
CREDITS: 5

COURSE DESCRIPTION: Application of derivative and definite integral; conic sections and other algebraic curves; calculus for rational, algebraic, circular, exponential and trigonometric functions; formal integration. Prerequisite: MATH-151 Calculus with Precalculus B, MATH-153 Calculus I, or MATH-156 Calculus & Analytic Geometry I

TEXTBOOK: **Calculus: Early Transcendentals, Single Variable**, 2nd Ed., by Rogawski (adopted Fall 2013)

Previous:
- **Single Variable Calculus - Early Transcendentals**, 6th Ed., by Stewart (adopted F07)
- **Calculus Early Transcendentals**, 5th Ed., by Stewart (adopted F03)
- **Calculus Early Transcendentals**, 4th Ed., by Stewart (adopted F00)
- **Calculus For Graphical, Numerical & Symbolic Points of View, Vol. II**, by Ostebee (adopted S97)
- **Calculus and Analytic Geometry**, by Thomas

COURSE OBJECTIVES:
The student shall be able to:
1. Comprehend the calculus and analytic geometry in its role in the development of mathematics.
2. Comprehend the logical development of calculus and analytic geometry.
3. Apply calculus and analytic geometry to the technical fields.
4. Analyze problems and use analysis to help solve these problems.
5. Have knowledge of integration and the relationship of integration to differentiations.
6. Have knowledge of analytic geometry and how it relates to calculus.

COURSE OUTLINE:
1. Techniques of Integration
2. Numerical Integration
3. Applications of Integration
4. Indeterminate Forms and Improper Integrals
5. Parametric Equations
6. Intro to Differential Equations
7. Sequences, Series, and Power Series