Mathematics 112
Spring, 1993

Textbook: Varbergand Purcell, Calculus, 6th edition

Instructors: Dr. Evelyn C. Bailey, office in Seney 115D

Office Hours: Monday, Wednesday, Friday, 12:00-1:30; Tuesday, Thursday, 11:00-1:00; Tuesday 2:30-4:00.

Content: Mathematics 112 is the second semester of calculus and includes derivatives involving inverse trigonometric, logarithmic, and exponential functions; methods of integration; L'Hôspital's Rule, and improper integrals; polar coordinates; sequences and infinite series; and power series. Specific topics by day is attached.

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

Major tests (5 @ 100 points)	500 points
Quizzes (best 8 @ 25 points)	200 points
Computer Project	100 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

There may be occasion to use the grades of B+ or C-. No other grade categories will be used.

Major tests: Four of five major tests will be given at 7:45 a.m. on the following mornings: February 2, February 23, April 8, April 20. Test 3 will be given out on Wednesday, March 17 and will be due class time on March 19. 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 the reference sheet provided for this course. Quizzes are due at class time on the class day following your receipt of them. Each quiz is worth 25 points and the best eight quizzes will be used to help determine your grade.

Computer Project: Using Derive in the computer laboratory in Pierce Hall, you are to prepare ten distinctly different graphs, giving all important aspects. The ten graphs should include 6 graphs from logarithms, exponents, and inverse trigonometry (Test 1) and 4 from Polar Coordinates (Test 3). Due Wednesday, March 24.

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 the tests and quizzes.

Homework: Homework assignments will be provided at the beginning of each testing segment. The specific topics included in this course are attached. Assignments will not be collected but are for your benefit. It is important that you successfully complete a majority of the problems assigned.

Tutoring: Student tutors will be available from 6:00 to 8:00, Monday through Thursday in room 201 of Language Hall. In addition, student tutors are available from 3:00 to 5:00, Monday through Thursday in Seney 115.

Help Sessions: A few help sessions will be scheduled throughout the semester. These are optional. Most will be held at 8:30 on Tuesday or Thursday mornings so as not to interfer with science laboratories and classes.

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.

Specific Topics

Wednesday, January 13 Friday, January 15	Sections 7.1, 7.2 Logarithmic Function and review integration
Monday, January 18	MLK Holiday
Wednesday, January 20 Friday, January 22	Sections 7.3, 7.4, 7.5 Exponential Function, Growth and Decay and review differentiation
Monday, January 25 Wednesday, January 27	Sections 7.6, 7.7 Inverse Trigonometric Function
Friday, January 29	Section 15.2 Partial Derivatives
Monday, February 1	Review

Test 1 on February 2 [Transendental Functions and review differentiation]

Wednesday, February 3 Friday, February 5	Section 8.1, 8.2 Substitution method of integration
Monday, February 8 Wednesday, February 10	Section 8.3 Trigonometric Substitution of Integration
Friday, February 12 Monday, February 15	Section 8.4 Integration by Parts
Wednesday, February 17 Friday, February 19	Section 8.5 Partial Fractions
Monday, February 22	Review

Test 2 on February 23 [Methods of Integration]

Wednesday, February 24	Sections 9.1, 9.2 L'Hôspital's Rule and Indeterminate Forms
Friday, February 26 Monday, March 1	Sections 9.3, 9.4 Improper Integrals

Wednesday, March 3 Friday, March 5	Sections 12.6, 12.7, 12.8 Polar Coordinates

Monday, March 8 - Friday, March 12 is spring break

Monday, March 15 Wednesday, March 17	Review

"Take home" test 3 on Wednesday, March 17, due Friday, March 19 [Improper Integrals, Polar Coordinates and integrations]

Friday, March 19	Section 11.1 Infinite Sequences
Monday, March 22 Wednesday, March 24	Section 11.2 Infinite Series
Friday, March 26 Monday, March 29	Sections 11.3, 11.4 Positive term series
Wednesday, March 31 Friday, April 2	Section 11.5 Alternating Series, Absolute Convergence
Monday, April 5 Wednesday, April 7	Review

Test 4 on Thursday, April 8 [Infinite Series and review limits]

Friday, April 9 Monday, April 12	Section 11.6, 11.7 Power Series
Wednesday, April 14 Friday, April 16	Section 11.8 Taylor and Maclaurin Series
Monday, April 19	Review

Test 5 on Tuesday, April 20 [Power Series and review Infinite Series]

Wednesday, April 21	Section 18.1 Linear Differential Equations and review integration
Friday, April 23 Monday, April 25	Review