# COURSE DETAIL

| LINEAR ALGEBRA |
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| **Country**<br>Japan |
| **Host Institution**<br>Tohoku University |
| **Program(s)**<br>Engineering and Science |
| **UCEAP Course Level**<br>Lower Division |
| **UCEAP Subject Area(s)**<br>Mathematics |
| **UCEAP Course Number**<br>10 |
| **UCEAP Course Suffix** |
| **UCEAP Official Title**<br>LINEAR ALGEBRA |
| **UCEAP Transcript Title**<br>LINEAR ALGEBRA |
| **UCEAP Quarter Units**<br>3.00 |
| **UCEAP Semester Units**<br>2.00 |

**Course Description**

This course introduces eigenvalues and eigenvectors of matrices, leading to diagonalization of matrices. Furthermore, vector spaces with inner product are treated and applications of linear algebra to various specialized topics are discussed.

Upon completion of the class, students are expected to:

- Compute eigenvalues and eigenvectors of matrices, and diagonalize real symmetric matrices;
- Understand inner products, orthogonality, and to be able to find orthogonal bases; and,
- Learn applications of linear algebra and perform computations to solve explicit problems.

**Language(s) of Instruction**
English

**Host Institution Course Number**
N/A

**Host Institution Course Title**
LINEAR ALGEBRA B

**Host Institution Course Details**

**Host Institution Campus**
Tohoku University

**Host Institution Faculty**

**Host Institution Degree**

**Host Institution Department**
Collegewide

**Course Last Reviewed**

2023-2024

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