Lectures: Every TuTh 9:35am-10:50am in TH 425

Instructor: Dr. Yitwah Cheung
Office: Thornton Hall, Room 950
Phone: (415) 338-1805
Office Hours: Tu 1-1:50pm, W 2-3pm, and by appt.
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Prerequisites: Math 370 with a grade of C or better.


Bulletin Description: Rigorous development of the theory of metric spaces and topological spaces. Concepts covered include open, closed sets, interior, closure, boundary of sets; connected sets, compact sets, continuous functions defined on metric and topological spaces.

Course Objectives: The aim of Topology is to introduce the theory of metric spaces and topological spaces. Students are expected to learn how to write, in logical manner, proofs using important theorems and properties of metric spaces and topological spaces. Students learn to solve problems using the concepts of topology. They present their solutions as rigorous proofs written in correct mathematical English. Students will be able to devise, organize and present brief solutions based on definitions and theorems of topology. Students who successfully complete this course should be capable of understanding the concept of open and closed sets, the interior, closure and boundary of sets; connected sets, compact sets and continuous functions defined on topological spaces. Students should be able to determine the interior, closure and boundaries of sets, and determine whether a given set is connected or compact. They should be able to determine whether a function defined on a metric or topological space is continuous or not. Students are expected not only to grasp the concepts of topology and apply them, but also to continue with their overall mathematical development. They will be improving such skills as mathematical writing and the presentation of rigorous logical arguments.

Homework and Reading Assignments: Students should check the course webpage at

http://online.sfsu.edu/~ycheung/450/
for weekly homework and reading assignments. Handouts and other useful information can also be found there. Students are expected to complete all homework and reading assignments in a timely fashion.

**Your Grade:** There will be a midterm and a final exam.
- Midterm (mid-October) and Final - 20% each
- Homework (assigned each week) - 55%
- Attendance - 5%

**Academic Integrity:** All students are expected to adhere to the SFSU honor code. Any student caught cheating on an examination will automatically fail the course and face expulsion from the University. You may discuss the homework with other students in the class, but the work you hand in must be written by yourself.

**Enrollment Status:** You are solely responsible for maintaining your own enrollment status. Check the “Withdrawl Policy” on the course webpage for the proper procedures for maintaining your enrollment status.

**Students with Disabilities:** The University is committed to providing reasonable academic accommodations to students with disabilities. To qualify, you **must** register with the Disability Programs and Resource Center (DPRC) in the Student Services Building, room 110. Phone (415) 338-2472 (voice/TTY), Fax (415) 338-1041, Email: dprc@sfsu.edu

**Religious Holidays:** Reasonable accommodations will be made for you to observe religious holidays when such observances require you to be absent from class activities. It is your responsibility to inform the instructor during the first two weeks of class, in writing, about such holidays.

**Final:** Tuesday, December 16 in TH 425 from 8:00-10:30am.