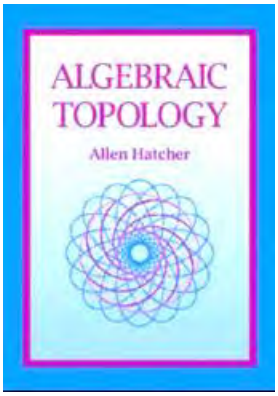
POLICIES / SYLLABUS

Instructor
Eric Moorhouse, Ross Hall $6^3 = 216$, moorhous@uwyo.edu,
https://ericmoorhouse.org

Office Hours: MWF 9:00–9:50 pm; T 1:30–2:50 pm, R 2:10–3:30 pm. In addition to my regularly scheduled office hours, please feel free to see me at other times, either by appointment or at other times if I am not busy. My current schedule is posted at https://ericmoorhouse.org/schedule.html



Class Meeting: MWF 8:00–8:50 am in RH 247. I do record pdf slides of lectures, and audio/video recordings, for your future reference. These will be posted through the course website (see below). Do not take this as an invitation to skip class without good reason. Students who consistently attend class perform better than those who do not.

Textbook: Allen Hatcher, *Algebraic Topology*, Cambridge Univ. Press, 2002. See the course website (below) for links to the electronic copy of the textbook, and list of errata, both on the author's website. Although the electronic copy is freely available, you will probably want to purchase a print copy of the textbook, which is beautifully printed and very reasonably priced. I will also make available a few handouts on topics to supplement the textbook, both in hardcopy form, and electronically.

Grading Scheme: This is somewhat negotiable, with two typical options being

20%	**Participation**
80%	**Homework**

or

20%	**Participation**
40%	**Homework**
40%	**Presentation**

If you would like to present a topic as part of your course grade, please speak with me during the first three weeks or so of the semester, and we will try to agree on a suitable topic and resources for you as you prepare. I will assign grades (A, B, C, D, F) at the end of the semester according to the scale: A=exceptional, B=very good, C=adequate, D=poor, F=fail. I always encourage students to consult me at any time during the semester with questions, including (but not restricted to) questions about your progress in the course. You may ask questions by email, at your own risk (remember that email is not secure); but questions asked in person typically receive more prompt and complete answers.

Homework: Homework assignments will be assigned on a regular basis.

It is fine for you to discuss the homework with other students. However, please do not copy anyone else's work directly. Copying adversely affects your grade; but more importantly, of course, you won't be adequately learning in this way.

Participation: You are expected to attend class regularly. A portion of your grade will be based on the regularity of your presence in class, but also on your involvement in class discussions. If you know that you cannot attend on a particular date, I encourage you to email me to let me know, as this will be helpful in monitoring your overall progress.

MATH 5605 Home Page: Course announcements, handouts, homework assignments, etc. will be posted at the official course website https://ericmoorhouse.org/courses/5605/ (not on WyoCourses, which is reserved for confidential information). Here you will find pdf and video recordings of lectures.

Appropriate Conduct/Academic Dishonesty: For issues of classroom deportment, etc., we refer to Classroom Climate and Conduct. This document is also linked on both the course website and the WyoCourse page. See also UW Regulation 2-114 (Academic Dishonesty).

Topics Covered: We will try to cover some (but not all) of the major topics appearing in the textbook, occasionally supplemented by additional sources or handouts. We plan to include

- Basic constructions: cell complexes, quotient spaces, etc.
- Homotopy equivalence.
- The fundamental group $\pi_1(X)$.
- Van Kampen's Theorem.
- Covering spaces and universal covers.
- Homology and cohomology of sequences, including
    - simplicial homology and cohomology;
    - de Rham cohomology;
    - singular homology and cohomology.
- Applications to group theory and graph theory.
- Long exact sequences for excision and Mayer-Vietoris.
- Higher homotopy groups $\pi_n(X)$.
- Fibre bundles.