MA 242 Linear Algebra

Spring 2021

Professor: Jennifer Balakrishnan (`jbala@bu.edu`)
TF: Monica Zhang (`yixuanz@bu.edu`)
Course hours: TR 2:00 - 3:15 PM on Zoom
Discussion: W 8:00 - 8:50 AM (PHO 201) or 9:05 - 9:55 AM (PHO 201) or 10:10 - 11:00 AM (CAS 325)
See Zulip for Zoom links.
Office hours: Balakrishnan: TR 3:15 - 4:15 PM or by appointment on Zoom
Zhang: W 1:00 - 3:00 PM on Zoom
Text: Lay, *Linear Algebra and its Applications*, 5th edition
Course website: http://math.bu.edu/people/jbala/242.html
Zulip: https://ma242.zulipchat.com/

Material: This course will cover the basic concepts of systems of linear equations and their solutions. The first half of the course will emphasize computational techniques, with applications to physics, applied mathematics, economics, and engineering. The second half of the course will cover matrices as linear transformations on vector spaces. We will cover Chapters 1-5 and further topics, time permitting.

Lectures: All lectures will be recorded for the benefit of registered students who are unable to attend live sessions due to time zone differences, illness or other special circumstances. The recordings will be posted on our password-protected Zulip site and will not be shared publicly. If you have concerns about the course being recorded, please let me know.

Zulip: We'll use Zulip to facilitate asynchronous discussions, ask/answer questions, form study groups, etc. (It's like Slack, if that helps.) If you've never used Zulip or Slack, don't worry – the first homework assignment will involve a friendly introduction to Zulip. The Zulip site will only be available to those registered in the course, while the course website is public-facing. So homework assignments and lecture notes will be posted on the course website, while other materials like the recorded lectures will only be available on Zulip. (You will receive an invitation to join our Zulip discussion server before our first lecture; if not, please contact me.) Please register for Zulip using your first and last name.

Grading: Homework will be due weekly and submitted on Gradescope. There will be midterm exams on **March 11** and **April 20** and a final exam, all submitted on Gradescope. The midterm exams each count for 20% of the grade, the final counts for 30%, and homework counts for 30%.

Homework: Homework will be due one week after it is assigned. You are welcome to work with others on your homework; please acknowledge your collaborators on the first page of your write-up.

Computer packages: Some homework problems will involve computer calculations. I recommend the open-source software package SageMath, which can be either be used in the cloud at http://www.cocalc.com or via a free download from http://www.sagemath.org.

We're in the middle of a pandemic: It's a difficult time. I understand that there will be some weeks where other things get in the way. You may receive an automatic one-week extension for any two homework assignments during the course. If you find yourself needing more than two extensions, please email me, so that we can discuss how you can stay on schedule and meet the course requirements. I want to make sure you have a productive semester learning linear algebra.

Accommodations: Students with documented disabilities may be entitled to accommodations in this course that may include, but are not limited to, additional time on exams, staggered homework assignments, and note-taking assistance. If you believe you should receive accommodations, please contact the Office of Disability & Access Services (`access@bu.edu`) to discuss your situation. This office can give you a letter that you can share with me outlining the accommodations you should receive.

Cheating: Boston University's policies on cheating are spelled out in the BU Academic Conduct Code, available at http://www.bu.edu/academics/resources/academic-conduct-code/. These policies will be followed in this class.