

Math 500 - Geometry and Topology I
Fall 2010
Tuesday, Thursday 12:00 – 1:30pm, DRL 4C6

Instructor: Jeff Jauregui

Office: DRL 4N34

Office hours: Monday 3:30pm–4:30pm, Tuesday 1:30pm–2:30pm, and by appointment

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Teaching assistant: Shanshan Ding

Office: DRL 4C11

Office hours: TBA

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Text: *Topology*, J. Munkres, 2nd edition

Course web page: <http://www.math.upenn.edu/~jjau/math500>

TA web page: <http://www.math.upenn.edu/~shanshand/10F500.html>

Course Blackboard page: TBA

Course description: This course is an introduction to point-set topology and algebraic topology. Technically the prerequisites are Math 240/241, although some exposure to advanced calculus/real analysis would certainly be helpful. Some of the topics we plan to cover are: topological spaces, continuous functions, metric spaces, connectedness, compactness, quotient spaces, countability and separation axioms, Urysohn Theorem, manifolds, homotopy of maps, and the fundamental group.

Attendance: To be successful in this course, you should be present for all class meetings. If you must miss class, notify both the College Office and me as soon as possible. For more information, see <http://www.college.upenn.edu/policies/attendance.php>

Homework: Homework assignments will be distributed in class and/or on the course web page, typically once a week. They will be due as noted, always at the beginning of class. You are responsible for being aware of the assignments and due dates.

Each homework will contain a reading assignment from the book, a list of exercises, and a list of problems. **You are expected to complete all the “exercises,” but to turn in only the “problems.”** Doing the full assignment is absolutely crucial! Late homework is not generally accepted.

You are strongly encouraged to work in groups to exchange ideas and help each other understand how to approach problems, but the work you turn in must be your own! If you work with others on an assignment, **be sure to indicate the names of the other students on your homework.**

Homework must be legible, well-organized, and written in complete sentences. Handwritten work is fine, but you are encouraged to type up the problems in LaTeX. For more information on expectations for the homework, consult the TA webpage.

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Exams: There will be two midterm exams and one final exam, according to the following tentative schedule:

- Midterm 1: in-class, October 7th
- Midterm 2: take-home, distributed November 11th, due November 16th
- Final exam: December 20th 12pm – 2pm, location TBA

All exams are to be taken under the University's Code of Academic Integrity (see below).

Grades: Your grade for the course will be determined based on the following factors:

Homework	25 %
Midterm exams (one take-home, one in-class)	20 % each
Final exam	35 %

Office hours: I will hold regular office hours at the times noted on the first page, unless I email or tell you otherwise in class. Alternatively, you may set up an appointment to meet with me.

Honor code: In this course, collaboration on homework assignments is allowed and encouraged, but the work you hand in must be entirely your own. You are not allowed to have any outside help (people, books, or notes) during exams, unless explicitly told otherwise.

Penn's Code of Academic Integrity will be strictly enforced.