COURSE INFORMATION

MATH 1172 WA: CALCULUS II

WINTER 2024

Lectures:	MW	10:00 AM - 11:30 AM	Location: UC 0050
Lab:	F	11:30 AM - 12:30 PM	Location: UC 0050

<u>Instructor</u>   Dr. Christopher Chlebovec
Office: RB 2007
Office Hours: W 11:30 AM – 12:30 PM or by appointment

<u>Email</u>   cchlebov@lakeheadu.ca (the best way to contact me!)

<u>Course Site</u>

This course has an online D2L site, which you access through MyInfo, via *mycourselink*. All information with regards to this course can be found on D2L and should be checked regularly. Class notes and other information will be posted on D2L periodically. Class notes are used concurrently with the lectures and will benefit you if printed and read prior to class.

Textbook

This class will not have a textbook required to purchase. There is a wealth of textbooks and calculus resources available to you and many can be found in the LU library. Here are some suggested references:

Comprehensive Textbooks:

- *Calculus* by Stewart
- *Calculus by* Salas, Hille, Etgen
- *Calculus by* Thomas, Weir, Hass

Free online textbooks that can serve as a supplement to the class notes:

- Apex Calculus, Version 3 by Gregory Hartman
  http://www.apexcalculus.com/downloads/

- Calculus Volume 2 by Edwin Herman, Gilbert Strang
  https://openstax.org/details/books/calculus-volume-2/

Course Description

 Some important topics that will be covered include:

- Applications of Integration (area between curves, volumes, center of mass, Pappus's Theorem on 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)

*Extra topics may be added, if time permits.

WeBWorK

WeBWorK is a free online homework system that will be required to complete the assignments.   The link to access WeBWorK as well as login information will be provide to you on D2L.

Labs

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

Attendance is not mandatory; however, it is strongly recommended that you attend. If you come to class, I would appreciate that you show up on time. Please turn off your phone while in class. Tests and the final exam must be taken on the date assigned and there will be no books, calculators, cell phones, or other aids allowed during the tests and final exam. Cell phones or other electronic devices are not allowed to be on your person during tests and final 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. Assignments (10 %)

There will be weekly assignments posted on WeBWorK. *Late assignments will not be accepted.*

B. Test I (25%)

Test I is tentatively scheduled for **February 16,** during the lab time.

C. Test II (25%)

Test II is tentatively scheduled for **March 22,** during the lab time.

D. Final Exam (40%)

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

Important Dates

First Day of Classes: Monday, January 8, 2024

Final Date to Register (Add): Friday, January 19, 2024

Winter Study Week: February 19, 2024 – February 23, 2024

Final Date for Withdrawal (Drop): Friday, March 8, 2024

Good Friday: Friday, March 29, 2024 (no classes)

Easter Monday: Monday, April 1, 2024 (no classes)

Final Day of Classes: Tuesday, April 9, 2024 (Apr 8 and Apr 9 make up days)

Examination Period: April 12 – 22, 2024 (11 days)

Examination Contingency Date: April 23, 2024