Analysis I

Math 554
Spring 1996

Instructor Information:

Professor: Bob Sharpley
Office: 313D LeConte
Office Hours: MWF 2:30-3:30 or by appointment.

Text:

Introduction to Mathematical Analysis, by W.R Parzynski and P.W. Zipse, McGraw-Hill, New York, 1982.

Grading:

The course grade is computed from 3 Test grades (20% each), Homework (10%) and the Final Exam (30%).

Course Content:

The topics contained in the first seven chapters of the text will be covered in some detail, but not necessarily following the text. Attendence is required and the exams will be over the lectures. The topics will include:

- Sets and set operations, principle of induction, the real numbers, order, least upper bounds, the Archimedian property and completeness.
- Sequences of real numbers, convergence, subsequences, the Bolzanno-Weierstrass property and compactness.
- Topology of the real numbers: open and closed sets, the Heine-Borel theorem and compactness, connectedness.
- Continuous functions and their properties, uniform continuity, monotone functions.
- Differentiation, Rolle's theorem and the Mean Value Theorem, L'Hospital's rule.
- The Riemann integral, its properties, and the Fundamental Theorem of Calculus.

- Series, uniform and pointwise convergence, interchange of limit operations.

Make-up Policy:

Make-up exams are not normally given.

Important Dates:

Classes Begin	Monday, Jan. 8
Last Drop Date (no record)	Fri., Jan. 12
Test 1	**Mon., Feb. 5**
Last Drop Date (without penalty)	Fri., Feb. 16
Test 2	**Fri., March 1**
Spring Break	March 3-10
Test 3	**Fri., April 5**
Easter	Mon., April 8
Last Day of Classes	Mon., April 22
Reading Day	Tue., April 23
Cumulative **Final Exam**	**Wed., May 1** [2 PM]