**Course**

Math 343 H: Honors Elementary Linear Algebra  
Lecture: MWF 2-2:50 pm 136 TMCB  
Lab: TTh 2-2:50 pm 150 TMCB  
Text: Linear Algebra with Applications. Steven Leon; 7th Edition

**Instructor**

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Office Hours: MWF 3-4 pm; F 1-2 pm (Math Lab)

**TA/Lab Instructor**

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**Introduction**

Linear algebra is the study of vectors, vector spaces, linear transformations, and systems of linear equations. Vector spaces are a central theme in modern mathematics, both pure and applied. Linear algebra has extensive applications in both the natural and social sciences, since nonlinear models can often be approximated by linear ones. Linear algebra is used more than any other form of advanced mathematics in industry and science.

**Expectations**

The primary responsibility of students is to learn and the primary responsibility of instructors is to teach. I will take my responsibility seriously and I ask the same from you. Unfortunately, our educational system requires that you worry about earning a grade and that I worry about assigning one. I will do my best to make sure that the pursuit of grades does not get in the way of learning. I will also assume that your primary motivation is to learn the material, not just to get a passing grade. If all you want is a diploma you can buy them online.

**Attendance**

I will not take attendance. I will not require attendance. I will not give pop quizzes or give out test answers to penalize you for not attending. I will not be offended if you do not attend. I will make every effort to make all the course announcements, information, and materials available online so that if you miss class you can get caught up by checking the website. However, I strongly recommend regular attendance. I will do my best to make lectures something you will not want to miss. I will add insights that you will not easily get from the text.

**Resources**

I am available during my scheduled office hours [including one hour in the Math Lab] or by appointment. My schedule is very flexible and I can usually make time for students whenever it is convenient for them. However, I would ask you to respect my time by making an appointment before stopping by. If you "just stop by" my office I will probably not help you.
You are fortunate to have an excellent TA. He did exceptionally well when he took linear algebra. He has been the TA for the Honors section of linear algebra for the last two semesters. He is very qualified and knowledgeable. I suggest you take advantage of his expertise.

The course website provides you with the entire schedule for the semester, the assignments, and the labs. I will make announcements, post notes, and supplements, etc. We have also created a Google group that we would encourage you to join if you would like to receive email notification of announcements and changes. The join the Google group:

1. Email brandonkbic@gmail.com with "Join Math 343H Group" in the subject and your name in the body.
2. You will receive an email with an invitation to the Google Group. Please click on the link and follow the instructions to join.

Homework

Homework will be due the lecture after the material for that assignment is covered. A complete schedule of assignments is available online. Most of the homework assignments are rather small. However, I have very high expectations on the quality of your work. Take pride in your work. Make your solutions clear and legible. Explain your solutions carefully. Examples of homework solutions that represent the quality I expect are available on the website.

Homework may be turned in anytime on the day it is due. You are welcome to turn it in during class, during office hours, or in my box (in 295 TMCB). Homework will be graded by the TA. However, if you have any questions or complaints about points you missed or the way your assignment was graded, please take them up with me, not the TA.

Grading late homework is not convenient. It is hard to be consistent and fair when students are allowed to turn in late assignments. However, I understand that for whatever reason you may not be able to turn in your homework on time. Therefore, I will accept late homework. However, it will be graded by me and not by the TA. Furthermore, I will not be particularly generous on late homework. That doesn’t mean you won’t get full credit. In fact, you will likely either get full credit or no credit. If your assignment is so well done that I cannot resist grading it then you will probably get full credit. Otherwise I will probably save myself the time and just give you a zero. Because of this policy, please do not bother giving excuses for late homework; just turn it in and remember that you justify your late assignments with the quality of your work, not how compelling your reasons are.

Because late homework is handled and treated separately, please CLEARLY indicate that the assignment is late (for example, you could write LATE in big bold letters across the top).

Exams

There will be four exams during the semester. Each will be weighted equally. The final exam is just a glorified midterm. It does not count for more points, nor is it comprehensive, although you will certainly need to be comfortable with the topics discussed in the beginning of the semester to solve problems later in the semester.

Exams are two-part; the first part is take-home. It will be worth approximately 25% of your grade on the exam. You are welcome to use your text book for the take-home portion, but please do not work together or get help from the Math Lab/friends/etc. You are welcome to come ask me if you get stuck on these assignments.
The second part of each exam will be given in the testing center. It is closed-book, closed-note and will consist of true/false, multiple choice, and a few short response questions. I will give you a study sheet to prepare for each exam, as well as a practice exam. You will not have to solve new problems you have not seen. Many of the problems will be taken directly from lectures or homework.

Labs

Labs are unique to the Honors course. They are also quite possibly the most useful part of the course. You will be using a computational package called MATLAB, which is an industry standard. Acquiring this skill will increase your understanding of linear algebra, allow you to solve much larger and more complex problems than you could dream of doing by hand, and is also a highly marketable skill. The Tuesday and Thursday class time will be held in a computer lab with the TA so that you can work on the lab assignments. You are not required to attend the labs, but I think you will find it helpful. You can easily complete each lab in under an hour with the help and instruction of the TA.

Labs will be due each week by the end of Saturday [midnight]. I expect the same quality on your labs as I do on your homework. Example lab write-ups are available on the website. To submit your labs:

1. Prepare your entire lab write-up in a single file (DOC, DOCX, or PDF are acceptable formats). DO NOT use several files, separate pieces, etc.

2. Send your lab write as an email attachment to brandonkbic@gmail.com with the subject line: Last Name, First Name Lab #. For example, West, Jeremy Lab 1.

3. DO NOT paste your write-up in the subject or send multiple attachments. Your lab write-up should be one self-contained file that is attached to your email submission.

Grading

Your grade will be weighted as follows:

- Homework: 25 %
- Labs: 15 %
- Exams: 60 % (4 Exams, 15 % each)

If at the end of the semester the overall grades are lower than expected, I will curve them up. I don’t expect this, and you should not plan on it. In no case will I curve grades down.

Extra Credit

I don’t believe there is any useful way to give extra credit, so I don’t do it. If the grades are all too low, I will curve them up.

Preventing Sexual Harassment

Title IX of the Education Amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds. The act is intended to eliminate sex discrimination in education. Title IX covers discrimination in programs, admissions, activities, and student-to-student sexual harassment. BYU’s policy against sexual harassment extends not only to employees of the University but to students as well. If you encounter unlawful sexual harassment or gender-based discrimination, please talk to your professor; contact the BYU Equal Employment Opportunity Office at 422-5895; or contact the Honor Code Office at 422-2847.

Students with Disabilities
Brigham Young University is committed to providing a working and learning atmosphere that reasonably accommodates qualified persons with disabilities. If you have any disability that may impair your completing this course successfully, please contact the University Accessibility Center (422-2767). Reasonable academic accommodations are reviewed for all students who have qualified documented disabilities. Services are coordinated with the student and instructor by the UAC. If you need assistance or if you feel you have been unlawfully discriminated against on the basis of disability, you may seek resolution through established grievance policy and procedures. You may contact the Equal Employment Office at 422-5895, D-282 ASB.

Children in the Classroom

The serious study of the physical and mathematical sciences requires uninterrupted concentration and focus in the classroom. Having small children in class is often a distraction that degrades the educational experience for the entire class. Please make other arrangements for child care rather than bringing children to class with you. If there are extenuating circumstances, please talk with your instructor in advance.