Course Outline

Department of Mathematics and Statistics

Minnesota State University, Mankato

Math 181 Intuitive Calculus (3 semester hours)

Course Description:

This course presents the concepts of the differential and integral calculus from an intuitive (non-theoretical) point of view. The course emphasis is on the applications of the calculus. Credit for both MATH 181 and MATH 121 is not allowed.

Prerequisites: Satisfy Placement Table in this section, or Math 112 with “C” (2.0) or better.

Learning Outcomes:

Students will be able to
1. Become adept at working with derivatives and integrals
2. Apply derivatives and integrals to solve real life problems
3. Gain appreciation of the many applications of calculus
4. Develop problem solving and logical reasoning skills

Content Outline:

1. Functions
2. Limits
3. The derivative and its application to problems business/economic
4. The integral and its application problems of business/economics
5. Exponential and logarithm functions
6. Functions of several variables

Textbook/Related Readings/Materials:

Benice, Brief Calculus and its Applications
Haeussler and Paul, Introductory Mathematical Analysis for Students of Business and Economics.
Hoffman and Bradley, Calculus for Business, Economics, and the Social and Life Sciences
(6th Edition)