to work on the assignments individually.

That said, I understand that you may want to work on the problem sets in groups. If you'd like to do this, that's totally fine. However, please be sure that on your problem set you include the names of the other people in the group. Additionally, **you must write up your own solutions** to all the problems. It is not acceptable to simply copy answers from another student. More generally, you **must not** copy solutions from any source. That's just dishonest.