The Department of Mathematics
2021–22–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/fall2022/courses/introduction-to-linear-algebra-c](https://www.math.bgu.ac.il/en/teaching/fall2022/courses/introduction-to-linear-algebra-c)

**Office Hours**  [https://www.math.bgu.ac.il/en/teaching/hours](https://www.math.bgu.ac.il/en/teaching/hours)

**Abstract**

**Requirements and grading**

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