

MATH 4200/6200 SPRING 2012 SYLLABUS

Instructor: Professor Mike Usher

Scheduled class meetings: MWF 12:20-1:10 in Boyd 303.

Office hours: Thursday 2:30-3:30, or by appointment, in Boyd 321C.

Required Textbook: *Topology*, 2nd ed., by James Munkres. Prentice Hall, 2000, ISBN 0131816292

Subject matter: Topology is the study of the properties of a geometric space which are preserved when the space is continuously deformed—thus to a topologist a circle is the same as a rectangle but is different from a line segment, since a circle can be deformed into a rectangle, but to turn it into a line segment you would have to tear it. It was a great success of mathematicians a century or so ago to develop a broad conceptual framework for analyzing these kinds of issues, and the subject has had a significant influence on many areas of mathematics, notably geometry and analysis, ever since.

In the book, we'll cover Chapters 1-4 of Munkres in detail, and then, depending on student interest and available time, some of Chapters 7, 8, and/or 9.

Grading: Grades will be based 40% on homeworks (due most Fridays), 25% on one midterm, and 35% on the final.

You are encouraged to cooperate on the homework assignments, and also to ask me questions about them, but the solutions that you hand must be written up independently and represent your own understanding of how to solve the problems.

Prerequisites: MATH 3100 and 3200 (sequences and series, and intro to proofs), or equivalent. This may be one of the most conceptually abstract courses that you've taken, so it is important that you be comfortable reading and writing proofs. Also, we'll make a lot of use of some ideas from basic analysis concerning sequences and continuity, and although I will review these some prior exposure would probably help.

Academic honesty: As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found at: www.uga.edu/honesty. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.

Obligatory disclaimer: The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.