

Math 2200-002/Discrete Mathematics

How to Navigate the Course

For some of you, this is your first course in “advanced” mathematics. In this and all other advanced courses, you should ask (and answer) the following questions *throughout the semester*:

- What is this course about?
- What are the distinct topics covered in the course?
- Within each topic, what are the important:
 - (1) Definitions
 - (2) Results/Theorems
 - (3) Examples
 - (4) Applications (if any)
- How do the topics relate to one another?
- How does the material relate to other math/science courses?
- What exam problems would you pose if you taught this course?

Incidentally, this is also what I do when I prepare the syllabus and prepare for each day of class. But you should be doing it also, ideally both before and after each class (in addition to doing your homework, of course). And write down your thoughts! Collect all the definitions, theorems, examples and applications in a personal written or electronic notebook and modify them as your understanding develops. Compare notes with your friends and visit me in my office hours.

How to Navigate the Textbook

As with so many math courses the book is massive and reading it from cover to cover is unfeasible. However, the book can and should be mined for information. We can start by limiting ourselves to the “core” sections as listed on page xiii. Still, each of these sections is lengthy (and there are a ridiculous number of problems in each section). Together, we need to extract the “core of the core” and sparingly use the rest of the book for context and additional insight, as needed. One technique is to highlight the important stuff, but I’ve found it much better to rewrite the material concisely in a notebook.

How to Navigate the Homework

It is very difficult to do a week’s worth of homework in one sitting. It is far better to look at the homework each day, finishing off a few problems at a time. Everyone who has done “advanced” math has had the experience of having no idea how to solve a problem on one day and suddenly “seeing” the solution one or two days later. Even a discrete math class deserves your continuous attention.

A Rough Calendar of the Course

Week	Mon	Wed	Fri
8/19-8/23	§1.1	§1.2	§1.3
8/26-8/30	§1.4	§1.5 (HW 1 due)	§1.6
9/2-9/6	Labor Day	§1.7 (HW 2 due)	§1.8
9/9-9/13	§2.1	§2.2 (HW 3 due)	§2.3
9/16-9/23	§2.3-4	§2.4 (HW 4 due)	§2.6
9/23-9/27	§4.1	§4.2 (HW 5 due)	§4.3
9/30-10/4	§4.4	Review	Midterm
10/7-10/11	Enjoy	Fall	Break
10/14-10/18	§5.1	§5.2 (HW 6 due)	§5.3
10/21-10/25	§6.1	§6.2 (HW 7 due)	§6.3
10/18-11/1	§7.1	§8.2 (HW 8 due)	§8.5
11/4-11/8	§9.1	§9.3 (HW 9 due)	§9.5
11/11-11/15	Review	Review (HW 10 due)	Midterm
11/18-11/22	§10.1	§10.2	§10.3
11/25-11/29	§10.4	§10.5 (HW 11 due)	Black Friday
12/2-12/6	Wrapping Up	Review (HW 12 due)	Study!
12/9-12/13	Study!	Final Exam	Celebrate