

The Department of Mathematics

2023–24–A term

Course Name Fundamentals of Measure Theory

Course Number 201.1.0081

Course web page

<https://www.math.bgu.ac.il/en/teaching/fall2024/courses/fundamentals-of-measure>

Lecturer Prof. Tom Meyerovitch, <mtom@bgu.ac.il>, Office 313

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

Abstract

Requirements and grading¹

Course topics

Algebras and sigma-algebras of subsets, the extension theorem and construction of Lebesgue's measure on the line, general measure spaces, measurable functions and their distribution functions, integration theory, convergence theorems (Egorov's, relations between convergence in measure and a.e. convergence), the spaces L_1 and L_2 and their completeness, signed measures, the Radon-Nikodym theorem, measures in product spaces and Fubini's theorem.

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