

MA 213: CALCULUS 3— SYLLABUS SPRING 2004

Textbook: *Calculus*, third edition by James Stewart

This course is intended to be an introduction to the calculus of several real variables. It is in this context that the laws of nature find their natural expression. Applications abound in physics, engineering and geometry, as well as in many other areas of current interest. The principal goal, therefore, is for the student to develop an understanding and facility with the language in which these laws and applications are most commonly expressed; that is, with the ideas and methods of the calculus of : (1) vector valued functions of one real variable, and (2) real valued functions of a vector.

Course Content:

Chapters 11: Three-Dimensional Analytic Geometry and Vectors.

Chapter 12: Partial Derivatives.

Chapter 13: Multiple Integrals.

Chapter 14: Vector Calculus (Sections 14.1-14.4).

Tests:

There will be three one hour, in class, middle term exams and a final exam in the course.