MTH 251 : Calculus I

Includes limits, continuity, derivatives and some applications of derivatives. Graphing technology is required, such as Desmos and/or GeoGebra which are available at no cost.

Addendum to Course Description

This is the first course of four courses in the Calculus sequence. Students will be required to have physical graphing calculators in MTH 251. Where physically possible instructors will demonstrate using Desmos, GeoGebra, or other online programs in class. Assessments requiring the use of a graphing calculator will be done outside of the proctored exam grade component.

Credits 5

Prerequisites

Equivalent placement test scores also accepted.

Subject

Mathematics

Course Outcomes

Upon completion of the course students should be able to:

- Analyze real world scenarios to recognize when derivatives and limits are appropriate, formulate problems about the scenarios, creatively model these scenarios (using technology, if appropriate) in order to solve the problems using multiple approaches, judge if the results are reasonable, and then interpret and clearly communicate the results.
- Recognize derivatives and limit-related concepts that are encountered in the real world; understand and be able to communicate the underlying mathematics involved to help another person gain insight into the situation.
- Work with derivatives and limits in various situations and use correct mathematical terminology, notation, and symbolic processes in order to engage in work, study, and conversation on topics involving derivatives and limits with colleagues in the field of mathematics, science or engineering.

Prerequisite Courses

MTH 112Z
WR 115
RD 115