

(—; 3-0-0)

Introduction to Calculus

MATH-006*

This course is equivalent to the OAC calculus course and prepares students for MATH-121 or MATH-126. It is intended for students who have never taken a calculus course or for those who have been away from mathematics for some time. The class meets once each week for three hours on Wednesday evenings.

Textbook: *PreCalculus: Mathematics for Calculus*, 4th Edition
by Stewart, Redlin and Watson (Brooks/Cole)

Supplementary Notes: Handouts on specific aspects of differentiation and integration will be provided during the course.

Prerequisite: Ontario Grade 11 Mathematics *or* equivalent *and* permission of the Department.

Instructor: A. Gardner

Evaluation: Quizzes (best 4 out of 5) 50%
Final Examination 50%

Outline:

The course covers the following areas and aspects of calculus:

- Introduction to functions
- Average rate of change
- Derivatives
- Sketching polynomials
- Sketching rational functions
- Min/Max Problems
- Derivative Rules
- Inverse Functions
- Logarithms, Exponentials
- Logarithmic and exponential equations
- Introduction to Trigonometry
- Trigonometric Identities
- Introduction to Sequences
- Geometric Sequences