

Math 475 – Introduction to Combinatorics (Fall 2015)

- Lecture times and location: MWF 12:05PM – 12:55PM, SOC SCI 6203
- Textbook: Miklós Bóna, *A Walk Through Combinatorics*, third ed.
- Course website: <http://math.wisc.edu/~svs/475/>
- Instructor: Steven Sam steven.sam@wisc.edu
- Office hours: 321 Van Vleck, Mondays 1-2PM and Thursdays 10-11AM
- Grader: to be confirmed

Course description

I plan to follow Bóna's book, Chapters 1–12, 16. It is hard to predict the pace of the lectures ahead of time, so some sections may be omitted, and I may add some things depending on how things go. A schedule of topics will be posted on the website and updated as necessary.

The main topics are: counting techniques, combinatorial identities, generating functions, basic graph theory, partially ordered sets. This is not a proof-heavy course, but we will do mathematical proofs in this course, so the ability to read and write proofs is needed. Linear algebra is listed as a prerequisite, so it is your responsibility to make sure that you understand whatever linear algebra we will use.

Expectations

My role is to teach you the material, and I hope that you enjoy it and learn it well! You are expected to read the textbook, and it will be infinitely more useful for you if you read ahead of the lectures and prepare questions. You are encouraged to work on homework with others, but solutions must be written up individually.

If you have questions about the material, you are encouraged to come to office hours. Also, there is a Piazza page for the course: <http://piazza.com/wisc/fall2015/math475/home>. You are encouraged to discuss the course and its material with one another there. If you have a question about the course, chances are that others have the same question, so it will be beneficial for all to have it posted to Piazza. However, please refrain from posting solutions to homework.

If there are issues that cannot be discussed on Piazza, please email me.

Important dates

- Sep 2: First lecture
- Oct 9: Midterm 1
- Oct 30: Deadline to drop classes
- Nov 13: Midterm 2
- Dec 14: Last lecture
- Dec 21: Final exam: 2:45PM – 4:45PM

Grading policy

- Homework: 20%
- Midterm 1: 20%
- Midterm 2: 20%
- Final exam: 40%

Your solutions in homework and exams will be graded for clarity and correctness. While it is important to get the right answer, it is equally as important to be able to communicate those ideas clearly. So, when appropriate, explanations should be given in complete sentences.

Homework is due most Fridays. I plan for there to be 11 homeworks, and your grade counts the 10 best scores only. There might be a 12th bonus homework if needed.

Late homework policy: The dropped homework score is intended to cover for minor issues; for more serious emergencies, please see me and we will work something out.

Academic integrity

<http://www.students.wisc.edu/doso/academic-integrity/>

Additional logistics

Students that need special accommodations should talk to me as soon as possible.