Math 431
Topology
Spring 2008
CRN:28600
MWF: 10:00-10:50
Kennedy 207

Instructor: Dr. Christopher Mouron
Office: 320 Ohlendorf Hall
Office Hours: MWF 11:00-11:50, TTh 10:-10:50
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Text: Notes from *Introduction to Point-set Topology* (1st edition) by Lew Ward and other sources.

Course Description: Much like geometry, topology is a study of how points sit in a space. What distinguishes topology from geometry is the type of transformations allowed before you really consider an object as "changed''. The subject of topology itself consists of several different branches, such as point set topology, algebraic topology and differential topology, which have relatively little in common. This class will focus on point set topology which is not only interesting in its own right, but is crucial to the study of other mathematical fields such as real analysis and functional analysis.
Keeping with the tradition of topology, this class will be taught by the Moore method in when the students will be given an outline of the subject via list of definitions, examples and theorems and the students will be expected to fill in the details. In this sense, the students themselves will be "writing the book'' for the class. The students work will be presented in two ways: classroom presentation and turned-in homework.

Course Content: The course will progress through the axioms for topology, separation axioms, mappings, compact sets, connected sets, product spaces, and continua with room for further student exploration

Course Prerequisites: Math 201

Attendance Policy: A major part of this course will be daily class presentations so regular class attendance in imperative. Let me know in advance if you plan to miss class so that other accommodations can be made. If you must miss a test due to illness you must let me know beforehand and go to the doctor.

Homework (50%): Homework is the core component of this course. The student is required to keep up with the homework daily. Here are the rules for the homework:

1) Students may not work together on the homework.
2) Students may not use *any* resources except the instructor.
3) The instructor may temporally suspend rule 1) and/or 2) depending on the current needs of the class.

In class presentations (30%): Each class, each student will be asked randomly to present homework solutions. If a student does not present a satisfactory solution, then another student may be asked to present a solution to the question.

Turned-in homework (20%): Each week, the students will submit some of the solutions to the homework.

Mid-term Exam (20%): The mid-term will consist of in-class and take-home portions. Tentative test date: February 27

Final Exam (30%): The final will consist of in-class and take-home portions. The final exam will be cumulative.

Grades: Grades will be earned for the following percentages:

A	Score >= 93%	*C*	73% <= Score < 77%
A-	90% <= Score < 93%	*C-*	70% <= Score < 73%
B+	87% <= Score < 90%	*D+*	67% <= Score < 70%
B	83% <= Score < 87%	*D*	63% <= Score < 67%
B-	80% <= Score < 83%	*D-*	60% <= Score < 63%
C+	77% <= Score < 80%	*F*	Score < 60%

MathHelp: MathHelp is a free problem session run by students in the evenings. However due to the rules of the course, you cannot use MathHelp.

Honor Code: The student is expected to conduct him or herself within the guidelines of the College's Honor Code. If you have any questions about what is or not allowed, please ask.

If you have a documented disability and wish to receive academic accommodations, please contact myself and the Office of Student Disability Services as soon as possible.