Math 445 - Introduction to Topology I

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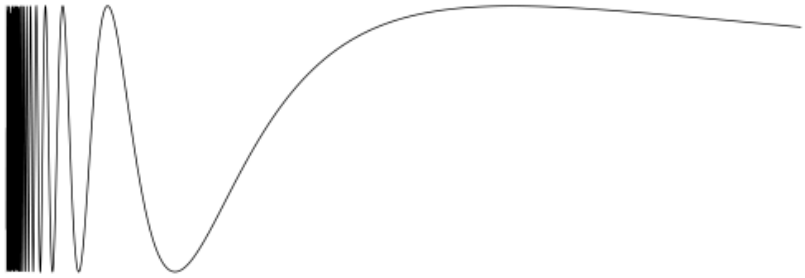
Fall 2015



1. Basic course information

Web Page	http://www.math.uic.edu/~ddumas/math445/
Textbook	*Topology*, 2ed, by James R. Munkres
Location	Taft Hall 204
Meeting Time	MWF 1pm
CRN	13713 (undergraduate), 20457 (graduate)
Email	ddumas@math.uic.edu
Office Hours	Wed and Fri 9:30–10:30am

2. Course overview

This course is a basic introduction to topology, which is the field of mathematics concerned with studying a formalization of the notion of "shape". Most of the course will focus on the area within topology known as *point set topology*.

We will define topological spaces and discuss some important examples, such as metric spaces. We will study a variety of properties of topological and metric spaces, including compactness and connectedness. We will also discuss general methods for constructing new topological spaces from existing ones, such as products, quotients, and subspaces.

We will cover chapters 2–4 in the textbook and selected topics from chapters 5–8.

Chapter 1 of the textbook ("Set theory and logic") contains some preliminary material that is not part of topology *per se*. Much of the material we will use from this chapter is covered in prerequisite courses such as Math 215 and Math 313. If topics from chapter 1 that are not often covered in earlier courses are needed later in the semester, we will spend some time discussing the necessary background.

3. Prerequisites

- Math 313 (Analysis I) with a grade of C or higher

4. GRADING

Grades in Math 445 will be computed on the following basis:

- 60% Homework
- 15% Midterm (Wed Oct 14, in class)
- 25% Final exam (Mon Dec 7, 1:00-3:00pm)

The homework and exams will be written and graded with the intention of ultimately converting percentage scores to letter grades using the following scale: A = 85% – 100%, B = 75% – 84%, C = 65% – 74%, D = 55% – 64%, F = less than 55%. While this is the goal, minor adjustments to this scale may be necessary. The final grading scale for the midterm exam will be announced after it has been graded. The final cutoffs for overall course grades will be set after the final exam is graded.

The grading scale for Math 445 will *not* be adjusted solely to ensure that a certain number of students pass, or that a certain number of students fail. Instead, the grading scale will be set so that the result grades reflect the instructor's assessment of the students' demonstrated mastery of the learning objectives of the course.

5. HOMEWORK

Homework problem sets will be posted to the course web page regularly (typically, once per week). Some of the problems will be assigned from the textbook. Each problem set is due in class on the date specified at the top of the sheet.

Late homework will not be accepted.

Written homework solutions must be clear, concise, and legible to receive full credit. Typed solutions are welcome, but not required.

Collaboration with other students on homework must be acknowledged in a written statement at the top of the first page of work submitted. Word-for-word copying of another student's homework solution is never acceptable. Instead, when working in a group, each student is expected to reach a conceptual understanding of the method of solution which they then write in their own words.

6. EXAMS

There will be an in-class midterm exam on Wednesday, October 14, during the regular lecture time (1:00pm in 204 Taft Hall).

The final exam will be held at the time set by the registrar: Monday, December 7, from 1:00pm to 3:00pm. The room will be announced at a later date.

7. PARTICIPATION

Students are encouraged to ask questions in lecture about the material currently under discussion, and to answer questions asked by the instructor.

Questions about recent homework problems, grading, exams, etc., are better left to office hours.

8. Attendance

Students are responsible for all of the material covered in the lectures, including any lectures they miss. Any student who misses a lecture is advised to ask classmates for notes and information about any assignments or course announcements. Lecture notes are not provided by the instructor (in case of absence or otherwise).

Frequent absence from lecture is inconsiderate and moreover such absences generally lead to poor performance on homework and exams.

9. Academic Honesty

All UIC students (graduate and undergraduate) are required to maintain the standards of academic integrity described in the *Guidelines Regarding Academic Integrity*:

http://dos.uic.edu/docs/Guidelines%20for%20Academic%20Integrity.pdf

In particular, this policy prohibits plagiarism. Any violation of these standards will be handled in accordance with the Student Disciplinary Policy.

10. Disability Accommodation

The University of Illinois at Chicago is committed to maintaining a barrier-free environment so that students with disabilities can fully access university programs, courses, services, and activities. Students with disabilities who require accommodations for access or participation in this course are welcome, but must be registered with the Disability Resource Center (DRC). You may contact the DRC at 312-413-2183 (voice) or 312-413-0123 (TTY). Further information is available from the DRC web page: http://drc.uic.edu/