

MATH 440/508: Complex Analysis
(3 credits)

Instructor: Mathav Murugan

Lectures: MWF 9-10 on Zoom. Please see Canvas homepage for Zoom login information.

Office hours: Monday 10-11, Wed 12-1 or by appointment on Zoom

Course webpage: Canvas

Text: *Complex Analysis* by Elias Stein and Rami Shakarchi. The textbook is available online at UBC Library.

Prerequisite: Math 300 (or equivalent) and a score of 68% or higher in Math 320.

Outline. The UBC course description is as follows:

- The residue theorem
- The argument principle
- Conformal mapping
- The maximum modulus principle
- Harmonic functions
- Representation of functions by integrals, series, and products
- Other topics at the discretion of the instructor (Possible options here are the geometric properties of conformal mappings, Prime number theorem and Riemann zeta function).

Chapter 1,2,3 and 8 of the textbook will be relevant for this course.

References: Functions of One Complex Variable (I and II) by John Conway, Complex Analysis by Theodore W. Gamelin

Evaluation: Homework will be assigned approximately once every two weeks for 60% of the grade. Late submissions will not be accepted.

The final exam will be worth 40% of the grade.

The final will be invigilated via Zoom and it is absolutely necessary for every student to have a webcam. If a student does not have a webcam in their computer, they will not be able to complete the course.

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