

Syllabus for Math 227B: Automorphism Groups

Winter 2006

Instructor: Jon McCammond

Office hours: M 12:00-1:50, W 12:00-12:50 or by appointment in South Hall 6711

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Course Home Page:

<http://www.math.ucsb.edu/~jon.mccammond/courses/winter06/227B/>

Text: No official text, but various articles available online will be linked to from the course homepage.

Course description: Math 227 is a topics course in topology, broadly defined. The topic changes from quarter to quarter. Three of the simplest types of infinite groups are free groups, surface groups and free abelian groups. This course focuses on the (outer) automorphism groups of these groups which can be investigated through a geometric study of the automorphism groups of finite graphs, closed orientable surfaces and n -dimensional tori. The approach will be to survey major results and to highlight some of the key underlying techniques, such as actions on R -trees and the construction of spaces such as outer space and the curve complex.

Grading: Your grade will primarily determined by attendance, participation, and the extent to which you complete the various short assignments given out during the course. As befits a second-year graduate course, the primary focus will be on the material itself rather than the grading.

Make-ups: Make-ups for exams and quizzes will only be given with documented University-approved excuses (see University Regulations).

ADA: Students with disabilities can get assistance from the Office of Services for Students with Disabilities (845-1637). I'm happy to work with them and you.

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