

Math 2210 Syllabus (Fall 2003)

Topic: Integral Calculus
Call Number: 92-429

Room: Grad Studies 222
2nd Period: 9:05-9:55 AM

Instructor: Dr. Robert Rumely
Office: 437 Grad Studies
Home: 1081 Twin Lakes Road, Athens, Ga. 30606

E-mail: rr@math.uga.edu
(706) 542-2630
(706) 543-0443

Office Hours: 3rd Period (10:00-11:05) MWF; other times by appointment, gladly.

Text: Edwards and Penney, Calculus with Analytic Geometry (6th edition)

Purpose: The goal of this course is for you to become familiar with the Riemann integral. You will learn its meaning, its relation to the derivative, some of its applications, and how to compute it. The course also includes a brief introduction to differential equations.

Grades: There will be 4 hour-long exams during the course, several quizzes, and a 3-hour comprehensive final. The course will be targeted for a flat grading scale (A = 90+, B = 80+, etc). Your course average will be determined using the weights

4 Hour-long Exams	400 pts total
Quizzes	50 pts total
Final	200 pts

In-Class Exams: September 10, October 8, November 5, December 5
Final Exam: Friday, December 12, 8:00-11:00 AM

Attendance: Attendance will be taken starting Wednesday, August 27.

Students with more than 3 unexcused absences may be withdrawn from the class.

Academic Honesty: The course will operate in accordance with UGA's academic honesty policy (<http://www.uga.edu/ovpi>)

Homework: Homework will be assigned daily, and it is essential that you do all reading before the next class and attempt all problems. We will spend some class time going over questions on homework. However, homework will not directly enter into your grade.

Course Outline: The course will cover the following sections and topics:

<u>Section</u>	<u>Topics</u>	<u>Days</u>
5.3	Elementary Area Computations	1
5.4	Riemann Sums and the Integral	2
5.5	Evaluation of Integrals	2
5.6	Fundamental Theorem of Calculus	1
5.7	Computing integrals by substitutions	2
	Review	

TEST 1

5.8	Areas of Plane Regions	2
5.9	Trapezoidal & Simpson's Rules (without error bound)	1
6.1	Riemann Sum Approximations (Setting up integrals)	2
6.2	Volumes by Rotations	2
6.3	Volumes by Cylindrical Shells (x axis only)	1
6.5	Force and Work	2
	Review	
	TEST 2	
6.7	The natural logarithm as an integral	1
6.8	Inverse Trig Functions	1
7.2	Basic Integration Formulas (skip tables)	1
7.3	Integration by parts	2
7.4	Trig Integrals	2
7.5	Rational functions and Partial Fractions (basic cases)	1
7.6	Trig Substitutions	1
	Review	
	TEST 3	
8.1	Simple Differential Equations	2
8.3	Separable Differential Equations	2
8.4	Linear first order equations and applications	2
8.5	Population Models (logistic equation)	1
8.6	Linear second order equations	1
8.7	Damped Oscillations	1
	Review	
	TEST 4	
	Course Review	1

Expected Schedule:

<u>Week:</u>	<u>Monday</u>	<u>Wednesday</u>	<u>Friday</u>
08/18-08/22	5.3	5.4	5.4
08/25-08/29	5.5	5.5	5.6
09/01-09/05	(Labor Day)	5.7	5.7
09/08-09/12	Review	TEST 1	5.8
09/15-09/19	5.8	5.9	6.1
09/22-09/26	6.1	6.2	6.2
09/29-10/03	6.3	6.5	6.5
10/06-10/10	Review	TEST 2	6.7
10/13-10/17	6.8	7.2	7.3
10/20-10/24	7.3	7.4	7.4
10/27-10/31	7.5	5.6	(Fall Break)
11/03-11/07	Review	TEST 3	8.1
11/10-11/14	8.1	8.3	8.3
11/17-11/21	8.4	8.4	8.5
11/24-11/27	8.6	(Thanksgiving)	(Thanksgiving)
12/01-12/05	8.6	Review	TEST 4
12/08-12/12	Review		FINAL EXAM