

**Math 313 -03**  
***Elementary Linear Algebra***  
**Fall Semester 2018**

**Professor:** *Vianey Villamizar*  
**Office:** 342 TMCB

**Class:** 10:00 - 10:50 a.m. MWF 104 TMCB  
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**Office Hours:**       **Mon**    2:00 – 3:00 p.m. (Office)  
                               **Fri**     2:00 - 3:30 p.m. (Office)

**TA/Grader:** **Cameron Hernandez** [cameronbhernandez@gmail.com](mailto:cameronbhernandez@gmail.com)

Text: Linear Algebra and its Applications, 5th Edition, David C Lay, Addison-Wesley 2012.

Week #	Date	Sections	Comments
1	Sep 3 – Sep 7	Intro, 1.1-1.2	<b>Mon Sep 3 Labor Day</b> <b>Work hard and enjoy learning</b>
2	Sep 10 – Sep 14	1.2-1.3, 1.3-1.4, 1.5	Tuesday, Sep 11: Last day to drop the class
3	Sep 17 – Sep 21	1.7, 1.7, 1.8	
4	Sep 24 – Sep 28	1.9, 2.1, 2.2	
5	Oct 1 – Oct 5	2.3 2.4, Review	<b>Midterm 1</b> Testing Center Oct 4-8 (Th-Mon) <b>Special Review Session Wed Oct 3 (5 pm)</b>
6	Oct 8 – Oct 12	3.1, 3.2, 3.3	
7	Oct 15 – Oct 19	4.1, 4.2, 4.3	
8	Oct 22 – Oct 26	4.4, 4.5, 4.6	
9	Oct 29 – Nov 2	Review, 5.1, 5.2	<b>Special Review Session Mon Oct 29 (5 pm)</b> <b>Midterm 2</b> Testing Center Oct 29-31 (Mon-Wed)
10	Nov 5 – Nov 9	5.3, 5.5, 6.1	
11	Nov 12 – Nov 16	6.2, 6.3, 6.4	
12	Nov 19 – Nov 23	6.5-6.6, 6.7	Thanksgiving holiday Nov 21-23 (Wed-Fri) Tuesday Nov 20 is Friday Instruction
13	Nov 26 – Nov 30	Review, 7.1, 7.2	<b>Special Review Session Mon Nov 26 (5 pm)</b> <b>Midterm 3</b> Testing Center Nov 27-29 (Tue-Thu)
14	Dec 3 – Dec 7	7.3, 7.4, 7.4	
15	Dec 10 – Dec 14	Review (2)	Dec 13 Last day of class <b>Dec 14 Exam Preparation day</b>
16	Dec 17 – Dec 21		<b>Final Exam Days Dec 15 – 20</b> <b>in the Testing Center</b>

**Objectives:** A major goal for the students enrolled in this course is to master computations with the objects of linear algebra, as well as to develop critical thinking and logical inference. You should study two to three hours per class hour. During this time, work on your homework and read the material to be covered in the next class period. Not all material can be presented in class in which case students are responsible to learn it on their own. Solving homework problems for every class period is a key to understanding the subject. I support the statement that “Linear Algebra is only learned by doing.” Linear Algebra plays an important role in many disciplines today.

I believe that my role as your instructor is to help and assist you in the process of learning mathematics. I will do my best to fulfill this role. I know that we will enjoy this class as we go along by making a consistent effort throughout the semester. **My best advice to you is found in D&C 4:2 replacing the first line by ....**

**O ye that embark in Math 313, see that ye work with all ....**

The **learning outcomes** for this course are found at [http://www.math.byu.edu/wiki/index.php/Math\\_313](http://www.math.byu.edu/wiki/index.php/Math_313)

**Homework:** Homework for this course consists of online homework and written homework. For the online homework, you should register with the publisher online homework system MyMathLab and follow the guidelines. MyMathLab homework problems are drawn from the exercise sets in the book and are typically simple exercises at the beginning of the set to help you check your understanding of the definitions, theorems, and basic procedures from your reading. **For best learning complete as much of the online homework as you can before the lecture. It could take as little time as half an hour.** You will have until 5 pm to complete the online homework for the dates indicated in the homework schedule.

**Written Homework:** The written homework corresponding to a class period will be collected at the following class period by 5 p.m (or as stated in our syllabus). Place completed homework at the basket located in front of my office door, if you cannot give it to me in person. These two forms of homework will be combined to obtain a single homework grade. To help you with homework questions, I have set apart Wednesday evening as a special review session during my office hours from 5:00 pm to 6:30 pm. Our TA Cameron Hernandez and I will lead the discussion. I encourage all of you to come to this session and work together on the challenging homework problems.

**I expect that you do not work on your homework during the class period.** Solutions to exercises should be clearly written and adequately explained. In other words, it is insufficient just to write down the answer. **Late homework won't be accepted.** To make up for this your lowest four homework section grades will be dropped. This policy will take care of any extraordinary circumstances as for example a sickness, a wedding, and others. Discussion of homework assignments is allowed, but you should keep in mind that homework is an individual work.

