

## The Department of Mathematics

2016–17–B term

**Course Name** Introduction to Von Neumann Algebras

**Course Number** 201.2.0061

**Course web page**

<https://www.math.bgu.ac.il/en/teaching/spring2017/courses/introduction-to-von-neumann-algebras>

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

### Abstract

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

### Course topics

Basics of  $C^*$ -Algebra theory. The spectral theorem for bounded normal operators and the Borel functional calculus. Basic theory of von Neumann algebras. Density theorems, topologies and normal maps, traces, comparison of projections, type classification, examples of factors. Additional topics, for example, noncommutative dynamics, subfactors, group actions, and free probability.

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