The Department of Mathematics  
2021–22–A term

Course Name  Fundamentals of Measure Theory  
Course Number  201.1.0081  
Course web page  https://www.math.bgu.ac.il//en/teaching/fall2022/courses/fundamentals-of-measure-theory  
Lecturer  Prof. Ilan Hirshberg, <ilan@bgu.ac.il>, Office 203  
Office Hours  https://www.math.bgu.ac.il/en/teaching/hours  

Abstract  

Requirements and grading

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. 

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