The Department of Mathematics
2023–24–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/fall2024/courses/introduction-to-linear-
Lecturer  Dr. Motke Porat, <motkep@bgu.ac.il>, Office 318
Office Hours  https://www.math.bgu.ac.il/en/teaching/hours

Abstract

Requirements and grading¹

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.

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