MATH 313 Spring 2017

Instructor: Lechao Xiao
Lecture: TTH 1:30pm-3pm, Room: DRL 3C4
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Email: xle@math.upenn.edu
Office Hours: TBA
TA: Jacob Hansen.

Textbook: *Introduction to Linear Algebra, by* **Gilbert Strang** *Fourth edition*

Course Website: Course materials/communications will be posted on Canvas:
https://canvas.upenn.edu/courses/1351019

Course Description: We plan to cover chapters 1-8 in Strang's book. Chapters 1-7 form the foundation for understanding linear algebra. This includes: solving linear systems equations, vector spaces, orthogonality and GramSchmidt algorithm, determinants, eigenvalues and eigenvectors, and linear transforms. Important applications from Chapter 8 will be sprinkled throughout the course.

Prerequisites: Math 114/ 115 or permission of the instructor.

Grading policy: Your grade for the course will be determined based on the following factors:

 (I) **Homework**: 30%

 (II) **Two Midterm Exams**: 20% each

(III) **Final**: 30%

(IV) **Bonus Project:** extra 5%.

Homework: There will be around 8 homework assignments. Collaboration on homework assignments is encouraged, but any work you turn in must be your own. If you collaborate with other students, please write down their names. Some assignments will need to be sent to the grader electronically. Late homework will not be accepted but I will drop your lowest homework score.

Programming Throughout this course, we will play around with MATLAB (or the open source alternative, Octave.) Many homework assignments will involve programming. Any code you turn in must be your own work; copying is strictly prohibited and considered to be a serious cheating problem! If you have little or no prior programming experience, you must be willing to learn as you go.
   MATLAB is available in on-campus computer labs, see the link below
https://www.seas.upenn.edu/cets/software/matlab/). You may wish to consider purchasing your

own copy, or using the free program Octave. These two languages are identical and have similar functionality.

Exams: There will be two in-class midterm exams and one final. Please let me know within the first two weeks if you have a conflict with any of these dates. Absence from an exam is a serious problem. Depending on circumstances, you may or may not be allowed to make up a missed midterm exam.

1. Midterm Exam 1: Feb 14th, Tuesday, in-class.

2. Midterm Exam 2: March 21st, Tuesday, in-class.

3. Final Exam: April 25th, Tuesday, in-class.

Students with Disabilities: Please dont hesitate in contacting SDS: http://www.vpul.upenn.edu/lrc/sds/.

Code of Academic Integrity : The following is from the Universitys website on academic integrity "Since the University is an academic community, its fundamental purpose is the pursuit of knowledge. Essential to the success of this educational mission is a commitment to the principles of academic integrity. Every member of the University community is responsible for upholding the highest standards of honesty at all times. Students, as members of the community, are also responsible for adhering to the principles and spirit of the following Code of Academic Integrity found here http://www.upenn.edu/academicintegrity/ai_codeofacademicintegrity.html If a student is unsure whether his action(s) constitute a violation of the Code of Academic Integrity, then it is that students responsibility to consult with the instructor to clarify any ambiguities."

Your Personal Information(Optional)
Name:

Major and Year:

Interests:

Say something about yourself that helps me to know you:

Your motivation to attend this course:

What do you expect from this course: