MATH 105B, WINTER 2001

REAL ANALYSIS

Course Outline

Instructor: Viktor Ginzburg
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Meetings: TTh 2:00-3:45pm, 159 Soc Sci II

Text: *Principles of Mathematical Analysis*
by Walter Rudin
1976 (third edition); McGraw-Hill, Inc.

Homework assignments will be collected in class every week. Homework pages should be stapled or clipped together.

Exams and Grading: There will be one midterm. The grade for the course will be based on a cumulative point total

- Homework assignments: 20%
- Midterm: 30%
- Final: 50%

Prerequisites: Math 23B, 105A, Math 100 or CS 101.

Syllabus: This is the second course in the series 105A-C. A thorough knowledge of the contents of 105A (Chapters 1-4) is required as well a good understanding of the concept of mathematical proof and a certain experience with the $\epsilon - \delta$ techniques.

The topics covered will include

- Differentiation (Chapter 5);
- The Riemann–Stieltjes integral (Chapter 6);
- Sequences and series of functions (Chapter 7);
- Power series and Fourier series and applications (selected material from Chapter 9).