

**THE CHINESE UNIVERSITY OF HONG KONG**  
**Department of Mathematics**  
**MATH1030A,B,C (First term, 2020-21)**  
**Linear Algebra I**

This course is intended to provide conceptual understandings and computational techniques of linear algebra. Topics include: Gaussian elimination, theory of simultaneous linear equations, matrices, determinants, vectors spaces, bases and linear independence.

## Instructors

- Section A: SHIU Wai Chee (Office: Rm 223 LSB. Email: [wcsheu@math.cuhk.edu.hk](mailto:wcsheu@math.cuhk.edu.hk))
- Section B: FONG Wing-Chung (Office: Rm 218 LSB. Email: [wcfong@math.cuhk.edu.hk](mailto:wcfong@math.cuhk.edu.hk))
- Section C: McBREEN Michael (Office: Rm 235 LSB. Email: [mcb@math.cuhk.edu.hk](mailto:mcb@math.cuhk.edu.hk))

## Tutors

- NG, Ming Ho (Office: Rm 228 LSB. Email: [mhng@math.cuhk.edu.hk](mailto:mhng@math.cuhk.edu.hk))  
Consultation hours: Tuesdays 1430-1630hrs.
- DAI, Bowen (Office: Rm 407A AB1. Email: [bwdai@math.cuhk.edu.hk](mailto:bwdai@math.cuhk.edu.hk))  
Consultation hours: Mondays 1430-1630hrs.
- DAI, Ling (Office: Rm 222A LSB. Email: [ldai@math.cuhk.edu.hk](mailto:ldai@math.cuhk.edu.hk))  
Consultation hours: Tuesdays 0930-1030hrs, Tuesdays 1230-1330hrs.
- WANG, Xia (Office: Rm 222C LSB. Email: [xwang@math.cuhk.edu.hk](mailto:xwang@math.cuhk.edu.hk))  
Consultation hours: Mondays 0900-1100hrs.
- YANG, Zhen (Office: Rm 222C LSB. Email: [xwang@math.cuhk.edu.hk](mailto:xwang@math.cuhk.edu.hk))  
Consultation hours: Tuesdays 0930-1030hrs, Wednesdays 1230-1330hrs.
- ZHANG, Hao (Office: Rm 222A LSB. Email: [haozhang@math.cuhk.edu.hk](mailto:haozhang@math.cuhk.edu.hk))  
Consultation hours: Wednesdays 1130-1330hrs.

## Time and Venue

Lectures:

- Section A: Tuesdays 1330-1415hrs YIA LT4, Thursdays 1230-1415hrs LSK LT3.  
Classes are conducted online until further notice from the university.
- Section B: Wednesdays 1030-1215hrs, Fridays 1030-1115hrs.  
Classes are conducted online throughout the semester.
- Section C: Tuesdays 0830-1015hrs, Thursdays 1530-1615hrs.  
Classes are conducted online throughout the semester.

Tutorials:

- Tuesdays 1430-1515hrs LSK LT6.
- Wednesdays 0930-1015hrs BMS G18.
- Thursdays 1430-1515hrs LSK LT3.
- Fridays 0930-1015hrs NAH 115.

Classes are conducted online until further notice from the university.

After face-to-face teaching is resumed by the university, students of Section A have higher priority for places in the classrooms.

## Course Material and Course Announcements

- Course material common to all sections will be uploaded to the common course homepage at the website of the Department of Mathematics:  
This includes Dr. Charles Li's Notes (for the year 2019-20), tutorial sheets and assignments.
- Course announcements may be put onto the common course homepage and communicated via the CWEM.

## Teaching Schedule

The schedule is provisional. We will adapt it along the way to suit the mathematical capability of the students.

- Weeks 1-4: Vectors, matrices, systems of linear equations.
- Weeks 5-9: Spanning, linear dependence and linear independence, bases.
- Weeks 10-13: Determinants, eigenvalues and eigenvectors, inner products.

## Assessment Scheme

Refer to the *Assessment Scheme First Semester 2020-21*.

## Submission of work for assessment

Every piece of work for assessment are to be submitted online, to the 'Blackboard'. As for the detail on technical requirements on formats, refer to *Instructions on submission of work*, which will be available in the common course homepage.

## WeBWorK

Refer to the 'Blackboard' site common to MATH1030A/B/C.

## Academic Honesty

Attention is drawn to University policy and regulations on honesty in academic work, and to the disciplinary guidelines and procedures applicable to breaches of such policy and regulations. Details may be found at

<http://www.cuhk.edu.hk/policy/academichonesty/>

There is zero tolerance on plagiarism. If you are found to have committed plagiarism, you will be reported to the university for disciplinary action and you could be recommended to receive the 'F' grade in the course.

## Books and other learning resources

- R. A. Beezer, *A first course in Linear algebra* (Version 3.5 or above).  
This book is available online.  
Dr. Charles Li's notes is developed from the material in this book.
- G. Strang, *Linear Algebra and its applications* (Fourth or fifth Edition).
- S. Friedberg, A. Insel, L. Spence, *Linear Algebra* (Fourth Edition).  
This book is only suitable as an advanced reference for those students who intend to declare for MATH as major subject.