MATH 249. HONOURS COMPLEX VARIABLES.

Credits: 3

Offered by: Mathematics and Statistics (Faculty of Science)

Terms offered: Winter 2026

View offerings for Winter 2026 in Visual Schedule Builder.

Description

Functions of a complex variable; Cauchy-Riemann equations; Cauchy's theorem and consequences. Taylor and Laurent expansions. Residue calculus; evaluation of real integrals; integral representation of special functions; the complex inversion integral. Conformal mapping; Schwarz-Christoffel transformation; Poisson's integral formulas; applications. Additional topics if time permits: homotopy of paths and simple connectivity, Riemann sphere, rudiments of analytic continuation.

- Winter
- Prerequisite(s): MATH 222
- Restriction: Intended for Honours Physics and Engineering students
- Restriction: Not open to students who have taken or are taking MATH 316

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