

Math 211, Spring 2005

Dr. Sarah Raynor

Textbook: Understanding Analysis, Stephen Abbott

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Course:

This course is a first course in real analysis, the study of functions on the real line. It will depend on your knowledge of one-variable calculus, but in this course we will be studying the rigorous notions and proofs that underly the usual ideas of calculus. Our course will discuss the nature of the real line, sequences and series, continuity and differentiability, and sequences and series of functions. If time permits we will also discuss integration.

Assignments:

This course will emphasize the creation and proper writing of mathematical proofs. It will also challenge your intuition with examples of what may go wrong, and why our definitions and proofs are formulated as carefully as they are. For this reason, it is crucially important that you work to develop your intuition and proof-writing skills by doing regular homework. I strongly recommend that you do every problem in the sections that we cover. Each week, I will assign a few problems for you to write up and turn in. They will be due on Wednesdays at the beginning of class.

In addition to the regular homework, you will be asked to complete a project. With a partner, you will complete and writeup the exercises given in Sections 1.5, 2.8, 3.5, 4.6, 5.4, 6.6, 8.2, or 8.4. After completing the section, you will present your work to the class.

Evaluation: There are 5 components of your final grade.

1. There will be a 50 minute in-class exam are worth 15% of your grade.
2. The three hour final exam is worth 35% of your grade.
3. The written weekly homework is worth 35% of your grade.
4. The project assignment is worth 10% of your grade.
5. Positive participation in class is worth 5% of your grade.

I have tentatively scheduled the in-class exam for Monday, February 28. You must let me know if you will be unable to make this date by January 19. Otherwise, you can miss the exam only for serious illness or emergency.

No late assignments will be accepted, and makeup exams will not be given. Should you be forced to miss an assignment or exam due to a legitimate excuse, it will not count toward your grade. This will have the effect of making your other assignments worth more.