Purdue University

MA 26500, Spring 2016

Instructor's Name: Yuanzhen Shao

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Office Hours and location: Monday 12:30-3:30pm or by appointment, MATH 850.

Important Websites:

Course Webpage:
http://www.math.purdue.edu/academic/courses/coursepage?subject=MA&course=26500

Section Webpage: http://www.math.purdue.edu/~shao92/teaching/MA%2026500.html

Important Dates

Last day for a student to drop a course

-without it being recorded: January 25 2016;

-without a grade: February 8 2016;

-with a passing or failing grade: March 11 2016.

Course Description

During this course, we will cover the following topics: Gauss elimination, algebra of matrices, determinants, vector spaces, linear transformation, inner products, eigenvalues and eigenvectors., and their applications.

Required Texts

Kolman & Hill, *Elementary Linear Algebra and Applications*, 9th Edition (plus Matlab Workbook).

Course Policies

Grading

Course grades will be determined from your total score which will be computed as follows:

Homework	*25%*
Two midterms, 20% each	*40%*
Final Exam	*35%*
Total	*100%*

The two lowest homework scores will be dropped.

You will be allowed to take a make-up test only in very special circumstances. See Section Attendance below for more details. If you have to miss an exam, contact the instructor as soon as possible.

Homework and Schedule

Homework problems to be handed in will be assigned on a weekly basis. The primary way to submit homework will be through WebAssign. There will also be hand-written homework and MATLAB homework submitted on paper. For Matlab homework, scripts need to be printed out on paper and you need to put a line of comment to highlight your answer if it is not alredy clear. The Assignment sheet is available on the course webpage.

Homework assignments are due on every Friday and will correspond to the lessons covered in the previous week. For example, on Friday, Jan. 22, you are expected to turn in the assigned problems from material covered on the week of Jan. 10-16, which corresponds to Book 1.1-1.3 and Matlab 1.1. The only exceptions are Feb. 26 and Apr.

1. These are the Fridays after exams. 0n Mar. 4, the homework assigned during both the week of Feb. 14-20 and the week of Feb. 21-27 will be collected. On Apr. 8, the homework assigned during both the week of Mar. 20-26 and the week of Mar. 27-Apr. 2 will be collected. Assigned hand-written and Matlab problems will be collected every Friday in class.

Notice, however, that depending on the pace of the course, small adjustments to the schedule may have to be made, in which occasion the problems which are due may also change. An up-to-date schedule will be maintained on Webassign and the section webpage: http://www.math.purdue.edu/~shao92/teaching/MA%2026500.html,

indicating which problems will be collected on each coming Friday.

No homework assignment will be accepted after its due day. The students should be responsible for handing in homework assignments on time.

Each set of hand-written and Matlab homework carries 10 points in total. In every set of assigment, all Matlab problems count as one hand-written problems. For example, in the assignment due on April 22, there are 5 Matlab problems and 3 hand-wrttien prolems, then each hand-written problem carries 2.5 points and all 5 Matlab problems carry 2.5 points.

Matlab

Useful resources for Matlab can be found in the section webpage:

http://www.math.purdue.edu/~shao92/teaching/MA%2026500.html

Calculators

Calculators will not be allowed on exams. It is important that you learn to do simple manipulations by hand.

Cheating

The Mathematics Department, following Purdue Policy, prohibits academic dishonesty. Violations will be punished to the maximum possible extent set forth in the Purdue Policy on academic dishonesty; see http://www.purdue.edu/studentregulations/student conduct/regulations.html

Attendance

The student who misses a class meeting is responsible for any assignments and/or announcements made. Office hours will not be utilized to re-teach material presented in class.

Students are expected to be present for every meeting of the classes in which they are enrolled. Only the instructor can excuse a student from a course requirement or responsibility. When conflicts or absences can be anticipated, such as for many University sponsored activities and religious observations, the student should inform the instructor of the situation as far in advance as possible. For unanticipated or emergency absences when advance notification to an instructor is not possible, the student should contact the instructor as soon as possible by email, or by contacting the main office that offers the course. When the student is unable to make direct contact with the instructor and is unable to leave word with the instructor's department because of circumstances beyond the student's control, and in cases of bereavement, the student or the student's representative should contact the Office of the Dean of Students.

Conflicts arising from personal travel plans or social obligations do not qualify as excused absences.

