

## COURSE DETAIL

### LINEAR ALGEBRA I

**Country**

Hong Kong

**Host Institution**

University of Hong Kong

**Program(s)**

University of Hong Kong

**UCEAP Course Level**

Lower Division

**UCEAP Subject Area(s)**

Mathematics

**UCEAP Course Number**

21

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

LINEAR ALGEBRA I

**UCEAP Transcript Title**

LINEAR ALGEBRA I

**UCEAP Quarter Units**

5.00

**UCEAP Semester Units**

3.30

**Course Description**

This course introduces the theory and techniques of linear algebra through many concrete examples in the Euclidean spaces. Topics include vector geometry in  $\mathbb{R}^2$  and  $\mathbb{R}^3$ , systems of linear equations, row equivalence of matrices, matrix algebra, determinant and rank of matrices, vector spaces, subspaces, basis and dimension, linear transformation, change of bases and diagonalization of matrices, eigenvalue problem, and inner product. Text: W. K. Nicholson, LINEAR ALGEBRA WITH APPLICATIONS. Assessment: exam (50%), test (40%), assignments (10%).

**Language(s) of Instruction**

English

**Host Institution Course Number**

MATH2101

**Host Institution Course Title**

LINEAR ALGEBRA I

**Host Institution Campus**

University of Hong Kong

**Host Institution Faculty****Host Institution Degree****Host Institution Department**

Mathematics

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