

Course Description

Some important topics that will be covered include:

- Applications of Integration (areas between curves, volumes, work, average value of a function)
- Inverse Functions (one-to-one functions and inverses, exponential, logarithmic, power and inverse trigonometric functions, hyperbolic functions)
- The Natural Exponential and Logarithmic Functions (properties, derivatives and integrals, logarithmic differentiation, exponential growth and decay)
- Indeterminate forms and l'Hospital's Rule
- Techniques of Integration (Integration by Parts, Trigonometric integrals, Trigonometric Substitution, Partial Fractions, Improper Integrals)
- Infinite Sequences and Series (sequences, limits of sequences, infinite series, tests for convergence, Power Series, Representation of Functions as Power Series, Taylor Series)

* The material for the course will be covered in Chapters 5, 6, 7, and 11. Extra topics may be added, if time permits.

Course Materials

WebAssign Access will be required to complete the assignments. It contains the eBook, *Calculus 8th Edition by Stewart*, along with a wealth of resources that will give you the opportunity to enhance your understanding. **If you purchased the multi-term Enhanced WebAssign last semester, you DO NOT have to purchase anything for this semester.** Otherwise, here is the link for a single-term use:

<https://www.cengagebrain.com/shop/isbn/9781285857619>

To sign in to WebAssign for MATH 1172, you must use the following link and class key:

<https://www.webassign.net/v4cgi/selfenroll/classkey.html>

Use the following class key: **lakeheadu.ca 3577 8907**

Labs

Quizzes will be distributed during the lab every other week (see evaluation below). The lab will also be used to facilitate your understanding of the material and it will be beneficial to attend. Concepts will be reinforced through explanations and examples.

Class Policies

If you decide to come to class, I would appreciate that you show up on time. Please turn off your phone while in class. Midterms and exams must be taken on the date assigned and there will be no books, calculators, cell phones, or other aids allowed during the exams. Cell phones are not allowed to be on your person during midterms and exams, per university policy.

Accommodations

Lakehead University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS) and register as early as possible. For more information, please visit: <http://studentaccessibility.lakeheadu.ca>

Evaluation

A. Quizzes (5%)

There will be quizzes given during the lab and each will contain a small number of questions. Quiz dates will be announced one week prior and will be approximately held every other week. Quizzes will be held at the beginning of the lab and no rewrites are permitted. *At the end of the semester, I will drop your lowest quiz mark.*

B. Assignments (10 %)

There will be weekly assignments posted on WebAssign.

Late assignments will not be accepted. At the end of the semester, I will drop your lowest assignment mark.

C. Midterm Exam (30%)

The midterm is tentatively scheduled on **February 14**, during the lab time.

D. Final Exam (55%)

The final exam will be a three-hour cumulative exam. The date of the exam will be provided as soon as it is scheduled.