



**Michigan
Technological
University**

Course Syllabus

MA4410 – Complex Analysis

College of Science and Arts

Spring 2025

Instructor Information

Instructor Office Allan Struthers
Location: 212 Fisher Hall
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Office Hours: MWF 10-10:50am and T/Th 3:15–4pm

Course Identification

Course Number: MA4410-R01
Course Name: Numerical Optimization
Course Location: Fisher 230
Class Times: M/W/F 11-11:50am
Prerequisites: MA 4330 or MA 4610 or MA 4630 or MA 5627

Course Description/Overview

A study of complex numbers, functions of a complex variable, analytic functions, elementary functions, integrals, Taylor and Laurent series, residues and poles, and conformal mapping.

Course Resources

Course Website(s)

- [Canvas](https://www.courses.mtu.edu) (www.courses.mtu.edu)
- [Github](https://github.com/AllanStruthersMTU) (<https://github.com/AllanStruthersMTU>)

Required Course Text

- Complex Variables and Analytic Functions: An Illustrated Introduction
Bengt Fornberg and Cécile Piret, ISBN 978-1611975970

Course Fees/Supplies (please install)

- Mathematica (available free to any enrolled MTU student)

Course Learning Objectives

Upon successful completion of this course, students will be able to

- *Understand and use complex calculus.*
- *Appreciate the history of complex numbers.*

Grading Scheme

Grading System

Letter Grade	Percentage	Grade points/credit	Rating
A	90% & above	4.00	Excellent
AB	90% – 85%	3.50	Very good
B	85% – 80%	3.00	Good
BC	80% – 75%	2.50	Above average
C	75% – 70%	2.00	Average
CD	70% – 65%	1.50	Below average
D	65% - 60%	1.00	Inferior
F	59.9% and below	0.00	Failure
I	Incomplete; given only when a student is unable to complete a segment of the course because of circumstances beyond the student's control.		
X	Conditional, with no grade points per credit; given only when the student is at fault in failing to complete a minor segment of a course, but in the judgment of the instructor does not need to repeat the course. It must be made up by the close of the next semester or the grade becomes a failure (F). A (X) grade is included in the grade point average calculation as a (F) grade.		

Point Distribution

Course Component	Points
Homework	50
Exams (midterm and final)	50
Total Points	100

Late Homework: I am going to try to very hard to enforce deadlines!

Course

Policies

- *Ask questions in class if you do not get something. You are very unlikely to be the only person with a question if (well actually when) I am less than crystal clear.*
- *Read the appropriate bit of the text before class.*
 - *Post questions on the Canvas discussion board before class for better answers!*
- *Everyone is stressed by our current disruptions!*

Academic Integrity Rules

You can (and should) discuss homework assignments with anyone willing to help! This includes me, your classmates, and/or your cousin in Auchtermuchty! You can (and also should) use any and all appropriate resources (books, articles, Wikipedia, Chegg, StudySoup, Course Hero, etc.) when appropriately cited. Because it's important to everyone at Michigan Tech that academic standards be maintained, academic misconduct may result in an appropriate conduct sanction/educational condition(s) imposed by the Office of Academic and Community Conduct and/or in an academic penalty (lower grade/failing grade) imposed by the faculty. Let me know if you used an AI tool.

For more details on academic integrity, please review the [Academic Integrity Policy of Michigan Tech](http://www.admin.mtu.edu/usenate/policies/p109-1.htm) [http://www.admin.mtu.edu/usenate/policies/p109-1.htm].

University Policies

Student work products (exams, essays, projects, etc.) may be used for purposes of university, program, or course assessment. All work used for assessment purposes will not include any individual student identification.

Michigan Tech has standard policies on academic misconduct and complies with all federal and state laws and regulations regarding discrimination, including the Americans with Disabilities Act of 1990. For more information about reasonable accommodations or equal access to education or services at Michigan Tech, please call the Dean of Students Office at 906-487-2212. More information is also available from the [Syllabi Policies webpage](http://www.mtu.edu/ctl/instructionalresources/syllabus/syllabus_policies.html) [http://www.mtu.edu/ctl/instructionalresources/syllabus/syllabus_policies.html].

COVID-19

All students are expected to comply with University protocols in place to reduce the spread of

COVID-19, which include wearing a face covering indoors at all times and maintaining six-foot social distancing whenever possible.

Students not in compliance with the face covering protocol may be asked to leave class until they are able to comply. Students unable to medically tolerate a face covering should contact [Student Disability Services](https://www.mtu.edu/success/disability/) [https://www.mtu.edu/success/disability/] to explore possible accommodations. Chronically noncompliant or disruptive students may be reported to the [Office of Academic and Community Conduct](https://www.mtu.edu/conduct/) [https://www.mtu.edu/conduct/].

Course Schedule (Preliminary)

The aim is to start at the beginning of the text and work through it. I will let you know where we are with Canvas announcements. The academic calendar is available at <https://www.mtu.edu/registrar/students/calendars/academic/>

We will have a final exam during final week.