Computer Science & Engineering 390D
Introduction to Discrete Math

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Office hours: Tuesdays 1:30-3:30 pm

Textbook

There is no required textbook, but the course material has been developed mostly to match *Discrete Mathematics and Its Applications*, by Rosen. If you want to have a textbook that provides additional examples, you could get a copy of the Rosen text. The latest edition is the 8th edition, but any recent edition will work well. There is also a somewhat less expensive extract for CSE311 that would cover most of the material from the course. Rosen also has a *Student's Solutions Guide* that you might find helpful.

Course Overview

The course examines fundamentals of logic, set theory, induction, discrete probability, and algebraic structures with applications to computing; finite state machines; and limits of computability. The prerequisite is CSE123 or CSE143 and either MATH126 or MATH136.

Discussion Sections

Instead of section, Stuart will hold a dedicated office hour for CSE390D students on Thursdays from 11:30 to 12:30 in CSE2 305.

Grading

You will be expected to complete a variety of weekly homework assignments for this course and to take two exams. Homework will be graded on a 10-point scale and will depend solely on effort, not on correctness. The resulting scores will be combined according to the following weightings:

50%	weekly homework assignments
15%	midterm (Friday, 11/1/24, in class)
35%	final exam (Wednesday, 11/11/24, 2:30-4:20 pm)

Contact Stuart in the first two weeks of the quarter if you have a conflict with these dates and times. Using the weightings above, each student's scores will be turned into an overall score ranging from 0 to 100 percent. These will be turned into grades as follows:

90%	at least 3.5	70%	at least 1.5
80%	at least 2.5	60%	at least 0.7

Course Web Page

Information about the course will be kept at http://cs.uw.edu/390d. Links to course handouts will be kept on this page along with useful links to other class resources.

Religious Accommodations

See https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/.

Indigenous Land Acknowledgement

I acknowledge that by the labor theory of property the Coast Salish people can claim historical ownership of almost none of the land currently occupied by the University of Washington.

Late Policy

Each assignment will list its due date. Most will be due on Fridays in lecture. Each student will have a total of five "free" late days (a late day is a class period of lateness, e.g. turning in a homework at the Monday lecture instead of the Friday lecture). There are no partial days, so assignments are either on time, 1 day late, 2 days late, etc. Because of this generous policy, students will not be granted extensions for assignments unless they have highly extenuating circumstances. Once a student has used up all free late days, each successive late day will result in a loss of 1 point. No assignment will be accepted more than two class periods after its due date.

As noted above, homework is graded on effort, not on correctness. In some ways, submitting incorrect answers is more helpful because it allows us to know what you are confused about.

Policy on Collaboration

You are allowed to discuss lecture examples and other resources with other students. You are highly encouraged to complete the homework on your own because you will be expected to perform individually on the exams. But you are allowed to discuss the homework problems with other students, particularly if you are stuck and could benefit from a helpful hint. But each student must write up their own solution to the homework problems. **Under no circumstances are you to copy another student's solution directly or to copy a solution from another source (web, other textbook, etc).**

Topic List

Below are the broad list of topics to be covered in the course, which appear in chapters 1-7 and 9-11 of the Rosen text:

- propositional logic (and set theory)
- predicate logic
- arithmetic (number theory)
- methods of proof
- mathematical induction
- counting
- discrete probability
- binary relations
- undirected and directed graphs