

This course is taught to a wide variety of students, including most of those majoring in chemistry, biology, biochemistry, life science, physical education, and geology. The course is also suitable for students concentrating in economics, other social sciences, or humanities. There are two large lecture sections. Additional help is provided by means of homework overview sessions, help sessions, office hours, and an electronic bulletin board.

Students majoring in mathematics should take MATH-120. Students doing a concentration in economics may take MATH-126. Students who have no previous experience with Calculus, may decide to take MATH-006* before taking MATH-121. A self-administered diagnostic test is available for students who lack background in Calculus and feel unsure about how to proceed. Enquire at the department office (Jeffery Hall, Room 310).

Because most students in this course are taking it as support for another subject, emphasis is placed as much on word problems and modelling as on mathematical computation. It is intended that students should learn to recognize and choose the mathematical technique or formula appropriate to a given simple scientific or other situation.

Textbook: *Calculus (Single Variable and Multivariable)*, 3rd Edition
by Hughes-Hallett (Wiley)

Prerequisite: OAC Calculus *or* MATH-006* *or* equivalent.

Instructors: A. Ableson, I. Dimitrov, G. Wild (Fall)
A. Ableson, B. Coolen, S. Cooper (Winter)

Coordinators: A. Ableson, M.-L. Thomson

Evaluation:	Homework	15%
	Technical Tests	25%
	December Examination	30%
	Final Examination	30%

Outline:

Functions, graphs, interpreting graphs

The Derivative

The Definite Integral (Fundamental Theorem of Calculus)

Differentiation

Applications of integration

Differential Equations

Taylor Polynomials

Functions of Several Variables

Differentiation functions of several variables

Optimization (including Lagrange Multipliers)