

M408M - Multivariable Calculus (#56705, #56710, #56715)

<http://www.ma.utexas.edu/users/bjorland/M408Ms09/>

University of Texas, Austin, Spring 2009

Lecture: ETC 2.108, 10:00-11:00am MWF

Text Book: Stewart, *Calculus*, 6E Edition.

Instructor: **Clayton Bjorland** (bjorland@math.utexas.edu)

Office Hours: RLM 10.144, 11:00-1:00 Mon, 2:00-3:00 Wed, and by appointment.

TA: **Allison Moore** (moorea8@math.utexas.edu)

Office Hours: RLM 12.146, 2:00-4:00 Tues; Kinsolving, 8:00-9:00pm.

Prerequisite and degree relevance

Mathematics 408L or the equivalent with a grade of at least C.

Only one of the following may be counted: Mathematics 403L, 408D, 408M (or 308M).

Calculus is offered in two equivalent sequences: a two-semester sequence, M 408C/408D, which is recommended only for students who score at least 600 on the mathematics Level I or IC Test, and a three-semester sequence, M 408K/408L/408M. For some degrees, the two-semester sequence M 408K/408L satisfies the calculus requirement. This sequence is also a valid prerequisite for some upper-division mathematics courses, including M325K, 427K, 340L, and 362K. M408C and M408D (or the equivalent sequence M408K, M408L, M408M) are required for mathematics majors, and mathematics majors are required to make grades of C or better in these courses.

Course Description

M408M is one of two first-year calculus courses. It is directed at students in the natural and social sciences and at engineering students. In comparison with M408D, it covers fewer chapters of the text. However, some material is covered in greater depth, and extra time is devoted the development of skills in algebra and problem solving. This is not a course in the theory of calculus.

Introduction to the theory and applications of differential and integral calculus of functions of several variables. Includes parametric equations, polar coordinates, vectors, vector calculus, functions of several variables, partial derivatives, gradients, and multiple integrals.

Course Outline

The course will cover chapters 11 through 16 in the Stewart text. There will be three midterm exams and a final exam, each midterm exam will be worth 18% of the students final grade and the final will be worth 36% of the students final grade. The midterm exams will be cumulative but will focus on new material, the final will be comprehensive. Homework will be assigned weekly on Friday and will be due the following Friday. The total homework scores will count toward 10% of the students final grade.

Exam Dates

Midterm 1 (18%) - February 13th, 2009

Midterm 2 (18%) - March 13th, 2009

Midterm 3 (18%) - April 24th, 2009

Final (36%) - May 14th, 2009. (2:00-5:00pm)

The University of Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471- 6259, 471-6441 TTY.