

ELEMENTARY LINEAR ALGEBRA

MATH 2270, Course #20895, Fall 2007

http://faculty.weber.edu/aghoreishi/Math2270_f07/Math2270_f07.asp/

Text: Required: Linear Algebra and Its Applications by David C. Lay, Addison Wesley, 3rd Edition, 2003, ISBN 0-201-70970-8.
Optional: Study Guide, Linear Algebra and Its Applications by David C. Lay, Addison Wesley, 3rd Edition, 2003, ISBN 0-201-77013-X.
A copy of this book is available in Mathematics Students' Room, B4, Rm. 507.

Prerequisites: Math 1220.

Class Meetings: 12:00-12:50 MWF, B4 Rm. 510.

Instructor Information: Dr. Afshin Ghoreishi, B4 Rm. 505A, <http://faculty.weber.edu/aghoreishi/>, M 11:00-11:50, T 11:00-12:30, W 9:00-9:50 and TH 9:50-10:20. At other times, you can see me whenever I am in my office and not busy. You can also see me by making an appointment.

Procedures: I will try to answer a few questions at the beginning of each class, but this time will be limited. Be prepared for each class by working on prior homework and reading the book ahead of time. You are encouraged and expected to read the book on your own.

We will have weekly homework, two exams and a comprehensive final exam. **Do not enter the class late & do not come to class if you have to leave early. Turn off pagers, cell phones and other such disruptive devices.**

Homework: A problem list composed of two parts is attached. To be successful in this class you should be able to solve all of them. I will collect all problems listed under the heading "To be Turned In". Every Monday I will announce the sections which will be due. Homework will be due **Friday 1:00 pm**, in the gray plastic holder on my office door. In addition, two homework will be computer labs using Mathematica commands relevant to our course. It is assumed that you are familiar with a computer algebra system. The computer algebra system available to us is Mathematica. If you are not familiar with a computer algebra system, complete the lab titled "An Introduction to Mathematica" immediately. All labs are available in the course website and you may use any computer algebra system. These two homework will be due the last day of class.

Do not solve problems side-by-side, write only on one side of each page and staple your homework. Write your name on the top center position of the front page and number your pages, for example: 1/7, 2/7, ... , 7/7 (if there are a total of 7 pages), on the top right hand corner of each page. **No** late homework will be accepted.

Exams: Exams I & II will be mostly computational and conducted in class. The final exam will consist of two parts: computational and theoretical. The theoretical part will be open book, with no time limit, and will be administered at the SC testing center. The computational part will be an one-hour comprehensive in-class exam. Exams will not require graphics/programmable calculator, however, you may use a scientific calculator. Sample tests will be available in the course website. **No** make-up exam will be given.

Exam I	Fri,	Oct 5 (tentatively chapters 1 & 2)
Exam II	Wed,	Nov 21 (tentatively chapters 3-5)
Final (theoretical portion)	Mon, Dec 10 -	Wed, Dec 12
Final (computational portion)	Wed,	Dec 12 (12:00-1:00)

The SC Testing Center is located in the Student Services Center, Rm. 262, and will be open 7:30 am - 8:00 pm M-TH, 7:30 am - 4:30 pm F, 9:00 am - 4:30 pm Sat. You must finish an exam within one hour after the closing time. You must also take along a picture I.D. We will meet for our regular lectures during exam days.

Extra Credit: You can earn 10 extra points by correctly solving and submitting your solution to any problem posted in certain mathematics journals. I will give out such problems and will also provide some advice, upon your request. You can earn up to 20 extra points.

Grading: Exams will be curved as needed, but a minimum standard will be retained regardless of the class performance. A typical exam scale is [0,55) E, [55, 67) D range, [67, 80) C range, [80, 90) B range, [90, 100] A range. Homework and computer exercises will have the standard scale.

Exam I & II (100 points each)	200 points	(20 percent per exam)
Homework	100 points	(20 percent)
Final Exam	200 points	(40 percent)
<i>Extra Credit (optional)</i>	<i>up to 20 points</i>	

Total	500 points	

It is possible to customize the above percentage values for best numerical representation of your learning. If you would like to take advantage of this, you must talk to me before the 2nd exam.

Extra Help: Room 507, Mathematics Students' Room, is a perfect place to study! A copy of the book's study guide has been placed in this room.

Other Important Dates:

Labor Day Holiday	Sept 3
Last day to cancel	Sept 14
Fall Break	Oct 19
Last day to drop with a grade of W	Oct 26
Thanksgiving Holiday	Nov 22-23

If you decide to drop this class, please inform me of your decision.

