

Writing Student Learning Outcomes

Program / Course / Lesson Math 252

Prerequisites Math 251

Program / Course / Lesson Goal:

This course is the second class in a three course calculus sequence. It includes integration, the fundamental theorem of calculus, sequences and series, and differential equations.

Course Objectives:

- **Examine the antiderivative of functions**
- **Define and interpret the integral of a function**
- **Recognize and restate the Fundamental Theorem of Calculus**
- **Sketch the graphical representation of the integral**
- **Derive, memorize and use integrals rules and formulas**
- **Find areas, volumes, and arc length**
- **Solve applied integral word problems**
- **Use numerical methods to find definite integrals**
- **Examine the convergence of sequences and series**
- **Find the power and Taylor series of functions**
- **Examine differential equations, slope fields and Euler's method**
- **Derive and use the basic rules for solving ordinary differential equations**

In the boxes below list a few knowledge, skills, attitudes or that you would like your students to know, do, or have when they leave your class.

<p>Knowledge and concepts they will have as a result of this program/course/lesson.</p>	<ul style="list-style-type: none"> • Use functions to interpret the integral from a numerical, graphical, and symbolic point of view. • State the Fundamental Theorem of Calculus.
<p>Skills or performance ability as a result of this program/course/lesson</p>	<ul style="list-style-type: none"> • Compute integrals numerically, graphically, and symbolically. • Apply integrals to applications in physics and economic problems.
<p>Attitudes or values developed as a result of this program/course/lesson</p>	<ul style="list-style-type: none"> • Gain confidence in using the derivative and integral of a functions.