Math 551: Topology I

Fall 2011
CB 343
MWF 11-11:50

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Texts: *General Topology* by Willard and *Introduction to Topological Manifolds* by Lee, second edition.

(*Topology* by Munkres, second edition, is an alternative text for this class. It covers very similar topics and is a standard reference.)

Website: www.ms.uky.edu/~kate/551.html.

This class is an introduction to point-set topology. The focus is on abstracting familiar properties of $\mathbb{R}^n$ and, more generally, metric spaces to sets that don't necessarily have a notion of distance, but do have a notion of "nearness" - a topology.

In the first part of the semester we will focus on basic definitions:

- topology,
- basis,
- continuity,

and ways to construct topological spaces:

- subspaces,
- products,
- quotients.

In the second part of the semester we will study fundamental properties of topological spaces:

- separation axioms,
- compactness,
- connectedness.

Exams and Assignments: All exams and assignments should be neat, legible, and written in complete sentences.

<u>Exams</u>: There will be two exams during the semester. They are tentatively scheduled for:

Friday, October 7,
Friday, November 18.

If these dates change, an announcement will be made in class at least a week before.

<u>Final Exam</u>: The final exam for this course will be

Friday, December 16 at 1:00PM.

It will be cumulative.

Homework: Homework will usually be assigned each class and will be due **in class** weekly. Assignments and due dates will be posted on the course website. I will grade selected problems from each assignment and I will give partial credit. The lowest homework score will be dropped at the end of the semester.

I **strongly** encourage you to discuss assignments with other students, but your solutions must be written up independently. *Copying a written solution from another student and submitting it as your own will be considered cheating.* Please see the UK office of Academic Ombud Services website (www.uky.edu/Ombud) for information about plagiarism.

Most Wednesdays we will spend part of class on student presentations of homework problems. All students will be expected to present. This will be part of the homework grade.

Grades: Final grades will be determined using the following distribution:

	Percentage of course grade
Final exam	30
Exam 1	20
Exam 2	20
Homework	30

I will use the standard scale for assigning final grades.

Academic Integrity: All students are expected to follow the academic integrity standards as explained in the University Senate Rules.

Attendance: Class attendance is expected of all students.

Classroom Demeanor: Turn off all cell phones or other electronic devices prior to entering the classroom. An attitude of respect for and civility towards other students in the class and the instructor is expected at all times.

Academic Accommodations: If you have a documented disability that requires academic accommodations, please see me as soon as possible. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resources Center (Room 2, Alumni Gym, 257-2754, jkarnes@uky.edu) for coordination of campus disability services available to students with disabilities. We can then collaborate on the best solution.

August 19, 2011