אוניברסיטת
בן-גוריון בנגב

The Department of Mathematics

2015–16–A term

Course Name Basic Concepts in Modern Analysis

Course Number 201.2.0351

Course web page
`https://math.bgu.ac.il//en/teaching/fall2015/courses/basic-concepts-in-modern-an`

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Office Hours `https://math.bgu.ac.il/en/teaching/hours`

Abstract

Requirements and grading[1]

Course topics

Banach spaces and Hilbert spaces. Basic properties of Hilbert spaces. Topological vector spaces. Banach-Steinhaus theorem; open mapping theorem and closed graph theorem. Hahn-Banach theorem. Duality. Measures on locally compact spaces; the dual of $C(X)$. Weak and weak-$*$ topologies; Banach-Alaoglu theorem. Convexity and the Krein-Milman theorem. The Stone-Weierstrass theorem. Compact operators on Hilbert space. Introduction to Banach algebras and Gefland theory. Additional topics as time permits.

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