אוניברסיטת
בן-גוריון בנגב

The Department of Mathematics

2018—19—A term

Course Name Introduction to Linear Algebra C

Course Number 214.1.9281

Course web page
`https://www.math.bgu.ac.il//en/teaching/fall2019/courses/introduction-to-linear-`

Lecturer Prof. Michael Muzychuk, `<muzychuk@bgu.ac.il>`, Office 305

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.

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