Mathematics 221
Spring, 2003

Instructor: Michael Rogers
Office: 115 Seney Hall
Phone: x4-8419
E-mail: `mroge02@emory.edu` (or LearnLink "Michael Rogers")
Hours: **MWF 10:30–12:00, MW 3:30–5:00.**

Textbook:

H. Anton, *Elementary Linear Algebra*, 2000.

Course Content: Mathematics 221 is an introduction to linear algebra. This course will cover systems of linear equations, vectors, matrices, determinants, vectors spaces, linear transformations, eigenvalues and eigenvectors, inner product spaces, and applications. We will study these topics over three fields of scalars, real numbers, complex numbers, and the the finite field with two elements.

Course Goals: At the end of the course, the student should achieve the following goals: to know the basic definitions and theorems in the field of linear algebra as described in the course content; to solve basic problems in linear algebra using using matrices and matrix operations; to prove the fundamental relationships (theorems) between the concepts in the course.

Evaluation: Grades will be based on the following written work:

Final Examination	200 points
Tests (2 @ 100 pts)	200 points
Problem Sets (3 @100 pts)	300 points
Homework	100 points
Total	800 points

The plus/minus system will be used. A rough guide to grades: A: $\geq$ 720 pts. B: 640–720 pts. C: 560–640 pts. D: 480–560 pts. F: $<$ 480 pts.

Final Examination: A closed-book, cumulative final examination, worth 200 points, will be given at the time schedule by the registrar.

Tests: There are two closed-book, mid-term tests, each worth 100 points. These will be scheduled at times convenient to both the instructor and students.

Problem Sets: There are three problems sets. The problem sets are take-home and open-book, but they are to be worked one's own.

Homework: Homework will be assigned frequently, collected, read, and marked.

Use good style: Thoughts are expressed by sentences: just so in mathematics. **All work must be in complete sentences.**

Calculators: Calculators may be used to assist the student with any assignment or examination, provided that the solutions are carried out in exact, rather than approximate, form (e.g., π rather than 3.14, $10/\sqrt{3}$ but not 5.77). Solutions that lack steps will also lack points, that is, to get full credit complete solutions showing the appropriate techniques and reasoning must be given. Calculators may not be used to store information for use on closed-book tests or assignments.

The Honor Code of Oxford College applies to all work submitted for credit in this course. By placing your name on such work, you pledge that the work has been done in accordance with the given instructions and that you have witnessed no Honor Code violations in the conduct of the assignment.