Mathematics 441 - Topology
Winter 1999

Instructor: Prof. Ted Sundstrom **Office:** 2268 Mackinac Hall

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Course Home Page: http://www3.gvsu.edu/wcb/schools/GV/mth/sundtrt/8/

Instructor's Home Page: http://www2.gvsu.edu/~sundstrt

Class Schedule: T Th 1:00 –2:15 1119 Mackinac Hall

Office Hours: To be announced later.

Prerequisite: MTH 203, MTH 210, and MTH 227

Course Description: An introduction to the fundamental concepts of topology. The topology of the real number system and its generalizations to metric spaces and topological spaces. Topics include subspaces, neighborhood spaces, open and closed sets, interior and boundary of sets, continuity and homeomorphisms, connected and locally connected spaces, compact sets and spaces.

Textbook: *Introduction to Topology*, Third Edition, by Bert Mendelson, Dover Publications, Inc., New York, copyright 1990.

Tentative Course Outline:

Chapter One	Sections 1, 2, 3, 4, 5, 6, 8, 9
Chapter Two	Sections 1, 2, 3, 4, 5, 6, 7
Chapter Three	Sections 1, 2, 3, 4, 5, 6, 7
Chapter Four	Sections 1, 2, 3, 4, 5
Chapter Five	Sections 1, 2, 3, 4, 5, 6

Internet Access and Student e-mail: Most of the materials and information for this course will be posted to the course homepage. This homepage is part of one of Grand Valley's internet sites called "Web Course in a Box." The internet address for "Web Course in a Box" is http://www3.gvsu.edu/wcb/8/. (This address is case sensitive.) Once you have the homepage for Web Course in a Box, scroll down the list of classes and select MTH441. You should access this homepage regularly since many announcements will be posted. In addition, the course schedule and assignments will be posted on this homepage.

In addition, many documents for this course will be stored in my directory on the student network in the "R drive" . To access these documents from the student network, start the appropriate software package (usually MS Word or Maple). Then open the document by accessing my directory. The pathname for the directory for this course is R:\sundstro\MTH441.

Absences: Students are responsible for material covered and announcements made during absences from class. Since material that is not in the text will be presented in class, it is advised that students miss as few classes as possible.

Writing: Writing is an important part of communicating mathematical results. The assignments, tests, and journal summaries will frequently require you to write solutions to mathematical problems. Writing mathematical solutions means more than writing formulas and circling an answer. It requires explanations of all significant steps taken in the solution of a problem. These explanations must be written in complete sentences and paragraphs with appropriate formulas and graphs included. The grading of the writing assignments will be based on the quality of the writing, the quality of the mathematical content, and the logical organization of the writing. Students are strongly encouraged to use Microsoft Word, its Equation Editor, and graphs imported from the software package Maple.

Homework: Daily reading and problem assignments will be made and homework will be reviewed in class. These homework assignments will not be collected.

Assignments: Each Thursday in class, an assignment will be made. Generally, each assignment will consist of two to four problems and will be due the following Thursday. Each problem will be graded on a ten-point basis. The two lowest scores for each student will be dropped.

Tests: There will be two tests during the semester. Each test will be graded on a 75 point basis. The first test is tentatively scheduled for Thursday February 25, 1999., and he second test is tentatively scheduled for Thursday April 15, 1999. No make-up tests will be given without permission from the instructor prior to the date of the test.

Final Examination: The final examination will be a comprehensive test worth 100 points. It will be given on Monday April 26, 1999 from 12:00 noon. to 1:50 p.m.

Grading: Grades will be determined by the scores on the assignments, tests, and final examination according to the following scale:

Grade	Minimum Score	Grade	Minimum Score
A	90%	C+	74%
A-	87%	C	70%
B+	84%	C-	67%
B	80%	D+	64%
B-	77%	D	60%