אוניברסיטת
בן-גוריון בנגב

The Department of Mathematics

2020–21–A term

Course Name Introduction to Linear Algebra C

Course Number 201.1.9281

Course web page
    https://www.math.bgu.ac.il//en/teaching/fall2021/courses/introduction-to-linear-

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

Abstract

Requirements and grading[1]

Course topics

.1 Introduction: the real and complex numbers, polynomials.

.2 Systems of linear equations and Gauss elimination.

.3 Vector spaces: examples (Euclidean 2-space and 3-space, function spaces, matrix spaces), basic concepts, basis and dimension of a vector space. Application to systems of linear equations.

.4 Inverse matrices, the determinant, scalar products.

.5 Linear transformations: kernel and image, the matrix representation of a transformation, change of basis.

.6 Eigenvalues, eigenvectors and diagonalization.

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