

Math 8200: Algebraic Topology, Spring 2010

Instructor information

Michael Ching Email: mching@math.uga.edu
Office: Boyd 508C Office hours: Tues, Wed, Thur: 1-2pm
Phone: (706) 542-4803 Webpage: <http://www.math.uga.edu/~mching/8200/>

Classes

Tuesday, Thursday 9:30-10:45am in Boyd 326.

Adding/dropping

The deadline for dropping the class is **Thursday January 14**. The deadline for adding is **Friday January 15**. The withdrawal deadline is **Tuesday March 23**. There are no classes on March 9, 11 due to Spring Break. The last class is on Tuesday April 27.

Textbook

Algebraic Topology, by Allen Hatcher, 2002, Cambridge University Press. You can download the latest version of this book from Hatcher's website here:

- <http://www.math.cornell.edu/~hatcher/AT/ATpage.html>

You do not need to bring the book to class, so you can download and print chapters as and when you find it convenient to help you study.

Outline of syllabus

We will cover roughly chapters 0–2 of the textbook, following it pretty closely. This class is an introduction to algebraic topology at the graduate level, with a course in point-set topology as the prerequisite (Math 4200 or equivalent). We start by exploring the notion of homotopy for continuous maps between topological spaces. We then turn to the fundamental group and covering spaces, then singular homology and CW complexes. Along the way, I will try to give you a feel for a range of interesting topological spaces and their properties, including projective spaces and the classification of surfaces.

Homework

Homework will be set and collected each week on Thursdays. You are responsible for checking the class website regularly to be aware of what the homework is and when it is due. Late homework will be accepted only with an **exceptionally** good excuse.

Exams

There will be one mid-term exam, in class on a date to be announced later. There will be a 3-hour final exam on **Tuesday May 4 from 8:00-11:00am**.

Grading

Your final grade for the class will be given by weighting your grades on the homework and exams as follows:

- homework: 50%
- mid-term: 10%
- final: 40%

Support

There are many sources of help and support if you are having difficulty with the class, material or anything else. These include:

- other students in the class;
- other graduate students who have taken the class previously
- my office hours;
- other topology faculty;
- email me to arrange a time to come and talk outside of office hours.

Please do not feel shy about asking for help, or just checking that you understand something correctly.

Absences

Attendance in class is mandatory but an occasional absence is not the end of the world.

Special Aid

Students with disabilities or other special needs who require classroom accommodations or other arrangements must make this known to me as soon as possible at the beginning of the semester, and be registered with the Disability Resource Center.

Collaboration

Collaboration on homework is allowed and encouraged. However, **each student must write up his/her solutions to the problems individually and in his/her own words** – copying from another student's paper is prohibited. Homework is an essential part of learning the course material. Failing to give it proper attention will significantly harm your performance on the exams and your overall grade for the class.

Academic honesty

All students are responsible for knowing the University's policy on academic honesty ('A Culture of Honesty'). All academic work submitted in this course must be your own unless you have received my permission to collaborate and have properly acknowledged receiving assistance. It is my responsibility to uphold the University's academic honesty policy and report my belief of dishonesty to the Office of the Vice President for Instruction.