

18.901 : Introduction to Topology Spring 2009

Instructor : Andrew Putman

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Class Hours : TR 1-2:30

Classroom : 2-102

Office Hours : TR 10:00-11:00, also by appointment

Text : *Topology* (2nd edition) by James Munkres

Course Objectives

1. To explore the foundations of mathematics (logic and set theory) at a level and depth appropriate for someone aspiring to study higher-level mathematics and/or to become a professional mathematician.
2. To present an introduction to the field of topology, with emphasis on those aspects of the subject that are basic to higher mathematics.
3. To introduce the student to what it means to do mathematics, as opposed to learning about mathematics or to learning to do computational exercises.
4. To help the student learn how to write mathematical text according to the standards of the profession.

Prerequisites : The prerequisite for the course is a first course in analysis, at the level of Rudin's "Principles of Mathematical Analysis" (18.100B here at MIT). This background is essential both for the knowledge of the subject matter and for the experience in formulating proofs.

Homework : Homework will be assigned every Tuesday and will be due the following Tuesday. It will be posted to the course webpage by Tuesday evening. Collaboration is encouraged, but each student must independently write up his/her own solutions. Late homework is never accepted, but the lowest homework grade is dropped.

Remark on Homework Grading : The homework will be graded both for correctness and for proper mathematical style. In particular, you should write everything out in complete sentences. I would advise you to work things out on scratch paper and then copy everything out neatly onto a separate sheet.

Midterms : There will be one closed book exam on Thursday, March 19th.

Grading :

50% Homework

20% Midterm

30% Final