SYLLABUS

MA242 Linear Algebra

Fall 2017

Professor: Steve Rosenberg
Office: MCS 248; phone 3-9556
Office Hours: Wednesday 11-12, 1-3 or by appointment
Course Hours: T/Th 3:30-4:45 in MCS B33; discussion T 12:30-1:20 in MCS B33
Text: Lay, *Linear Algebra and its Applications*, 5th edition
Website: `math.bu.edu/people/sr`
Course Website: Blackboard via `learn.bu.edu`
Email: `sr@math.bu.edu`; Be sure to check your Blackboard regularly for course announcements.

Material: The course will cover the basic concepts of systems of linear equations and their solutions. The first half of the course will emphasize calculational 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 if time permits.

Grading: There will be two in-class exams and a final. There will be a brief quiz at the beginning of each discussion section. The in-class exams each count for 20% of the grade, the final counts for 20%, the quizzes count for 10%, and homework counts for 30%. The only acceptable excuses for missing an exam, quiz or homework due date are legal reasons such as jury duty, substantiated illness, family emergency or religious reasons. Make-up exams for in-class exams are not given. If you miss an in-class exam for an acceptable reason, your remaining in-class exam will count for 40% of your grade.

Homework: The homework assignments are listed below. Homework will be due one week after it is assigned. Late homework will not be accepted. Since the answers to the odd-numbered problems are in the back of the book, you must give complete answers on all problems to receive credit. I cannot emphasize enough the importance of doing the homework problems – I think it is impossible to do well in the course without keeping up with the homework. You are welcome to work with others on your homework.

Computer packages: Some homework problems will involve computer calculations. Go to the book's website at `http://wps.aw.com/aw_lay_linearalgebra_5/` and click on student resources to find introductions to computer algebra packages (*Getting Started with Technology* in the left hand column) such as Maple, Mathematica and Matlab. You can download all data sets to avoid tedious typing in of data by clicking on *Data Sets* in the left hand column. Free student versions of Matlab and Mathematica are available if you log onto your BU account at the computer lab Common@Mugar at Mugar Library. Once you log on, hit the Start button, then select Run, then enter Matlab or Mathematica. Both programs come with tutorials.

For remote access to Matlab and Mathematica, you will need to get an account on the scc-lite.bu.edu server. You will need to install X window software on you computer. Information on getting an scc-lite account and free versions of X window software for PCs and Macs are available at
`http://www.bu.edu/tech/services/support/desktop/computer-labs/unix/`

You can use another system (such as TI-86, TI-85, etc.) if you prefer. Perhaps the best system is Wolfram Alpha, which has worked linear algebra examples at
`https://www.wolframalpha.com/examples/Matrices.html`.

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

Cell phones and laptops: No use of laptops, cell phones, smart phones, texting, etc. in class.

Outline of Contents

Final Exam: Tuesday, December 19, 3-5 pm

***Warning:** The dates of the in-class exams may be changed.