

Math 467: Intro to Real Analysis

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Office Hours: M T W 3:00 - 4:00 pm
You are also welcome to make appointments for other times.

Course: Theoretical development of the calculus of a real-valued function of a real variable. Topics covered include the algebraic and topological properties of the real line; sequences and series; limits, continuity, and differentiability of functions. Prerequisites: Math 273 and Math 222 with a grade of C or better. Credit: 3 sem. hrs.

Text: *Introduction to Real Analysis* by Robert G. Bartle and Donald R. Sherbert, 3rd Edition (1999) John Wiley & Sons.

Goals:

- Pursue a rigorous study of the fundamental concepts of real analysis.
- Continue to acquire mathematical sophistication.
- Develop the ability to deal successfully with complex, abstract material.
- Lay a foundation for other advanced courses (e.g. topology).

Grading: Your work will be distributed as follows:

	<u>portion of grade</u>
2 midterm exams	$\frac{1}{3}$
Cumulative final exam	$\frac{1}{4}$
1 quiz = $\frac{1}{2}$ of a midterm exam	$\frac{1}{12}$
6 problem sets	$\frac{1}{3}$

A = 90-100% of the total points, B = 80-89%, C = 70-79%, D = 60-69%

Make-Ups: **NO** make-ups for exams or the quiz will be given unless I have agreed to give you one **before** the scheduled exam or quiz time.

Attendance: A passing grade normally requires attendance at no fewer than 80% of the classes held.

Important Dates:

Note: all are Wednesdays.

Exams:

Exam 1	March 5
Exam 2	April 23
Final Exam	May 14

Quiz: April 9

Problem set due dates: most non-exam Wednesdays:
February 13,27; March 19; April 2,16; May 7

“On being a mathematician. There is much to be said for being a mathematician. To begin with, he has to be completely honest in his work, not from any superior morality, but because he simply cannot get away with a fake. It has been cruelly said of arts dons, especially in Oxford, that they believe there is a polemical answer to everything; nothing is really *true*, and in controversy the object is to prove your opponent a fool. We escape all this. Further, the arts man is always on duty as a great mind; if he drops a brick, as we say in England, it reverberates down the years. After an honest day’s work a mathematician goes off duty. Mathematics is very hard work, and dons tend to be above average in health and vigor. Below a certain threshold a man cracks up; but above it, hard mental work *makes* for health and vigor (also – on much historical evidence throughout the ages – for longevity).”

– Littlewood, *Littlewood’s miscellany*