MATHEMATICS 101
Spring, 2001

Textbook: Larson and Hostetler, *Precalculus*, Fifth Edition, Houghton Mifflin Company

Instructor: Dr. S. Rucker

Course Goals and Content: The purpose of this course is to prepare students for academic success in college calculus (Mathematics 111). The course also provides the mathematical skills needed for Chemistry 141.

The first half of the course concentrates on general techniques involved with algebraic simplification, solving algebraic equations and inequalities, and the study of functions and graphs. The second half concentrates on transcendental functions (trigonometric, inverse trigonometric, exponential and logarithmic) and includes, as well, some miscellaneous topics of importance in calculus. A calendar of topics is given at the end of this syllabus.

Evaluation: The following written work will provide the basis of the student's evaluation:

Major tests (4 @ 130 points)	520 points
Quizzes	220 points
Final Exam	260 points
Total	1000 points

In general, letter grades will be determined as follows:

A: 900 or more points
B: 800-899 points
C: 700-799 points
D: 600-699 points
F: fewer than 600 points

Credit and Advancement: **(1)** Math 101 is for elective credit only; that is, this course does not count toward satisfying the distributions requirements of Oxford College in mathematics. **(2)** A grade of "C" or higher is required for continuation to Math 111 (Calculus I). **(3)** Students who received credit for Math 100C and who subsequently pass Math 101 will receive a total of four semester-hours for the combination of Math 100C and Math 101 toward the 64 academic hours required for the A.A. degree and continuation to Emory College. Both courses, however, count in the student's total number of semester-hours and in computing the student's grade point average.

Tests: The four tests will be given outside the regular class time, as follows:

Test 1: Friday, February 9 at 2:15 p.m.
Test 2: Friday, March 2 at 2:15 p.m.
Test 3: Friday, April 6 at 2:15 p.m.
Test 4: Friday, April 27 at 2:15 p.m.

Calculators are not permitted on tests.

The First Test: The first test, given in two parts, covers some prerequisite algebra, which will be reviewed in the first few weeks. Part A is given at the very beginning of the course in order to give the student an idea of what is expected and how the student currently stands in relation to these expectations. Part B is given at the time scheduled above. If a student scores higher on Part B than on Part A, the difference between the two scores is added to the score on Part A. Thus through diligent work the student can make up a poor grade on Part A.

Test Attendance: Students are expected to take tests at the scheduled times. Any conflicts or problems will be handled on an individual basis by the instructor. If a student has an excuse deemed legitimate by the instructor, arrangements will be made for the student to take a test prior to the testing time.

Quizzes: One or two quizzes will be given each week. Announced and unannounced quizzes may be given. No make-up quizzes will be given. Students may drop the 3 lowest quiz scores or 3 missed quiz scores.

Homework: Assignments of exercises from the text and from handouts will be distributed at the beginning of each segment of the course. These assignments may be modified at the instructor's discretion. The most important factor contributing to success in Math 101 is the regular (done at least every other day) and successful (exercises correctly done with a degree of confidence) completion of the exercises. Daily practice is recommended as a remedy for lazy mental habits. The goal is for the student to be able to solve problems in good style, unaided by books, notes, tutors, or calculators. In general the student should expect to spend at least two hours on homework assignments for every hour of scheduled instruction.

Tutoring/Help Sessions: Student tutors will be available in the Gregory Room of the JRC. A schedule will be announced early in the semester. Help sessions will be scheduled as needed. Attendance is optional.

Class Attendance: The student is responsible for the course material discussed in class. Therefore, the student is expected to attend all classes. An inordinate number of absences will be handled in accordance with the College's policies.

THE HONOR CODE OF OXFORD COLLEGE APPLIES TO ALL WORK SUBMITTED FOR CREDIT IN THIS COURSE. WHEN YOU WRITE YOUR NAME ON SUCH WORK, YOU PLEDGE THE WORK TO BE YOURS AND YOURS ALONE.

Mathematics 101 - Calendar of Topics
Spring 2001

Wednesday, January 17	**Test 1, Part A**
Friday, January 19	Algebra, Exponents and Radicals [P.1, P.2]
Monday, January 22	Polynomials, Factoring, Alg. Fractions [P.3, P.4]
Wednesday, January 24	Review of Algebra
Friday, January 26	Equations [P.5]
Monday, January 29	Inequalities [P.6]
Wednesday, January 31	Common Errors, Review [P.7]
Friday, February 2	Graphical Representation, Review [P.8]
Monday, February 5	Graphs, Lines [1.1]
Wednesday, February 7	Review
Friday, February 9	**Test 1, Part B at 2:15 p.m.**
Monday, February 12	Lines, Secant Lines [1.2]
Wednesday, February 14	Functions and Their Graphs [1.3, 1.4]
Friday, February 16	Functions and Their Graphs [1.5, 1.6]
Monday, February 19	Inverse Functions [1.7]
Wednesday, February 21	Quadratic and Polynomial Functions [2.1, 2.2]
Friday, February 23	Conic Sections [10.2, 10.3]
Monday, February 26	Conic Sections [10.4], Review
Wednesday, February 28	Review
Friday, March 2	**Test 2 at 2:15 p.m.**
Monday, March 5	Radians, Degrees, and Trig. Functions [4.1, 4.2]
Wednesday, March 7	Right Triangle Trigonometry [4.3]
Friday, March 9	General Trigonometric Functions [4.4]
March 12-16	Spring recess
Monday, March 19	Graphs of Sine and Cosine [4.5]
Wednesday, March 21	Graphs of Other Trigonometric Functions [4.6]
Friday, March 23	Inverse Trigonometric Functions [4.7]
Monday, March 26	Fundamental Trigonometric Identities [5.1, 5.2]
Wednesday, March 28	Trigonometric Equations [5.3]
Friday, March 30	Trigonometric Formulas [5.4, 5.5]
Monday, April 2	Review
Wednesday, April 4	Review
Friday, April 6	**Test 3 at 2:15 p.m.**
Monday, April 9	Exponential Functions [3.1]
Wednesday, April 11	Logarithmic Functions and Properties [3.2, 3.3]
Friday, April 13	Exponential and Logarithmic Equations [3.4]
Monday, April 16	Systems of Equations [7.1]
Wednesday, April 18	Systems of Linear Equations [7.2, 7.3]
Friday, April 20	Sequences and Summation Notation [9.1, 9.2, 9.3]
Monday, April 23	Binomial Theorem [9.5]
Wednesday, April 25	Review
Friday, April 27	**Test 4 at 2:15 p.m.**
Monday, April 30	Review for Final Exam