

I. COURSE INFORMATION

- A. Mathematics 125 Calculus with Analytic Geometry II
- B. 5 credit hours
- C. Briggs, Cochran, Gillett and Schulz. *Calculus for Scientists and Engineers: Early Transcendentals*. 3rd ed. New Jersey: Pearson, 2018
- D. Prerequisites: MAT 123 Calculus with Analytic Geometry I with a C grade or above

II. COURSE DESCRIPTION

This course studies integration of algebraic, exponential, and trigonometric functions including application of differentiation and integration. This course also studies infinite sequences and series, as well as, polar coordinates and conic sections.

III. LEARNING OUTCOMES

- A. Use and apply integration techniques
- B. Use various types of integration techniques
- C. Graph conic sections
- D. Graph equations in polar coordinates
- E. Compute areas in polar coordinates
- F. Use various tests to determine the convergence or divergence of infinite series

IV. MAJOR CONTENT AREAS

- A. Integration techniques
- B. Polar coordinate systems
- C. Sequence and series

V. ASSIGNMENTS (may include but are not limited to)

- A. Reading assignments
- B. Homework
- C. Writing assignments
- D. Quizzes and exams

VI. EVALUATION METHODS (may include but are not limited to)

- A. Attendance and participation
- B. Assignments
- C. Quizzes and exams
- D. Comprehensive final