

Effective Date: Summer 2004-2005

Course Description

Prerequisite: MATH 1552. Vectors and geometry in space, functions of several variables, partial derivatives, multiple integrals, and applications. (A grade of “C” or better is required to advance to any higher numbered mathematics course.)

Course Objectives

Students will:

1. Understand the fundamentals of multidimensional calculus as presented in the topical outline.
2. Develop critical thinking and problem solving skills.

Procedures to Evaluate these Objectives

1. In-class problems after concept presentation
2. In-class exams
3. Cumulative final exam

Use of Results of Evaluation to Improve the Course

1. Student responses to in-class problems will be used to immediately help clarify any misunderstandings and to later adjust the appropriate course material.
2. All exams will be graded and examined to determine areas of teaching which could use improvement.
3. All evaluation methods will be used to determine the efficacy of the material presentation.

Detailed Topical Outline

The material that is going to be covered has already been noted in detail under Course Objectives. The main topical themes are as follows:

1. Vectors and Geometry in Space
2. Vector-Valued Functions
3. Functions of Several Variables
4. Multiple Integration
5. Vector Analysis

