Mathematics 1910
Calculus I
(Course Syllabus when last taught)

Prerequisites: MATH 1730 or MATH 1710 and 1720 (each with a grade of C or better) or equivalent

Instructor: Dr. Mary B. Martin
Email: mmartin@mtsu.edu • Office: KOM 203F • Phone: 904-8236


Calculator: A TI-83 or TI-82 calculator is required. A TI-83 is preferred.

Purpose: This is a course on differential calculus with an introduction to integral calculus. It is the first in a sequence of three courses designed to provide the skills and concepts necessary to either continue study in mathematics or physics, computer science, and engineering. This course is a part of the core requirements for any mathematics major.

Objectives: Upon completion of this course, students will have:

- The ability to interpret graphs and extract information from them.
- An understanding of the concept of the derivative and the ability to compute derivatives.
- The ability to apply the derivative to the solution of problems in business and science.
- An understanding of the concept of the definite integral, its mathematical model as the limit of a Riemann sum, and the Fundamental Theorem of Calculus.
- Some knowledge of the advantages and limitations of current technology applied to calculus
- Develop the ability to read English descriptions of mathematical situations and devise the correct mathematical formulas and processes.
- Develop the ability to read mathematics and analyze the related procedures.

Topical Outline: This course covers Chapters 1 – 6 of the text. In particular the course covers:
A Library of Functions (Review)

1. The Derivative
2. The Definite Integral
3. Shortcuts to Differentiation
4. Using the Derivative
5. Constructing Derivatives
6. We will also be covering portions of Chapter 7.