Math 170 – Applied Calculus – Spring 2013

SYLLABUS

Professor: Eric Lehtonen

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Office: 2763

Office hours: MW 5:30-6:30

TR 2:00-3:00

Calculators: The TI-30.
Text: Calculus with Applications: Lial, 9th ed.

Grading: There will be 4 exams and one final exam. Please note the dates in the class schedule below.

Tests: 60%

Final   30%

Homework 10%

Homework: Homework will be assigned daily.

Attendance: Students not attending the first day of class will be automatically dropped. Students missing more than one week worth of classes, dating from when the student first enters the class will be dropped.

Any student with a documented disability who may need educational accommodation should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible.

COURSE/CATALOG DESCRIPTION:

To prepare for courses for which calculus is recommended and/or required. To study the ideas and concepts of advanced mathematics as applied to a modern computerized society. Topics covered include pre-calculus concepts, functions, differentiation, integration, differential equations, and functions of several variables. (Formerly MATH 124.).

MEASURABLE COURSE OBJECTIVES AND MINIMUM STANDARDS FOR GRADE OF "C":

Upon satisfactory completion of the course, students will be able to:

1. Demonstrate an understanding and comprehension of basic ideas and elementary concepts of algebra.
   2. Demonstrate an understanding of functions and intuitive understanding of limits.
   3. Demonstrate an understanding and a working knowledge of the derivative.
   4. Demonstrate proficiency in problem solving when dealing with applications of differentiation.
   5. Distinguish the various approaches when solving integration problems.
   6. Demonstrate the ability to solve problems in a step-by-step manner when dealing with application of integration.
   7. Demonstrate an understanding of logarithmic and exponential functions, and differential equations, and their use in applications.
   8. Analyze functions of several variables..

STUDENT LEARNING OUTCOMES:

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Demonstrate an understanding of the relationship between slope, average rate of change, instantaneous rate of change, and the derivative. (ILO2)
2. Calculate limits, derivatives and integrals for polynomial, rational, exponential and logarithmic functions (ILO2)
3. Use differentiation and integration techniques to solve problems from business, economics, social science and life science. (ILO1, ILO2, ILO4)
4. Use the derivative to analyze and aid in graphing functions as well as solving optimization and related rate problems. (ILO1, ILO2)

Lecture And Test Schedule

Week 1
Jan 15   Introduction,1.1
Jan 17   1.2
Week 2
Jan 22   1.3
Jan 24   2.1,2.2

Week 3
Jan 29   2.3,2.4
Jan 31   2.5,2.6

Week 4
Feb 5   3.1,Review
Feb 7   **TEST 1**

Week 5
Feb 11   3.2,3.3
Feb 13   3.4,3.5

Week 6
Feb 18   4.1,4.2
Feb 20   4.3,4.4

Week 7
Feb 25   4.5,5.1
Feb 27   **TEST 2**

Week 8
Mar 4   5.2,5.3
Mar 6   5.4,6.1

Week 9
Mar 11   6.2,6.3
Mar 13   6.4,6.5

Week 10
Mar 18 6.6.
Mar 20   7.1,Review

Week 11
Mar 25   **TEST 3**
Mar 27   7.2,7.3

Week 12
Apr 1   **Spring Break**
Apr 3   **Spring break**

Week 13
Apr 8   7.4
Apr 10   7.5,8.1

Week 14
Apr 15   8.2,8.4
Apr 17   9.1

Week 15
Apr 22   9.2
Apr 24   9.3

Week 16
Apr 29   Review
May 1   **Test 4**

Week 17
May 6   Review
May 8   **Final Exam**

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