

Math 307 (202) Applications of Linear Algebra – 2016W Term 2

Lecture: 11AM-12:30PM TuTh in LSK 200

Course website: <http://www.math.ubc.ca/jtzou/TEACHING/MATH307.html>

Instructor: Justin Tzou (jtzou@math.ubc.ca)

Office Hours: By appointment - I am in everyday but try to make your appointments on Tuesdays and Thursdays if possible. I will also usually be available right after class for quick questions. My office is in a no-student area - the default meeting place will be in the seating area on the fourth floor of ESB by the elevator.

Textbook: The main text that we will follow is available on the course website. Other textbooks that you may find useful as references include

- Linear Algebra and Its Applications, by Gilbert Strang
- Elementary Linear Algebra with Applications, by Howard Anton and Chris Rorres

Grades:

- assignments: 25%
- midterm: 25%
- final exam: 50%

An alternative grading scheme may be applied if it is more advantageous to you. While you are encouraged to work together on assignments, **all work that you submit for grading must be your own. In particular, the figures that you are asked to generate must be made by code that you write yourself.**

There will be approximately 6-8 assignments over the course of the term, all weighted equally. Your worst assignment grade will be dropped. No late assignments will be accepted.

The midterm will be held during class time in LSK 200 on **Thursday Mar. 2**. The midterm grade of those students who miss the midterm exam (**with proper documentation given within 72 hours of the midterm**) will be replaced by that obtained on the final exam. **There will be no makeup exams given under any circumstances.**

For the midterm and final exam: no calculators, no notes, no books, no cell phones or other electronic devices of any kind.

Computational aspect of assignments – MATLAB/GNU Octave:

To complete the work for this course, you will need access to MATLAB software. MATLAB is a widely used program for numerical computations with matrices. **As a UBC student, you may obtain a free Student Version [here](#) – this version will be sufficient for this course, and I strongly recommend you go with this option.** You can also access MATLAB in the math department computer labs. These are located in LSK 121 and 310. The labs hours are posted [here](#). You may use any free terminal in the labs during these times. You will need an account to use the terminals – please let me know if you need access. If you prefer, you may also use GNU Octave, which is an open source MATLAB clone that is available for

free. It is included in most Linux distributions. Windows and Mac versions are available for free download. However, I will probably only be able to answer questions regarding MATLAB.

Course plan:

From the main text above, we will plan to cover approximately the following sections (time considerations will dictate what we ultimately cover):

- Chapter I: everything except for I.2.4 and I.2.5
- Chapter II: all of II.1, all of II.2, II.3.1-7 (inclusive)
- Chapter III: all of III.1 except for III.1.5, all of III.2, all of III.3, (III.4 is not covered in the exam), III.5.1
- Chapter IV: all of IV.1 except for IV.1.10, IV.2.1-3 (inclusive), IV.2.5, all of IV.3, IV.4, IV.6.1-2 (inclusive), IV.7.1-3 (inclusive)