**Homework Format (PLEASE ADHERE TO THE FOLLOWING HOMEWORK FORMAT):** Use one side only of standard letter-sized paper. Put your name at the top of each sheet. Keep problems in order, and label each problem with its number and page. Place only one problem in any horizontal space; visually separate consecutive problems by drawing a line between them entirely across the page. If the problem has a numerical answer, highlight it in some way. If the answer to a problem involves a sequence of logical steps, set them clearly. Use correct grammar and complete sentences.

To submit homework, stack the sheets in order and fold the stack lengthwise to form a "book" with the back of the last sheet on the outside. On the front of the "book," write your name, your Math 313 section, and the section of the text from which these problems are taken. Each homework sets should contain problems from only one section of the text. Homework problems to be graded will be chosen among the whole set of problems. Incomplete homework will receive partial credit according to the amount of problems worked out.

**Exams:** The Midterm exams will be given in the testing center. The exams will not be timed, but I expect each to take less than 2 hours. Arrive at the testing center early enough to allow yourself sufficient time for each test. The questions will be similar to those discussed in class, or those assigned as homework, but some of them will require a good understanding of the concepts and techniques. The best way to prepare for the exams is to go over the homework problems and the examples worked in class (they constitute your best study guide) and then try to solve related problems that you haven't seen before. **If you can reach the point where you can do fresh problems without help in all sections, I can anticipate that you will be able to successfully solve all problems on the midterms and final exam.**

**The final exam** will be will be cumulative and held during the final exam week (15 - 20 Dec) in the testing center. Make up exams cannot be arranged except in case of an emergency or absence due to official university business. **Exam dates will be strictly enforced.** The University Final Exam Policy states: **"Scheduled final examinations are to be administered in accord with the published Final Examination Schedule as to date, time, and place. They are not to be given or taken early."** Only basic scientific calculators (no graphic or symbolic ones) will be allowed in all exams. No books and no other notes will be allowed.

**Grading:** Grades will be based on cumulative points earned as follows:

**Written Homework 19%, Online Homework 5%, Midterm 17/17/17 %, and Final 25 %.**

At the end of the semester, I will make an average based on each one of the above forms of evaluations with their corresponding weights. Then, a Gaussian curve will help me to determine your final grade. In any event, the Gaussian curve will not hurt your grade. I will guarantee the following letter grades:

	B+ = 89-87%,	C+ = 79-77%,	D+ = 69-67%,	
A = 100-93%,	B = 86-83%,	C = 76-73%,	D = 66-63%,	E = 59-0%
A- = 92-90%,	B- = 82-80%,	C- = 72-70%,	D- = 62-60%.	

Keep in mind that a good grade is the end result of a good learning process. All of you can get a good grade by successfully experiencing this learning process

**Honor Code:** In keeping with the principles of the BYU Honor Code, students are expected to be honest in all of their academic work. Academic honesty means, most fundamentally, that any work you present as your own must in fact be your own work and not that of another. Violations of this principle may result in a failing grade in the course and additional disciplinary action by the university. Students are also expected to adhere to the Dress and Grooming Standards. Adherence demonstrates respect for yourself and others and ensures an effective learning and working environment. It is the university's expectation, and my own expectation in class, that each student will abide by all Honor Code standards. Please call the Honor Code Office at 422-2847 if you have questions about those standards.

**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 and pertains to admissions, academic and athletic programs, and university-sponsored activities. Title IX also prohibits sexual harassment of students by university employees, other students, and visitors to campus. If you encounter sexual harassment or gender-based discrimination, please talk to your professor or contact one of the following: the Title IX Coordinator at 801-422-2130; the Honor Code Office at 801-422-2847; the Equal Employment Office at 801-422-5895; or Ethics Point at <http://www.ethicspoint.com>, or 1-888-238-1062 (24-hours).

**Student Disability:** Brigham Young University is committed to providing a working and learning atmosphere that reasonably accommodates qualified persons with disabilities. If you have any disability, which may impair your ability to complete this course successfully, please contact the University Accessibility Center (UAC), 2170 WSC or 422-2767. Reasonable academic accommodations are reviewed for all students who have qualified, documented disabilities. The UAC can also assess students for learning, attention, and emotional concerns. 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 by contacting the Equal Employment Office at 422-5895, D-285 ASB.

