Calculus 1

Course Description: A study of functions, limits, continuity, differentiation, applications of differentiation, and an introduction to integration.

Course Objectives:

- 1. Graph Functions
    - a. Calculate Domain/Range
    - b. Find inverses of functions
- Calculate limits and determine if functions are continuous
- Calculate derivatives using
    - a. The definition
    - b. Product Rule/Quotient Rule
    - c. Chain Rule
    - d. Implicit Differentiation
    - e. Logarithmic Differentiation
- Understand parametric curves and their use in calculus
- Use derivatives to solve applied problems involving velocity and acceleration, related rates, optimization, etc.
- Use the properties of derivatives to sketch graphs
- Compute the area under a curve using
    - a. Rectangles
    - b. Definite integrals
- Integrate functions using substitution