

AMAT 540A: TOPOLOGY I

SYLLABUS - FALL 2026

Instructor: Prof. Matt Zaremsky

Course meets: MW 10:10am–11:30am in Hudson B003

Course Website: <http://www.albany.edu/~mz498674/teaching.html>

Office: Hudson 113

Email: mzaremsky at albany dot edu

Office hours: F 10am–1pm, in my office (and I am very on top of email, if you can't make it to this)

1. TEXTBOOK

None officially required. I'll generally work out of Munkres' "Topology" (second edition), so that could be good to have.

2. COURSE DESCRIPTION

Introduction to graduate-level topology. Topics include topological spaces and continuous maps, metric spaces, compactness, connectedness, separation and countability axioms, fundamental groups, and covering space theory.

3. PREREQUISITES

Permission of the instructor (you only need to ask me if the system doesn't let you register though).

4. HOMEWORK/GRADING

There will be weekly homework and three in-class midterm exams, dates TBD. Homework will be posted on the course webpage every Wednesday, due the following Wednesday. No late work will be accepted. The lowest homework will be dropped. Homework is worth 40% of your grade, and each exam is 20%. (Note that this means 60% of your grade is determined by in-class, handwritten exams, so blindly using AI to do well on the homework is a bad long-term strategy.)

5. POLICIES

See university policies [here] (medical excuse policy), and [here] (academic integrity).

"Instructors must explicitly refer to New York State Education Law (Section 224-A) whereby campuses are required to excuse, without penalty, individual students absent because of religious beliefs, and to provide equivalent opportunities for make-up examinations, study, or work requirements missed because of such absences. Faculty should work directly with students to accommodate religious observances. Students should notify the instructor of record in a timely manner."