Math 425A/575A, Winter 2010
Fundamental Concepts of Analysis

Instructor: Gerald Folland.

Email: folland@math.washington.edu

TA (Grader): Ting Zhou. Her email address is tzhou@math.washington.edu

Office Hours: Folland: Monday 2-4 and Thursday 1:30–3:30, or by appointment, in Padelford C436. (The Thursday hours are mainly for the benefit of my other class.) Zhou: Tuesday 10:30-12:30 in Padelford C8D (which is directly below the math advising office).

Text: *Mathematical Analysis* (2nd ed.) by T. M. Apostol. We'll cover Chapters 5, 12, and 13 this quarter, to which I will add some supplementary notes. There are also some other books on reserve in the Math Research Library (Padelford C306) that you might want to look at:

A Companion to Analysis by T. W. Körner
Principles of Mathematical Analysis by W. Rudin
An Introduction to Mathematical Analysis by S. A. Douglass
Analysis, with an Introduction to Proof, by S. R. Lay

Körner is written in a more engaging conversational style than most math books, and Rudin is an old classic written in a terse, efficient style. I will make use of these in preparing my lectures. The other two are at a somewhat more elementary level; you might consult them if you're feeling lost.

Homework: There will be weekly homework assignments that will be posted on the class web site as pdf files. It is your responsibility to get the assignments from the web. They will be handed in on Wednesdays (except perhaps for the last one), and the graded assignments will usually be handed back on the following Mondays. Your lowest homework score (including any 0's for missed assignments) will be dropped. Late homework will usually not be accepted; if you have to miss more than one assignment for some compelling reason, talk to me (Folland) about it.

Exams: There will be a Midterm Exam on *Friday, February 12*. The Final Exam will be on *Wednesday, March 17, 2:30-4:20 p.m.*

Grades: The homework will count as 30% of your course grade, the Midterm will count as 25%, and the Final Exam will count as 45%.

What Is the Course About? The 424-5-6 sequence is concerned with the theoretical foundations of calculus (and more advanced parts of mathematical analysis). 425 is largely concerned with the theory of differential calculus in one and several variables.