Accommodations for Students with Disabilities

If you have been certified by the Disability Resource Center (DRC) as eligible for academic adjustments on exams or quizzes see http://www.math.purdue.edu/ada for exam and quiz procedures for your mathematics course or go to MATH 242 for paper copies.

In the event that you are waiting to be certified by the Disability Resource Center we encourage you to review our procedures prior to being certified. For all in-class accommodations please see your instructors outside class hours –before or after class or during office hours – to share your Accommodation Memorandum for the current semester and discuss your accommodations as soon as possible.

Webassign

If you have enrolled in this class through Purdue Banner, you can login Webassig from http://www.webassign.net/purdue/login.html

by using your purdue careeer account information. An instruction to how to use Webassign can be found on the section webpage:
http://www.math.purdue.edu/~shao92/teaching/MA%2026500.html

The following website also contains lots of useful information:
http://intranet.math.purdue.edu/webassign

You have a two-week grace period before you have to enter a WA access code or buy access online. (You will be prompted to do so after you login.)

You can either purchase the Purdue Edition (which comes with WA access code – one semester access only) at the Purdue University Bookstore or Follett's or you can buy the book and online access code separately. There is no e-book option.

After a two week grace period, the students must pay a non-refundable access fee.

You can ask questions on assignments by clicking Ask Your Teacher button in Webassign. I will sign on and respond on Tuesday and Thursday 7:00pm-7:30pm.

Tips for answering Webassign homework

(A) whenever possible, always enter exact expressions (not approximations from calculators), unless told otherwise by the question.

(B) for numerical answers, as a rule of thumb, always enter at least four decimal or four significant digits.

(C) Capital and small letter variables are different: Π (Pi), π (pi), Φ (Phi), φ (phi), Θ (Theta), θ (theta), etc.

(D) questions which prompt for the open or close brackets "(", ")", "[", "]" are treated as True/False questions and hence allow only one chance.

Useful Resources

For a better idea of what will be on the final, see the following link to the past exam archive of MA 26500:

http://www.math.purdue.edu/academic/courses/oldexams?course=MA26500

If typically you can learn things only by seeing tons of examples, you should have a look at the textbook "Schaum's outline of Linear Algebra" (or one of its variants).

Class Schedule

This syllabus is subject to change.

Date	Sections	Webassign HW	Hand-written HW and Matlab HW	HW due in class	Remarks
Jan. 11	Book 1.1 Matlab 1.1	Book 1.1: 1,2,4,6,10,14,16,22	Matlab 1.1: 1,2,3,4		
Jan. 13	Book 1.2	Book 1.2: 4,6,8,10			
Jan. 15	Book 1.3	Book 1.3: 12,14,16,18,19,26,30	Book 1.3: 28		
Jan. 20	Book 1.4 Book 1.5 Matlab 3.1	Book 1.4: 8,10,12,22,32 Book: 16,30,32,32,35,36	Book 1.4: 3 Matlab 3.1: 1,2,5		
Jan. 22	Book 2.1	Book 2.1: 2,6,8,12	Book 2.1: 10	Matlab 1.1: 1,2,3,4 Book 1.3: 28	
Jan. 25	Book 2.2 Matlab 4.2 Matlab 4.3	Book 2.2: 4,6,8,10,12,14,16,20,22,26	Matlab 4.2: 2,3 Matlab 4.3:1,2		
Jan. 27	Book 2.3	Book 2.3: 7,8,9,17,19,20			
Jan. 29	Book 3.1	Book 3.1: 3,5,11		Book 1.4: 3 Matlab 3.1: 1,2,5 Book 2.1: 10	
Feb. 1					No class meeting
Feb. 3	Book 3.2 Matlab 8.1	Book 3.2: 2,3,4,7,23,25,26	Book 3.2: 10,14,15,17 Matlab 8.1: 5,6		

