

Math 142A Advanced Calculus

Winter 2007

This course may be thought of as a deeper look at the theory of functions of a single real variable. Many of the topics will remind you of your Freshman/Sophomore calculus, but many new ideas will be introduced. There will also be a greater emphasis on *proof* and on gaining a better understanding of the basic principles. You will be expected to do a certain amount of mathematical writing, in your homework assignments and on your exam papers. The main topics to be discussed this term revolve around issues of convergence: limits, continuity, and differentiation of real functions. As a “warm-up” we’ll look at the notion of *cardinality* for sets.

- Instructor: P. Fitzsimmons, AP&M’ 5715, phone 534–2898.
- Office Hours: MWF 12:30 PM to 1:30 PM, or by appointment.
- TA: A. Shakeel, APM 6434
- Text: W.A.J. Kosmala, *A Friendly Introduction to Analysis* (2nd edition), Pearson/Prentice Hall, 2004. (I plan to cover topics found in Chapters 2–5 of the text.)
- Lectures will be on Monday, Wednesday, and Friday, from 2 PM to 2:50 PM, in Warren Lecture Hall 2205.
- Your discussion sections with the TA (A. Shakeel) meet on Tuesdays in Warren Lecture Hall 2208 from 8 PM to 8:50 PM (A01) and Center Hall 218 from 11 AM to 11:50 AM (A02).
- There will be two midterm exams (in the fourth and eighth weeks) and a final exam, weighted as follows:
 - Midterm #1: 20%
 - Midterm #2: 20%
 - Final: 35%

In addition, there will be weekly homework assignments, which will account for the remaining 25% of your grade. The +/– system will be used for letter grades.

This handout and other information concerning Math 142A is available on the World Wide Web at the URL:

<http://math.ucsd.edu/~pfitz/winter07/142a/>