Course syllabus for Math 6441
Algebraic topology

Fall 2014

Course description: "One of the main ideas of algebraic topology is to consider two spaces to be equivalent if they have 'the same shape' ..." –Allan Hatcher. This course will develop some of the basic tools of algebraic topology.

Text: **Algebraic Topology** by Allan Hatcher.

Time and place: TR 12:05-1:25pm. Skiles 156. Webpage via T-square.

Instructor contact information and office hours: Kirsten Graham Wickelgren, e-mail: kwickelgren3@math.gatech.edu, office: Skiles 227, office hours: Tuesday 11am-12pm, Thursday 1:30pm -2:30pm, or by appointment.

Prerequisites: Math 4107, Math 4317, Math 4431 or consent of instructor.

Course outline:

- fundamental group and classification of covering spaces
- (co)homology
- Poincaré duality

Homework, exams: There will be be weekly problem sets, two in-class midterms tentatively scheduled for September 16 and October 28, and a final exam. The final is scheduled for December 11, 11:30am-2:20pm. You are encouraged to work together on the homework. You are also free to consult any references you wish to complete the homework. Any sources you use or collaborators you consult should be credited in writing on your work, of course.

Grading: Grades will be computed by weighting the homework 50%, each midterm 15%, and the final 20%.

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