Course Coverage and Problem List for Elementary Linear Algebra (The problem list may be adjusted as needed.)		
Section		To Be Turned In
1.1	2, 6, 8, 12, 15-18, 21, 23, 24, 26, 27, 32	2, 8, 12, 16, 18, 26, 32
1.2	1-4, 7, 9-12, 13, 15-24	2, 4, 12, 16, 18, 20, 24
1.3	1-9, 11, 12, 14, 16-18, 20, 22-25, 29, 32	2, 6, 8, 12, 16, 20, 26
1.4	1, 5-7, 9, 10, 12, 13, 15-19, 24, 25, 26, 29, 30, 32-34	6, 10, 12, 16, 30, 32, 34
1.5	1-3, 5, 8, 12, 13, 17, 18, 25, 28, 29-32, 37, 40	2, 6, 12, 18, 28, 32, 40
1.6	Independent Study	
1.7	1-3, 5-7, 9, 10, 12, 13, 16, 18, 19, 21-25, 29, 31, 32	2, 6, 10, 16, 18, 26, 32

Course Coverage and Problem List for Elementary Linear Algebra (The problem list may be adjusted as needed.)		
Section		To Be Turned In
1.8	1-3, 4, 7, 8, 10, 12, 14, 17-19, 22, 24-26, 29, 31, 33-35	2, 4, 10, 12, 16, 24, 26
1.9	2-4, 6, 8, 9, 11-13, 15, 17, 19, 25-27, 29-32, 34, 35, 36	2, 6, 8, 12, 26, 30, 36
1.10	Independent Study	
2.1	1-8, 10, 12, 16, 22-24, 28	4, 6, 10, 12, 22, 24, 28
2.2	1, 3, 5, 6, 8, 9, 11, 13, 16, 18, 19, 21, 22, 24, 25, 29, 31, 32	3, 6, 8, 16, 18, 22, 24, 32
2.3	1-8, 11-14, 23, 24, 36, 37, 39, 40	2, 4, 6, 12, 14, 24, 36
2.5	1-4, 6-13, 17, 18, 26	3, 8, 10, 12, 18, 26
3.1	1-3, 10-12, 15, 16, 22, 23, 25, 27, 29, 31, 32, 38-40	2, 10, 12, 16, 22, 32, 38
3.2	3-9, 11-19, 23-25, 28, 29, 32, 40, 42	2, 8, 12, 18, 24, 40, 42
3.3	1, 2, 5, 6, 8, 9, 12, 13, 17, 19, 20, 27, 28	2, 6, 8, 12, 20, 28
4.1	1-17, 20-22, 30-32	2, 8, 10, 12, 20, 22, 32
4.2	1-3, 5-9, 11, 15-18, 24, 26, 28-32, 34, 35, 36	2, 6, 8, 16, 18, 24, 30
4.3	1, 3-5, 7-12, 14-16, 19, 20, 22, 24, 26, 27, 29-34	4, 8, 10, 12, 16, 24, 32
4.4	1-5, 7-11, 13-16, 18-20, 21, 23-27, 29	2, 4, 8, 10, 14, 24-26
4.5	1-3, 5, 7, 8, 10, 11, 13, 17, 19, 21-28	2, 8, 10, 12, 14, 22, 24
4.6	1-4, 7-11, 15, 16, 21, 24, 27-30	2, 4, 8, 10, 16, 24, 28
4.7	1-16, 20(a)	2, 6, 10, 14, 16, 20(a)
4.9	Independent Study	
5.1	1-6, 8-10, 12-15, 17, 19, 20, 21, 24-26, 31-33	2, 4, 6, 10, 16, 24, 26
5.2	1-5, 7, 9-11, 14-17, 20, 23-27	2, 10, 14, 16, 20, 24, 26
5.3	1-4, 6-9, 11-13, 21, 23, 24, 26, 27, 29, 31, 32	2, 4, 8, 12, 24, 28, 32
5.5	1-5, 7-11, 13-15, 17, 22-24, 26	2, 4, 8, 10, 14, 22, 26
5.7	Independent Study	
6.1	1-8, 11-16, 19, 21, 22, 24-31	2, 6, 12, 16, 22, 24, 26
6.2	1-11, 14-18, 21, 23, 26-31	2, 6, 8, 10, 16, 26, 28
6.3	1-4, 6, 9, 10, 12, 14, 16-21, 23, 24	2, 4, 6, 10, 12, 16, 24
6.4	1-9, 12-14, 16, 17, 19	2, 4, 6, 8, 12, 14, 16
6.7	Independent Study	