אוניברסיטת
בן-גוריון בנגב

The Department of Mathematics

2022–23–B term

Course Name Fundamentals of Analysis for EE - part I

Course Number 212.2.5331

Course web page
`https://www.math.bgu.ac.il//en/teaching/spring2023/courses/fundamentals-of-analysis-for-ee-part-i`

Lecturer Prof. Arkady Leiderman, <arkady@bgu.ac.il>, Office 308

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

Abstract

Requirements and grading[1]

Course topics

Metric spaces: closed sets, open sets, Cauchy sequences, completeness, compactness, Theorem of Heine–Borel, continuity and unfiorm continuity of functions, unfiorm convergence of sequences of functions.

Measure theory: algebras, measures and outer measures, measurable sets, discrete measure spaces, Lebesgue measure on the real line, measurable functions, Lebesgue integral, dominated convergence theorem, L_p-spaces as complete normed spaces. Time-permitting: signed measures and absolute continuity of measures and the Radon-Nykodim theorem.

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