

Syllabus for MATH 2121: Linear Algebra (Fall 2026)

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TAs: See *MATH TA/IA Assignment (2026-27 Fall Term)* on www.math.hkust.edu.hk/

Lectures: (L1) Tuesdays & Thursdays 16:30 - 17:50
(L2) Tuesdays & Thursdays 15:00 - 16:20
(L3) Mondays 13:30 - 14:50 & Fridays 9:00 - 10:20

For lecture locations see registry.ust.hk/schedule

Website: www.math.ust.hk/~emarberg/Math2121/
There is also a course website on Canvas.
The Canvas website will be used to post grades and announcements.

Textbook: Linear Algebra and its Applications by Lay, Lay, and McDonald, 6th Ed.

Outline: This will be a first course in linear algebra, from an applied perspective.
The main topics covered will include solving linear systems of equations, vector spaces, matrices, linear mappings and matrix forms, inner products, orthogonality, eigenvalues and eigenvectors, and symmetric matrices.

No prior knowledge of matrix algebra is assumed.

Grading: Online homework 5% (weekly assignments, weighted equally)
Offline homework 5% (weekly assignments, weighted equally)
Midterm 30%
Final examination 60%

Homework: The homework for the course will have two parts: online and offline.

The online homework will consist of weekly problem sets accessible in WebWork.
The problems will cover all course content but are easier than exam questions.

Each week will come with a list of practice problems, which are similar to exam questions.
For the offline homework, you must choose a certain number of practice problems from the current week and write up complete solutions, showing all steps, like on an exam.

Your lowest online and offline homework scores will be dropped when computing final grades, so you can skip one week with no penalty.

But there will be no extensions to homework due dates.