Sept. 15, 2008

MATH 131A1 - Fall 2008 - Real Analysis

MWF 10:00 MS 5117 and Tues 10:00 MS 5117

Office hours: John Garnett: MWF 1:30 in MS 7941; William Meyerson: M 12:30 - 1:30, T 11:30 - 12:30 in MS 2961.

Text: K. A. Ross, Elementary Analysis: The Theory of Calculus, Springer, (0-387-90459-X) (required).

Material: We will cover Sections 1 - 34 of the book, excluding the starred (*) sections. The course will emphasize mathematical rigor. You will be expected to know how to formulate and write a correct mathematical proof. At the end of the course you should be able to derive every theorem in the course (with a few clearly indicated exceptions) from the axioms for the real numbers given in the first chapter.

Grades: Homework 30%, final 40%, midterms 30%.

Homework: There will be eight homework assignments of 10 - 15 problems each. Homeworks are due at the beginning of the Tuesday Quiz Section, beginning October 7, ending December 8 and excluding November 11. You may work together on the homework, but you must write up your solutions by yourself. The homework will emphasize making correct proofs. The lowest of your eight homework scores will not be counted.

Midterms: In class, October 20, on Sections 1 - 10. In class, November 24, on Sections 11 - 29. Some midterms questions will ask for proofs of theorems from class. You may not bring your notes or a book to the midterm, but you may bring a 4 x 6 file card, with notes written on both sides.

Final Exam: December 9, 3 - 6. Comprehensive and closed-book, but you may bring a 4 x 6 file card with notes written on both sides.

Note: Except for different questions on the midterms and finals, this class will be the same Sections 2 of 131A, meeting 11:00 MTWF.

Homework Assignment 1, due Tuesday Oct. 7: All from Ross. 1.3, 1.4, 1.10, 1.12, 2.3, 3.3, 3.4, 3.6, 4.1 (evens only, i.e. b, d, f, etc), 4.6, 4.7, 4.8.