MA 122 Calculus for Business and Life Sciences II

Course Description:

Integral calculus with application in engineering, business, economics, and the management, life, and social sciences.

Credit Hours: 3

Course Objectives:

- Business, life science, and engineering technology students will learn applied concepts of integral calculus
- Students will become fluent in concepts of exponential and logarithmic derivative functions
- Students will be able to conceptualize and explain anti differentiation
- Students will practice and apply integration by parts and substitution
- Students will apply integral mathematics to real world applications.

Course Content:

The Exponential and Logarithmic Functions
The Exponential Function
The Logarithmic Function
The Derivatives of the Exponential and Logarithmic Functions
Applications of the Exponential Function
Basics of Trigonometry
Right Triangle Trigonometry
The Unit Circle
Pythagorean and Symmetric Identities
The Sine, Cosine, and Tangent functions and their Inverses
The Derivatives of the Sine, Cosine, and Tangent Functions
Functions of Two or More Variables
Partial Derivatives and Maxima and Minima
Applications
Anti-differentiation
Antiderivatives
Integration by Substitution
Integration by Parts
Tables of Integral
A Brief Table of Integral The
Definite Integral
The Area Under a Curve Properties
of the Definite Integral Some
Applications of Integration The
Riemann Integral
Application of the Riemann Integral to Business
Improper Integral
Number Integration Techniques
Other topics as time permits

Evaluation: There are at least three 50 minute examination during the semester plus a final exam.

ACCOMMODATION STATEMENT:

In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the University offers reasonable accommodations to students with eligible documented learning, physical and/or

psychological disabilities. Under Title II of the Americans with Disabilities Act (ADA) of 1990 and Section 504 of the