

Master Syllabus

MAT 2160 - Calculus for Business & Economics

Division: Science, Mathematics and Engineering

Department: Mathematics

Credit Hour Total: 5.0

Lecture Hrs: 5.0

Prerequisite(s): MAT 1460

Other Prerequisite(s): AND Other with a grade of C or better or satisfactory score on math placement test

Date Revised: November 2015

Course Description:

Functions and graphs, limits, continuity, derivatives, techniques of differentiation, applied problems in business and economics, exponential and logarithmic functions, techniques of integration, applications of integration, functions of two variables, partial derivatives and applications. Traditional testing (proctored or in Testing Center) is used in all online sections.

General Education Outcomes:

- ▣ Critical Thinking/Problem Solving Competency

Course Outcomes:

Limits, Derivatives and Integrals

Compute the value of a limit and a definite integral, find the derivative of functions, and find indefinite integrals.

Assessment Method: Locally developed exams

Performance Criteria:

Pass locally developed exams with a score of 70% or better.

Graphs of Functions

Use calculus to graph a variety of functions such as linear, polynomial, exponential and logarithmic functions.

Assessment Method: Locally developed exams

Performance Criteria:

Pass locally developed exams with a score of 70% or better.

Applications of Calculus

Solve application problems involving rates of change, optimization, related rates; exponential and logarithmic functions

Assessment Method: Locally developed exams

Performance Criteria:

Pass locally developed exams with a score of 70% or better.

Outline:

Evaluate limits and assess continuity of a function
Compute derivatives using a variety of methods
Solve applications problems involving derivatives
Graph functions using applications of the derivative
Solve application problems involving exponential/logarithmic functions
Determine the indefinite integral of a function
Evaluate the definite integral of a function