Math 151a, Topology I  
Fall 2018

**Instructor:** Professor Ruth Charney  
Office: 304 Goldsmith  
Office hours: Mondays 5:00-6:00, Thursdays 3:30-5:30  
email: Charney@brandeis.edu

**Textbook:** *Algebraic Topology*, by Allen Hatcher, Chapters 0-2, available for free from Allen Hatcher’s webpage.

**Prerequisites:** I will assume familiarity with basic concepts of point-set topology and undergraduate-level algebra. Topics covered in Hatcher’s Chapter 0 would also be useful, though we will review these as needed.

**Learning Goals:** This course is an introduction to algebraic topology. We will cover the material in Chapters 1 and 2 of Hatcher’s book, including fundamental groups, covering spaces, and homology theory. The goal of the course is to familiarize students with basic concepts, terminology, and techniques in algebraic topology. Students will get experience using a combination of geometric and algebraic arguments to establish topological properties of spaces.

**Grading:** Grades will be based on the following.  
- Homework 70%  
- Final Exam 30%

Success in this 4 credit hour course is based on the expectation that students will spend a minimum of 9 hours of study time per week in preparation for class (readings, homework, preparation for exams, etc.).

**Homework policy:** The goal of homework is to help you absorb the concepts discussed in class and to improve your problem solving skills. You may discuss homework problems with other students in the class. However, I highly recommend that you spend time thinking about the problems on your own before discussing them with others, and I strongly advise against searching for solutions on the web. Struggling with a problem is not a waste of time; it is the best way to improve your understanding of the material! If you are stuck on a problem, I would be happy to offer hints.

*Most important, once you have a solution, write it down in your own words. You may not copy the written work of another student or from any other source such as the internet, nor should you allow another student to copy your written work. What you submit should be written in your own words and reflect your own understanding of the ideas.*

**Accommodations:** If you are a student with a documented disability and wish to have a reasonable accommodation made for you in this class, please submit the appropriate paperwork to me as soon as possible. Accommodations cannot be granted retroactively.