

## Brief Course Outline

**Course Title:** **Introductory Calculus**

**Course Number and Section:**

MATH

0110A 550

**Instructor Name(s):** Mohsen Mollahajiaghaei

**Instructor Email(s):** mmollaha@uwo.ca

Disclaimer: Information in the brief course outline is subject to change. The syllabus posted on OWL is the official and authoritative source of information for the course.

### Course Description:

Limits, continuity, definition of derivative, rules for differentiation, higher-order derivatives, velocity, acceleration, implicit differentiation, related rates, exponential functions, logarithmic functions, differentiation of exponential and logarithmic functions, maxima and minima, concavity, curve sketching, optimization.

### Learning Outcomes:

Be able to manipulate functions to accomplish required goals.
Explore limits of functions
Understand instantaneous rates of change and how they compare with slope and average rates of change.
Be able to calculate and interpret derivatives of single-variable functions
Learn how to use exponential and log functions.
Solve application problems in a variety of areas.
Use derivatives to infer information about the graphs of functions.
Perform optimization with constraints.
Learn how to properly justify steps in mathematical calculations.

### Textbooks and Course Materials:

Bundle: Custom Textbook and Solutions Manual for MAT0110A/B 1225A/B 1230A/B PB

SKU: 9781774749586

Cost: \$116.25

Students are welcome to purchase second-hand or earlier editions of this textbook.

**Methods Of Evaluation:**

Assignment	Due Date mm/dd/yy	Weight - %
Quizzes (weekly)		20
Test 1		20
Test 2		20
Final exam		40

In solidarity with the Anishinaabe, Haudenosaunee, Lūnaapéewak, and Chonnonton peoples on whose traditional treaty and unceded territories this course is shared.

Friday, August 15, 2025