

## The Department of Mathematics

2021–22–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/spring2022/courses/theory-of-functions-of-a->

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

### Abstract

### Requirements and grading<sup>1</sup>

### 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.

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