MA107A - Linear Algebra, Spring 2022

Instructor

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Office hours: Monday 2–3:50 pm, Thursday 9–9:50 am (in person only), or by appointment (in person / Tencent Meeting 520-800-4008) (updated May 16)

TA: 刘程宇 LIU Chengyu

Discussion sessions (**Tencent Meeting 952-598-7096 with passcode 802933**): Wednesdays 7–8:50 Lecture Hall 1-511 / Thursdays 7–8:50 Lecture Hall 1-511 / Fridays 7–8:50 Liyuan 2-208

Class QQ group: 798430702

Objectives

This course introduces the basic concepts in linear algebra including systems of linear equations, matrix algebra, determinants, vector spaces, linear transformations, eigenvalues and eigenvectors, singular value decomposition and quadratic forms. It is a prerequisite for Advanced Linear Algebra. The emphasis is on operations with matrices, solving systems of linear equations, fundamental theory of vector spaces and linear transformations, solving eigenvalues and eigenvectors problems, and quadratic forms.

Textbook

Gilbert Strang, _Linear algebra and its applications_, fourth edition, Thomson Brooks/Cole, 2006.

Supplementary materials

Online open course

Steven J. Leon, _Linear algebra with applications_, ninth edition, Pearson, 2015.

北京大学数学系前代数小组编，高等代数，第四版，高等教育出版社，2013.

Evaluation (updated March 31)

The following components count towards your final grade:

- attendance 5%

- quizzes ~~15%~~ **30%**

- homework ~~10%~~ **15%**

- ~~midterm exam 30%, and~~

- final exam ~~40%~~ **50%**.

The 4 quizzes are 50 minutes each, during discussion sessions, in Weeks 4, 7, 12, 15.

~~The midterm exam is tentatively scheduled on April 9, 2–4 pm.~~

Homework

The assigned problems for each week are due at the beginning of each discussion session (**Wednesdays at 7 pm until in-person classes begin**), listed on the Schedule page.

Students must make arrangements in advance if they will not be handing in homework on time. We encourage you to discuss homework problems with your classmates, including strategies for solving different kinds of problems. However, when you actually write up your solutions, you must do this on your own.