MATH 23b Introduction to Proofs Fall 2005

Time: Monday and Wednesday 2:00–3:30 p.m. (Block K)

Room: Goldsmith 226

Instructor: Daniel Ruberman
Goldsmith 310
736–3074
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Office Hours: Monday, Wednesday 11-12; Thursday 1-2.

Course mailing list: 053math-23b-1@lists.brandeis.edu

Textbook: *Mathematical Thinking: Problem-Solving and Proofs, 2nd edition* by John P. D'Angelo and Douglas B. West

Topics to be covered will include

Logic
Sets and functions
Mathematical induction
The real numbers
Combinatorics (time permitting)

The purpose of this course is to develop the ability of students to read and write mathematical proofs. We will start with elementary logic and basic proof techniques. We will then study some fundamental concepts from various areas of mathematics, and read and write proofs of varying degrees of complexity.

This course satisfies the *writing intensive* requirement. The writing will be in the form of regular homework assignments, with revisions. For this course, it is not sufficient to get "the right answer"; the answers must also be well written. For each homework assignment 1/3 of the score will come from the original version of the homework and 2/3 will come from the revision. (Exceptions: The entire grade for the first assignment will come from the revision and the last two assignments will not be revised.) If your score for the first version of a homework assignment is at least 90%, you need not revise it, and you don't need to rewrite any problem for which you get full credit.

Grades will be based on homework, with revisions, two 1-hour tests (in class), and a final exam (scheduled by the registrar for this time block), weighted as follows:

Homework	50%	
Tests	10% each	Monday, Oct. 10 and Wednesday, Nov. 16
Final Exam	30%	Monday, Dec. 19, 1:30 pm–4:30 pm

Note that the homework is very important in determining your grade.

Homework policy: You may discuss the homework problems with other students in the class; however, if you do, you should write on your homework submission the students with whom you discussed the assignment. (You do not need to mention any help you received from the TA's or instructor.) **You may not copy the written work of another student or allow another student to copy your written work. What you submit should be your own work.**

If you are a student with a documented disability on record at Brandeis University and wish to have a reasonable accommodation made for you in this class, please see me immediately. Please keep in mind that reasonable accomodations are not provided retroactively.

You are expected to be honest in all of your academic work. The University policy on academic honesty is distributed annually as section 5 of the Rights and Responsibilities *handbook. Instances of alleged dishonesty will be forwarded to the Office of Campus Life for possible referral to the Student Judicial System. Potential sanctions include failure in the course and suspension from the University. If you have any questions about my expectations, please ask.*