Mathematics 112
Fall, 1992

Textbook: Zill, Calculus, 2nd Edition

Instructor: William P. McKibben
Office: Seney 303
Phone: 4-8333

Office Hours: Regular (generally in office - no appointments):
Mondays - 2:30 to 4:30 p.m.
Wednesdays - 2:00 to 3:00 p.m.
Tuesdays & Thursdays - 2:00 to 3:30 p.m.

Other Possible Hours (by appointment):
Mondays & Wednesdays: 10:00 to 11:00 a.m.
Tuesdays: 8:30 to 9:15 a.m. & 3:30 to 4:30 p.m.
Thurdsays: 8:30 to 9:15 a.m. &12:30 to 2:00 p.m.
Fridays: 10:00 to 11:00 a.m. & 2:30 to 4:00 p.m.

Course Content: Math 112 is the second semester of calculus and is a continuation of Math 111. New topics are derivatives of inverse trigonometric functions and logarithmic and exponential functions; methods of integration; polar coordinates; L'Hospital's Rule; improper integrals; infinite sequences and series; power series; and solutions of elementary first-order differential equations. A list, by days, of topics to be discussed is given on the attached calendar.

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

Major tests (4 @ 100 points)	400 points
Quizzes (best 14 @ 25 points)	350 points
Final Exam	250 points
	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

Major Tests: The four major tests will be given as follows:

Test 1: Thursday, September 17 at 7:45 a.m.
Test 2: Tuesday, October 6 at 7:45 a.m.
Test 3: Friday, November 6 at 2:15 p.m.
Test 4: Tuesday, November 24 at 7:45 a.m.

Students are expected to take tests at the scheduled times. Any conflicts or problems will be handled on an individual basis. For reasons deemed legitimate by your professor arrangements may be made for a student to take at test prior to the testing time. Emergencies will be handled on an individual basis.

Quizzes: All quizzes are announced and "take home." A student must be present in class to receive a quiz. Quizzes must be done during one sitting and use only the reference sheet provided for the course. Quizzes are due at class time on the class day following. Each quiz will be graded on the basis of 25 points.

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 that and only that of the individual student submitting the work.

Homework: Homework assignments are for the student's benefit and will not be collected. It is important, however, that the student complete most of the problems assigned.

Tutoring: Beginning August 31, student tutors will be available from 6:00 p.m. to 8:00 p.m., Monday through Thursday, in Room 201 of Language Hall.

Help Sessions: Help sessions will be scheduled at appropriate times during the semester.

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.

Mathematics 112
Fall 1992
Calendar of Topics

Mon., Aug. 24 - Review Functions, Derivatives, Integrals; Inverse Functions [7.1]

Wed., Aug. 26 - Inverse Trigonometric Functions [7.2]

Fri., Aug. 28 - Derivatives and Integrals Involving Inverse Trigonometric Functions [7.3]

Mon., Aug. 31 - The Natural Logarithmic Function [8.1]

Wed., Sept. 2 - The Exponential Function [8.2]

Fri., Sept. 4 - Review Applications of Integration; Integrals Involving Logarithmic and Exponential Functions [8.3]

Mon., Sept. 7 - Labor Day (no class meeting)

Wed., Sept. 9 - Logarithmic Differentiation [8.6]

Fri., Sept. 11 - Introduction to Differential Equations; Separable Differential Equations and Applications [8.7]

Mon., Sept. 14 - Review

Wed., Sept. 16 - Review

Thur., Sept. 17 - TEST 1 at 7:45 a.m.

Fri., Sept. 18 - Techniques of Integration: Substitutions [9.1]

Mon., Sept. 21 - Techniques of Integration: Integration by Parts [9.2]

Wed., Sept. 23 - Techniques of Integration: Trigonometric Integrals [9.3]

Fri., Sept. 25 - Techniques of Integration: Trigonometric Substitutions [9.4]

Mon., Sept. 28- Techniques of Integration: Partial Fractions [9.5]

Wed., Sept. 30- Homogeneous Differential Equations [19.2]; Review

Fri., Oct. 2 - Review

Mon., Oct. 5 - Review

Tues., Oct. 6 - TEST 2 at 7:45 a.m.

Wed., Oct. 7 - Polar Coordinates [13.3]

Fri., Oct. 9 - Graphs of Polar Equations [13.4]

Mon., Oct. 12 - Fall Break (no class)

Wed., Oct. 14 - Area with Polar Coordinates [13.5]

Fri., Oct. 16 - L'Hospital's Rule

Mon., Oct. 19 - L'Hospital's Rule; Improper Integrals [10.2]

Wed., Oct. 21 - Improper Integrals; Review

Fri., Oct. 23 - Infinite Sequences [11.1 & 11.2]

Mon., Oct. 26 - Introduction to Infinite Series: Convergence, Nth-Term Test; Geometric Series; Telescoping Series [11.3]

Wed., Oct. 28 -Tests of Convergence for Series of Positive Terms: Integral Test, Comparison Tests, Limit Comparison Test [11.4.1]

Fri., Oct. 30 - Tests of Convergence for Series of Positive Terms: Ratio Test and Root Test [11.4.2]

Mon., Nov. 2 - Tests of Convergence for Series with Infinitely Many Negative Terms: Alternating Series Test and Absolute Convergence [11.5]

Wed., Nov. 4 - Review

Fri., Nov. 6 - Review
TEST 3 at 2:15 p.m.

Mon., Nov. 9 - Linear First-Order Differential Equations [19.3]

Wed., Nov. 11- Power Series [11.6]

Fri., Nov. 13 - Power Series: Operations [11.7+]

Mon., Nov. 16- Power Series (continued)

Wed., Nov. 18- Power Series: Taylor Series (MacLaurin Series c=0) [11.8]

Fri., Nov. 20 - Review

Mon., Nov. 23 - Review

Tues., Nov. 24 - TEST 4 at 7:45

Wed., Nov. 25- Thanksgiving Travel Day (no class)

Fri., Nov. 27 - Thanksgiving Break (no class)

Mon., Nov. 30- Review Differential Equations and Integration

Wed., Dec. 2 - Review of Course

Fri., Dec. 4 - Review of Course-Last Class Day

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Thursday, December 10 - FINAL EXAMINATION
at 9:00 a.m.