Mathematics 111
Fall, 1992

Textbook: Varberg and Purcell, Calculus, 6th edition

Instructor: Dr. Evelyn C. Bailey

Content: Mathematics 111 is the first semester of calculus and includes a brief review of functions, limits of functions, the derivative with applications, introduction to integration with applications. Algebraic and trigonometric functions are used.

Major Tests: The four major tests will be given at 7:45 a.m. on the following mornings: September 17, October 15, November 3, and November 24. Mark your calendars now!

Quizzes: All quizzes are announced and "take home"; however, you must be present in class to receive your quiz. You must work each quiz at one sitting and use only authorized materials. In most instances you will need only a pencil and your own paper. Quizzes are due at class time on the class day following your receipt of them. Each quiz is worth 25 points and the best six quizzes will be used to help determine your grade.

Paper: Mathematicians who are historians cite the following as the five greatest mathematicians of all time: Archimedes, Karl Fredrick Gauss, Sir Isaac Newton, Leonard Euler and John von Neumann. After reading about these five mathematicians, prepare a typed paper of appropriate length with references giving reasons why these five mathematicians should be considered the greatest. You are to do your own research and writing. Due class time on October 9.

Computer Project: The computer laboratory in Pierce Hall has the following computer packages available: Derive (IBM), Mathematica (MacIntosh), Calculus Explorer (IBM). Using any of these programs as resources, prepare a pamphlet of computer print-outs showing 15 different non-piecewise defined functions that have distinctly different shapes. Identify each function and all important characteristics. You may get help from the computer aids on the use of the computer, but you may not share functions. Due class time on November 13.

HONOR CODE: THE HONOR CODE OF OXFORD COLLEGE APPLIES TO ALL WORK SUBMITTED FOR CREDIT IN THIS COURSE, AND ALL SUCH WORK WILL BE PLEDGED TO BE YOURS AND YOURS ALONE. THIS INCLUDES ALL "TAKE HOME" QUIZZES, PAPERS, AND COMPUTER PROJECTS.

Grading: The final course grade will be determined as follows:

Major tests (4 @ 100 points)	400 points
Quizzes (best 6 @ 25 points)	150 points
Paper	100 points
Computer Project	150 points
Final Exam	200 points
	1000 points

In general:
- A: 900 points and above
- B: 800-899 points
- C: 700-799 points
- D: 600-699 points
- F: below 600 points

Homework: Assignments from your text will be given at the beginning of each testing period. These assignments will not be collected but are for your benefit. Additional problems and information handouts will be provided as needed.

Tutoring: Student tutors will be available from 6:00 to 8:00, Monday through Thursday in room 201 of Language Hall, beginning August 31 and ending December 4.

Help Sessions/Office Hours: A few help sessions will be scheduled throughout the semester. These are optional. In general, office hours will be ~~9:30-11:00~~ 11:30-12:30 Monday, Wednesday, Friday; 10:00-11:00 Tuesday, Thursday; 3:30-5:00 Monday afternoon; others by appointment.

Attendance: You are expected to attend all classes since you are responsible for work covered in class. An inordinate amount of absences will be handled in accordance with school policies.

YOU ARE EXPECTED TO TAKE TESTS AT THE SCHEDULED TIMES. ANY CONFLICTS OR PROBLEMS WILL BE HANDLED ON AN INDIVIDUAL BASIS. IF THE EXCUSE IS CONSIDERED LEGITIMATE BY YOUR INSTRUCTOR, ARRANGEMENTS WILL BE MADE TO TAKE A TEST PRIOR TO THE TESTING TIME. EMERGENCIES WILL BE HANDLED ON AN INDIVIDUAL BASIS.

Summary of Important Dates:

September 7	Labor Day
September 17	Test 1
October 9	Paper
October 12, 13	Midsemester break
October 15	Test 2
November 3	Test 3
November 13	Computer Project
November 24	Test 4
November 25-27	Thanksgiving Break
December 4	Last class day

Topics by Dates:

Monday, August 24	Functions (2.1, 2.2, 2.3)
Wednesday, August 26	Limits (2.4, 2.5)
Friday, August 28	Continuity (2.7)
Monday, August 31	Review introductory concepts
Wednesday, September 2	Derivative (3.1, 3.2)
Friday, September 4	Rules of Differentiation (3.3)
Monday, September 7	Labor Day holiday
Wednesday, September 9	Derivatives of sine and cosine (3.4)
Friday, September 11	Chain Rule (3.5)
Monday, September 14	Leibniz Notation (3.6)
Wednesday, September 16	Review
Thursday, September 17	Test 1
Friday, September 18	Higher Order Derivatives and Implicit Differentiation (3.7, 3.8
Monday, September 21	Related Rates (3.9)
Wednesday, September 23	
Friday, September 25	Maxima/Minima (4.1)
Monday, September 28	
Wednesday, September 30	Max/Min/Concavity (4.2, 4.3)
Friday, October 2	More Maxima/Minima (4.4)
Monday, October 5	Economics (4.5)
Wednesday, October 7	Limits at Infinity, Infinite Limits (4.6)
Friday, October 9	Review, Paper Due
Monday, October 12	Midsemester Break
Wednesday, October 14	Review
Thursday, October 15	Test 2

Friday, October 16	
Monday, October 19	Graphing (4.7)
Wednesday, October 21	
Friday, October 23	Mean Value Theorem (4.8) Antiderivatives (5.1)
Monday, October 26	Introduction to Differential
Wednesday, October 28	Equations (5.2)
Friday, October 30	Sums and Sigma Notation (5.3)
Monday, November 2	Review
Tuesday, November 3	Test 3
Wednesday, November 4	Area, Definite Integral,
Friday, November 6	Fundamental Theorem of Calculus (5.4, 5.5, 5.6)
Monday, November 9	Substitution Method of
Wednesday, November 11	Integration (5.8)
Friday, November 13	Area (6.1); Computer Project
Monday, November 16	Volume Disk (6.2)
Wednesday, November 18	Volume Shell (6.3)
Friday, November 20	Review
Monday, November 23	
Tuesday, November 24	Test 4
Wednesday, November 25	Thanksgiving Break
Friday, November 27	
Monday, November 30	Work (6.5)
Wednesday, December 2	Review for final
Friday, December 4	