MATH 4510, INTRODUCTION TO TOPOLOGY, FALL 2009

Classroom:	LCB 225	**Time:**	MWF 10:45 – 11:35, and problem session Tuesdays as needed
Instructor:	Domingo Toledo		
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Office:	JWB 324	**Phone:**	(801) 581-7824
Office Hours:	Mon, Tues 11:50–12:40, or by appointment.		
Web-page:	`http://www.math.utah.edu/∼toledo/4510.html`		
Prerequisites:	Math 3220. (Concurrent) Math 5320 could help.		
Textbooks:	B. Mendelson, *Introduction to Topology*, Third Edition. A. Katok and V. Climenhaga, *Lectures on surfaces*.		

Course Description: This course is the first half of a one year sequence, the second half being Math 5520, which I will teach in the Spring. The year sequence is intended to replace three old courses: the old Math 4510 (Introduction to Topology), Math 4530 (Curves and Surfaces) and the old Math 5520 (Introduction to Algebraic and Geometric Topology). You can take the first semester without taking the second, but the first is a prerequisite for the second.

Over the year we should cover these broad topics:

> Basic concepts of topology.
> Topology of surfaces, classification of surfaces.
> Fundamental group of a topological space, applications.
> Geometry of surfaces, hyperbolic geometry.

The course will begin with the basic concepts of topology:

> Metric spaces.
> Topological spaces and continuous mappings.
> Construction of topological spaces.
> Compact spaces, connected spaces.

As examples of some of these concepts we will study surfaces as metric spaces and the topology of surfaces.

The textbook by Mendelson will be used the first semester, the one by Katok and Climenhaga will be used both semesters. The textbooks will be supplemented by online references, particularly during the second semester.

Homework: I will be assigning homework problems to be collected roughly every two weeks. As the semester goes on, we will decide how many problem sessions to have on Tuesdays.

Exams: There will be two midterm exams on September 30 and November 11, and a comprehensive final exam on Monday, December 14, 10:30–12:30.

Grading:

Homework , drop lowest 2:	35 %
Midterm Exams:	40 %
Final Exam:	25 %

Important dates: Last day to drop (delete) classes: Wednesday, September 2. Last day to withdraw from classes: Friday, October 23.

ADA: The Americans with Disabilities Act requires that reasonable accommodations be provided for students with physical, cognitive, systemic, learning, and psychiatric disabilities. Please contact me at the beginning of the semester to discuss any such accommodations you may require for this course.