

## The Department of Mathematics

2015–16–A term

**Course Name** Advanced topics in complex variables

**Course Number** 201.2.2051

**Course web page**

<https://www.math.bgu.ac.il/en/teaching/fall2015/courses/advanced-topics-in-comp>

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

### Abstract

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

### Course topics

- Some review of complex variables
- Hilbert spaces of analytic functions. General theory
- Bergman space
- Hardy spaces
- Fractional Hardy space and self similar systems
- Bargmann-Fock space and second quantization
- Banach spaces of analytic functions.
- Frechet spaces and Schwartz spaces
- Proof of Riemann's mapping theorem
- Dual of the space of functions analytic in a given open set
- Gelfand triples and applications

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