Math 8306, Algebraic Topology
Fall 2008

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Course website	http://www.math.umn.edu/~tlawson/8306/

Objectives. This is the first half of a one-year course in modern algebraic topology. This is a subject whose methods have become widespread in mathematics, and has applications in number theory, algebraic geometry, differential geometry, K-theory, and many others.

The first semester covers homology and cohomology up at least through Poincaré duality; further topics may depends on student background, interest, and time. The second semester will cover homotopy theory.

Prerequisites. The official prerequisite for this course is Math 8301, or consent to take it without it. You need a good background in point-set topology and algebra, and some basic understanding of homology and the fundamental group. Our point of view will lean towards the more algebraic end of the spectrum.

Class time. The lectures for this course are MWF from 1:25 pm to 2:15 pm in Vincent Hall 211.

Textbook. The text for this course is *Algebraic Topology*, by Allen Hatcher. There is a free version of this text available online as well as lists of corrections.

http://www.math.cornell.edu/ hatcher/AT/ATpage.html

Homework. There will be weekly problem sets to be handed in during class each Monday. The first problem set is due *Monday, September 8*. Your lowest problem set score will be dropped from your final grade. These will form the basis for your final grade.

Homework will be posted online on the course webpage. There will usually be 5 problems per set.

Late homework will be docked by 15% per day (or portion thereof) up to a maximum of 45%, unless you have made prior arrangements.

Collaboration and cheating. You are allowed (and encouraged) to work with other students while trying to understand the homework problems. However, the homework that you hand in should be your work alone.

Exams. There will be none.

Office hours. Official office hours are Wednesday and Friday for questions about the course material or algebraic topology in general. If you have more immediate concerns or cannot come during ordinary office hours, feel free to contact me by email or in person.