Course Syllabus

CSU Math 571: Topology II, Spring 2018

Instructor: Henry Adams
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Office: Weber 125
Lectures: MWF 10:00-10:50am in Engineering E206
Textook: *Algebraic Topology* by Allen Hatcher. An electronic copy of this book is freely available at https://www.math.cornell.edu/~hatcher/AT/ATpage.html, and paperback copies are also moderately priced.
Class Webpage: http://www.math.colostate.edu/~adams/teaching/math571spr2018

Course Overview: This course will be a continuation of algebraic topology, as introduced in Math 570. We will return to the fundamental group in order to discuss Van Kampen's Theorem, covering spaces, and deck transformations and group actions. We will return to homology in order to discuss exact sequences and excision, the equivalence of simplicial and singular homology, cellular homology, Mayer-Vietoris sequences, homology with coefficients, and axioms for homology. Finally, we will introduce cohomology groups, including the cohomology ring and Poincaré duality.

Prerequisites: Math 566 (Abstract Algebra I) and Math 570 (Topology I)

Requirements: Your final grade will be based on the following components:
75% homework, 12.5% midterm, 12.5% final exam.
Note the midterm is worth less than two homework assignments, and same for the final.
You are expected to attend class essentially everyday (no worries on the few days you can't make it), to participate in class, to read the textbook, and to do the homework.

Exams: The dates for the exams (all in-class) are

- Midterm, **Wednesday, March 7** during class (plus extra time before or after).
- Final exam, **Friday, May 4** during class (plus extra time before or after).

Talk to Henry asap if you know you must miss an exam. You will only be able to use your brain and a pen or pencil — no notes, books, or electronic devices. The exams will be comprehensive, except that the final may emphasize the material after the midterm.

Homework: We'll have weekly homework assignments. The clarity of your solutions will count as much as their correctness, and all steps must be explained. Working in groups on homework and to study is encouraged! However, your submitted homework must be written up individually, in your own words.

Homework is due at the beginning of class. Late homework will not be accepted, though to accommodate illnesses and other unexpected events the lowest homework score will be

dropped. It is in your best interest to inform me as soon as reasonably possible when such a situation arises. CSU policies apply for university-sanctioned activities, for which you should give me plenty of advanced notice.

Academic Policies: Students are expected to adhere to the CSU Academic Integrity Policy as found on the Students' Responsibilities page of the CSU General Catalog and in the Student Conduct Code. For further policies which apply to all math department classes, please see http://www.math.colostate.edu/programs/undergraduate/policies.shtml. CSU is committed to providing accommodations for all persons with disabilities; please see the RDS webpage (http://www.rds.colostate.edu) and ask the instructor if you have any questions.