

Fall 2011
Math 8301: Manifolds and Topology

Lectures: MWF 1:25–2:15 in Vincent Hall 2.

Office Hours: WF 2:30–3:30 pm in Vincent Hall 355.

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Text: *Algebraic Topology*, by Allen Hatcher and *Introduction to Topological Manifolds*, Second Edition by John Lee. Hatcher's book is available free online, at <http://www.math.cornell.edu/hatcher/AT/AT>. Both textbooks are available at the University bookstore, and also on reserve in Math Library.

Prerequisites: Point-set topology and algebra.

Course web page: www.math.umn.edu/~akhmedov/M8301.html

Course Outline: This is a first course in topology of manifolds. The fall semester we plan to cover the classification of compact surfaces, the fundamental group and covering spaces, homology, basic cohomology.

Grading: The course grade will be based on homework assignments, in-class midterm and a comprehensive take-home final, with the following weights:

Homework (35%)

Midterm (in class) (30%) (Wednesday, November 5)

Take Home Final (35%)

Homework: There will be 8 homeworks in this course, each worth 100 points. Homework will be a fundamental part of this course, and will be worth 800 points (35% of the course grade). The first homework assignment will be due on 09/19. The grader will pick up the homework usually on Mondays (sometimes on Wednesday) after the class. This means that **NO LATE HOMEWORK CAN BE ACCEPTED**. You may work together on homework, but everyone must turn in their own written solutions. Please staple your homework before handing it in. If you have questions about the homework, it is best to ask during my office hours. Please check the course webpage for homework assignments and due dates: www.math.umn.edu/~akhmedov/M8301.html

Midterm and Final Exam: There will be an in-class midterm on Wednesday, November 2nd and a comprehensive take-home final examinations. The exams worth $30\% + 35\% = 65\%$ of the final course grade. **TAKE HOME FINAL DUE:** by 2.00pm Friday, December 16