

Topology
Math 452, Winter 2012
2:00-3:15 TTh, Bouillon 102

Instructor: Dr. Fassett

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Text: Foundations of Topology, by C. Wayne Patty.

Course Description: This course is the second in a three-course sequence introducing students to a mathematically rigorous study of topology. The majority of our time will be spent on the concepts of connectedness and compactness. If time permits, we will also consider the separation and countability axioms.

Course Goals: The main goal of the course is for students to learn how to read, understand, and write rigorous mathematical proofs in an abstract setting. In addition, a less measurable goal is for students to be rewarded for their efforts toward mathematical rigor and abstraction by being exposed to concepts and examples that present the richness inherent in the study of topology.

Course Policies:

Class Participation: Daily classes will be a mixture of lecture and discussion of assigned problems. Meaningful contributions are expected each week. This can take the form of presenting a proof or participating in class discussions. There should be plenty of time to share your thoughts, understandings, and questions. Poor attendance will hurt your participation score.

Homework: Problems from each section will be assigned and selected problems will be turned in for grading. You are encouraged to work together on homework but each student must turn in his or her own write-up. Problems turned in for grading will be organized and neatly presented or they will not be graded.

Exams: There will be an in-class midterm exam and a take-home final exam. You cannot pass the course without taking the final exam.

Course Grade: Course grades will be assigned according to the following:

Homework	50%
Class participation	10%
Midterm Exam	20%
Final Exam	20%

Students with special needs or disabilities that may affect their ability to access information or material presented in this course are encouraged to contact the Director of Disability Support Services at 963-2171 (TTD 963-2143).

General Comments: I have been very careful in trying to select a text that is readable yet rigorously presents the richness of topology. I expect you to take advantage of the thorough explanations by reading the text in detail. You may find it helpful to write comments in the text that fill in the gaps or highlight questions you would like to address during class.

Many of the problems you will work on will take several attempts over a period of several days. You may even find yourself waking-up in the middle of the night thinking about a particular problem. Be persistent, keep up, work together, and enjoy yourself. After all, this is how the material you will be studying was developed.

I assume everyone has experience writing logically and grammatically correct proofs. As we move a long in the course our expectations of each other's proof writing abilities will increase.