

# COURSE DETAIL

## LINEAR ALGEBRA I

**Country**

Korea, South

**Host Institution**

Yonsei University

**Program(s)**

Yonsei University

**UCEAP Course Level**

Lower Division

**UCEAP Subject Area(s)**

Mathematics

**UCEAP Course Number**

40

**UCEAP Course Suffix****UCEAP Official Title**

LINEAR ALGEBRA I

**UCEAP Transcript Title**

LINEAR ALGEBRA I

**UCEAP Quarter Units**

4.50

**UCEAP Semester Units**

3.00

## Course Description

This course opens the door to higher mathematics, science and technology, as well as economics and social science. This course emphasizes skills, theory, and applications. The course presents the core of the linear algebra as an axiomatic development of the most important elements of finite-dimensional linear algebra and progresses into more abstract areas as we add structure to our knowledge: Fields and Vector spaces, Linear Operators, Determinants and eigenvalues, The Jordan canonical form, Orthogonality and its most important application of best approximation, spectral theory of symmetric matrices and Hermitian matrices, The singular value decomposition, Matrix factorizations and numerical linear algebra, Infinite dimensional vector spaces and Analysis in vector spaces. Linear algebra forms the basis for much of modern mathematics-theoretical, applied, and computational.

### Language(s) of Instruction

English

### Host Institution Course Number

MAT2102

### Host Institution Course Title

LINEAR ALGEBRA I

### Host Institution Course Details

### Host Institution Campus

### Host Institution Faculty

### Host Institution Degree

### Host Institution Department

Mathematics

### Course Last Reviewed

2025-2026

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