Feb. 5	Book 3.3	Book 3.3: 4,6,7		Matlab 4.2: 2,3 Matlab 4.3:1,2	
Feb. 8	Book 3.4 Book 3.5	Book 3.4: 1,2,3 Book 3.5: 1,2,3			
Feb. 10	Book 4.1	Book 4.1:,5,6,8,11,14,15,16, 17,19	Book 4.1: 2		
Feb. 12	Book 4.2	Book 4.2: 2,8,10	Book 4.2: 12	Book 3.2: 10,14,15,17 Matlab 8.1: 5,6	
Feb. 15	Book 4.3	Book 4.3: 2,6,10	Book 4.3: 4		
Feb. 17	Book 4.3 Matlab 6.1	Book 4.3: 16,17,19,33, 34	Book 4.3: 28 Matlab 6.1: 1,2,4,8		
Feb. 19	Book 4.4	Book 4.4: 3,4,5,6, 7, 10, 12	Book 4.4: 13,15	Book 4.1: 2 Book 4.2: 12	
Feb. 22					Review Session for Exam 1
Feb. 24	Book 4.5 Matlab 6.2 Matlab 6.3	Book 4.5: 4, 5, 6, 11,12, 15, 16	Matlab 6.2: 1, 2,6 Matlab 6.3: 1		
Feb. 26	Book 4.6	Book 4.6: 2,3,7,8,11,12			
Feb. 29	Book 4.6	Book 4.6: 14,15,16,17,19, 20, 23, 24			
Mar. 2	Book 4.7	Book 4.7: 2ab,5,6,7 8, 10, 11,12			
Mar. 4	Book 4.9 Matlab 6.4	Book 4.9: 1,3,6, 8, 9,10, 13	Matlab 6.4: 2	Book 4.3: 4 Book 4.3: 28 Matlab 6.1: 1,2,4,8 Book 4.4: 13,15 Matlab 6.2: 1,	

				2,6 Matlab 6.3: 1	
Mar. 7	Book 4.9	Book 4.9: 12,14,16, 20,22, 29, 30,32, 34,36	Book 4.9: 35		
Mar. 9	Book 5.1	Book 5.1: 2,6,8,10, 17, 18,25,26, 27, 28			
Mar. 11	Book 5.3 Matlab 9.1 Matlab 9.2	Book 5.3: 8,29,33,34	Matlab 9.1: 1 Matlab 9.2: 2	Matlab 6.4: 2	
Mar. 21	Book 5.4 Matlab 10.3	Book 5.4: 1,3,10,11,14, 16, 22, 28	Matlab 10.3: 1,2, 7		
Mar. 23	Book 5.5 Matlab10.2	Book 5.5: 1a,3, 4, 7, 12,14,16, 18, 20	Matlab10.2: 1, 3, 4, 6, 7		
Mar. 25	Book 5.6	Book 5.6: 3,11,12		Book 4.9: 35 Matlab 9.1: 1 Matlab 9.2: 2	
Mar. 28	Book 6.1	Book 6.1: 1,2,7,10,11,12,13,14	Book 6.1: 19		
Mar. 30					Review Session for Exam 2
Apr. 1					No class meeting
Apr. 4	Book 7.1 Matlab 13.2	Book 7.1: 5,6,7,8,17,18	Matlab: 13.2: 1,2,5		
Apr. 6	Book 7.2	Book 7.2: 6,7,8,10,11			
Apr. 8	Book 7.2	Book 7.2: 12,13,15,17,19		Matlab 10.3: 1,2, 7 Matlab10.2: 1, 3, 4, 6, 7 Book 6.1: 19	
Apr. 11	Book Appendix B1	Book Appendix B1: 1,2,7,9			

Apr. 13	Book Appendix B2 Matlab 1.2	Book Appendix B2: 1,3,4,5,11	Matlab 1.2: 1,2,4,5,6		
Apr. 15	Book 7.3	Book 7.3: 2	Book 7.3: 1,8,10	Matlab: 13.2: 1,2,5	
Apr. 18	Book 7.3	Book 7.3: 18,19,20,22	Book 7.3: 14		
Apr. 20	Book 8.4	Book 8.4: 1,2,5,6,7,10			
Apr. 22	Book 8.4 Book 8.5	Book 8.4: 3,8,9	Book 8.4: 3,8,9 Book 8.5: 1,2,5,6	Matlab 1.2: 1,2,4,5,6 Book 7.3: 1,8,10	
Apr. 25	Book 8.5		Book 8.5: 3,4,7,8		
Apr. 27					Review Session for the Final
Apr. 29				Book 7.3: 14 Book 8.4: 3,8,9 Book 8.5: 1,2,5,6 Book 8.5: 3,4,7,8	Review Session for the Final