

The Department of Mathematics

2023–24–B term

Course Name Theory of Functions of a Complex Variable

Course Number 201.1.0251

Course web page

<https://math.bgu.ac.il/en/teaching/spring2024/courses/theory-of-functions-of-a->

Lecturer Dr. David Corwin, <corwind@bgu.ac.il>, Office 215/58

Office Hours <https://math.bgu.ac.il/en/teaching/hours>

Abstract

Requirements and grading¹

Course topics

- Complex numbers. Analytic functions, Cauchy–Riemann equations.
- Conformal mappings, Mobius transformations.
- Integration. Cauchy Theorem. Cauchy integral formula. Zeroes, poles, Taylor series, Laurent series. Residue calculus.
- The theorems of Weierstrass and of Mittag-Leffler. Entire functions. Normal families.
- Riemann Mapping Theorem. Harmonic functions, Dirichlet problem.

¹Information may change during the first two weeks of the term. Please consult the webpage for updates