

The Department of Mathematics

2019–20–B term

Course Name Introduction to Linear Algebra C

Course Number 201.1.9281

Course web page

<https://www.math.bgu.ac.il/en/teaching/spring2020/courses/introduction-to-linear-algebra-c>

Lecturer Dr. Natalia Karpivnik, <mordeev@post.bgu.ac.il>, Office 10

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