

Welcome to
MATH 3171 - Complex Analysis
Fall term 2023

INSTRUCTOR Dr. Monica Ilie

- **Contact info:** RB 2019 ★ ph: 766-7224 ★ *milie@lakeheadu.ca*
- **Office hours:** Tuesday/Thursday 10:00-11:00 or By appointment

COURSE OBJECTIVES At the end of this course you will know how to work with a large class of complex functions, you will be able to analyze their properties (analyticity, differentiability, continuity) as well as integrate them on contours. You will have a good grasp of the connections between complex and real analysis, how the former is built upon the latter, as well as that of using complex analysis to compute integrals of real functions.

COURSE INFORMATION

- **Class time:** Tuesday/Thursday 8:30 a.m.- 9:45 a.m. (RB 2047)
- **Suggested Textbook:** *Complex variables and applications* by James Ward Brown and Ruel V. Churchill
- **Website:**
<https://mycourselink.lakeheadu.ca>
- **Grading:** Your final grade will be given according to the grading scheme bellow:

Assignments	Midterm	Final Exam
10%	40%	50%

- **Midterm:** Thursday October 26, 2023 (in class)

SYLLABUS

The topics to be covered are, tentatively, Chapter 1 - Chapter 7. We will first learn about the set of complex numbers and the operations within the set, then we will study the properties of functions of a complex variable including limits, continuity and differentiability. We will finish the term with the study of the contour integral techniques, including the residue theorem, and see their applications to real integral computations.

ASSIGNMENTS

Homework assignments are given as topics are covered in class, and announced on the course website. There will be mostly online assignments and probably a few written assignments. The online assignments will available on the WebWork platform.

MISSED MIDTERM POLICIES

If you miss the midterm for a legitimate reason which you can document (e.g. doctor's note), the weight of the midterm will be *transferred* to the final exam. There will be no

make-up exams! **The documented proof of absence should be provided to me no later than 10 days after the exam was written.**

MISSED FINAL EXAM POLICIES (University Regulations)

In cases where a student misses a formal examination due to an incapacitating illness, the student must have the Certificate of Illness or Incapacitation completed by a Medical Professional and submit the completed form to Enrolment Services no later than three (3) working days after the date of the original final examination. The Certificate of Illness or Incapacitation must be dated as seen by the Medical Professional no later than one (1) working day after the examination.

In other exceptional circumstances, official supporting documentation must be provided (e.g. copy of a death certificate or letter from the funeral home).

Accommodation shall be granted only when the documentation indicates that the onset, duration and severity of the illness or other circumstances are such that the student could not have reasonably been expected to complete the examination on the scheduled date.

University Regulations *Students will not be given another opportunity to write the examination if it is missed a second time. In some cases, when extraordinary circumstances beyond a student's control prevent him/her from completing the rescheduled examination, a student may be eligible to petition Enrolment Services to explain the circumstances.*

A friendly piece of advice: don't book your plane ticket home until the final exam schedule is published. A booked flight is not an acceptable excuse for missing an exam.

LECTURE POLICIES

- **Attendance** is not mandatory; however, it is strongly recommended that you come to class. I would appreciate the fact that you show up on time if you do decide to come to class. Arriving late disturbs both me and your fellow classmates.
- **Cellphones policy:** I strongly recommend to turn off you cell phone or place it in your bag. Texting during class disturbs you, your colleagues and the friend you are communicating with as they might be in a class as well.

ACCOMODATIONS

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>

IMPORTANT DATES

September 18, 2023: last day for registration

November 3, 2023: last date for course withdrawal without academic penalty

December 18, 2023: contingency date (all exams that are missed by the closure of the university during the exam period, due to unforeseen circumstances, will be rescheduled this day)