

Advanced Calculus I

Math 151A, Fall 2008

Instructor: Dr. Julie Bergner

Class: TTh 2:10-3:30 pm, SPR 2339

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Course Web Page: <http://www.math.ucr.edu/~jbergner/math151af08.htm>

Office hours: TTh 1-2 pm (subject to change) and by appointment

Teaching Assistant: Curtis Pro

Discussion section: M 8:10-9:00 am, INTN 1006

Textbook: *Principles of Mathematical Analysis, Third Edition*, by Walter Rudin. We will cover the first 5-6 chapters this quarter, but you will continue to use it if you continue with the course in the winter and spring.

Course Objectives: This course is an introduction to mathematical analysis, to be continued in a year-long sequence. The idea is that we will be giving a rigorous treatment of many ideas that you have seen in calculus, but in more generality. In this quarter, we'll begin with the real and complex number systems and a review of point-set topology in metric spaces. We'll then look at sequences and series, limits and continuity, differentiation, and, time permitting, integration. The hope is that this course will give you a deeper understanding and appreciation for these ideas.

Grades: Grades will be based on homework, a midterm exam (tentatively Tuesday, October 28), and a final exam (Friday, December 12, 8:00-11:00 am).

Late homework will be accepted but penalized. No make-up exams will be given except under extreme circumstances. Please note that travel plans are not considered extreme circumstances.

Homework: Homework will be assigned during each class period, and will generally be due at the beginning of class on Tuesday. The homework assignments will give you the opportunity to gain an in-depth understanding of the concepts covered in class. At any level, the only way to understand mathematical ideas is to work with them yourself. You are encouraged to work together on the assignments, but you must write up your own work. Copying a solution directly from another student is cheating and will be treated as such. The discussion section on Mondays will be one opportunity to get help on homework.

Discussion Section: These sessions will give you a further chance to go over material with the teaching assistant. Please note that these sessions are required, not optional. (Yes, I know they are early in the morning!) More information will be given in class on Monday.

A Final Note: This course is usually considered to be very challenging! I strongly encourage you to keep up with the material and to get help from me and/or the TA as you need it. Please do not hesitate to come and talk with me if you are having problems with the material or with the course in general. I am around often outside of office hours and you are welcome to drop by my office, although making an appointment in advance is encouraged, as I may not always be available.

If you have any condition, such as a physical or learning disability, which will require academic accommodations, please notify me in the first two weeks of the course.