**Respectful Environment:** "Sadly, from time to time, we do hear reports of those who are at best insensitive and at worst insulting in their comments to and about others... We hear derogatory and sometimes even defamatory comments about those with different political, athletic, or ethnic views or experiences. Such behavior is completely out of place at BYU, and I enlist the aid of all to monitor carefully and, if necessary, correct any such that might occur here, however inadvertent or unintentional. "I worry particularly about demeaning comments made about the career or major choices of women or men either directly or about members of the BYU community generally. We must remember that personal agency is a fundamental principle and that none of us has the right or option to criticize the lawful choices of another." President Cecil O. Samuelson, Annual University Conference, August 24, 2010 "Occasionally, we ... hear reports that our female faculty feel disrespected, especially by students, for choosing to work at BYU, even though each one has been approved by the BYU Board of Trustees. Brothers and sisters, these things ought not to be. Not here. Not at a university that shares a constitution with the School of the Prophets." Vice President John S. Tanner, Annual University Conference, August 24, 2010

**HOMEWORK ASSIGNMENTS**  
**Math 313 Elementary Linear Algebra – Fall 2018**  
**Instructor: Vianey Villamizar**

Due Date	Sections	Problems	Due Date	Sections	Problems
Sep 7	1.1 Online: Written:	2, 7, 23, 25 3, 14, 17, 18, 27, 33, 34	Oct 26	4.5 Online: Written:	1, 10, 14, 17, 20 15abc, 19, 21, 23, 24, 25, 29,
Sep 12	1.2 Online: Written:	2, 4, 11, 21, 26, 29 7, 13, 15a, 16ab, 27, 28, 30	Oct 29	4.6 Online: Written:	4, 7, 11, 18, 27 15, 17bc, 22, 26, 28a, 30, 33
Sep 14	1.3 Online: Written:	11, 17, 22, 24 10, 15, 19, 20, 21, 23b, 27ab, 32	Nov 2	5.1 Online: Written:	2, 6, 14, 21, 26 1, 3, 7, 11, 15, 17, 24, 25, 27
Sep 14	1.4 Online: Written:	1, 3, 11, 15, 23 5, 13, 19, 29, 30, 33, 34, 36	Nov 5	5.2 Online: Written:	4, 13, 20, 22 3, 8, 10, 12, 19, 23, 24, 25
Sep 17	1.5 Online: Written:	1, 5, 11, 15, 23, 25 6, 7, 13, 19, 26, 29, 30, 34, 35	Nov 7	5.3 Online: Written:	5, 9, 12, 19, 27 4, 16, 20, 21abd, 23, 24, 28, 31
Sep 21	1.7 Online: Written:	1, 8, 15, 31, 36 16, 17, 21abc, 27, 33, 34, 37, 39, 40	Nov 9	5.5 Online: Written:	3, 5 1, 2, 17, 22, 23, 24
Sep 24	1.8 Online: Written:	2, 4, 22 1, 3, 5, 9, 13, 15, 29, 33, 36	Nov 12	6.1 Online: Written:	3, 6, 14, 17, 19 1, 8, 11, 15, 22, 24, 25, 27, 29, 30, 31
Sep 26	1.9 Online: Written:	2, 8, 15, 19, 27 7, 10, 11, 17, 23ade, 25, 29, 31, 32, 35	Nov 14	6.2 Online: Written:	4, 10, 14, 19, 24 15, 21, 23abd, 25, 26, 28, 29, 33
Sep 28	2.1 Online: Written:	1, 4, 5, 19 10, 12, 15ac, 18, 21, 22, 23, 25, 26, 27, 28	Nov 16	6.3 Online: Written:	5, 8, 12, 15, 19 1, 10, 13, 17, 21abcd, 24
Oct 1	2.2 Online: Written:	4, 7, 31 2, 8, 10, 11, 14, 16, 17, 19, 21, 25, 32	Nov 19	6.4 Online: Written:	2, 7, 10, 12, 14 5, 11, 16, 17bc, 18, 19
Oct 3	2.3 Online: Written:	3, 7, 13, 28 11abcd, 15, 17, 19, 27, 31, 32, 34, 35, 38	Nov 26	6.5 Online: Written:	4, 6, 12, 15, 18 3, 7, 13, 17, 19, 25
Oct 5	2.4 Online: Written:	1, 5, 9 6, 13, 21, 25	Nov 26	6.6 Online: Written:	1, 4, 7, 10 2, 8, 9, 15, 16
Oct 10	3.1 Online: Written:	1, 5, 16, 25, 26, 28 4, 12, 17, 33, 35, 37, 38	Nov 30	6.7 Online: Written:	1, 4, 10, 21 3, 5, 9, 14, 15, 17, 18, 23, 25
Oct 12	3.2 Online: Written:	3, 9, 19, 31 4, 11, 14, 24, 28, 31, 33, 34, 36, 42	Dec 3	7.1 Online: Written:	4, 8, 13, 17, 22, 26 16, 19, 24, 25abc, 28, 30, 31
Oct 15	3.3 Online: Written:	3, 7, 11, 19, 21 1, 11, 14, 17, 18, 25, 29, 30	Dec 3	7.2 Online: Written:	2, 5, 11 3, 13, 21abcde, 23, 24, 25, 26
Oct 17	4.1 Online: Written:	3, 11, 24, 26, 32 6, 8, 13, 16, 20, 21, 22, 23cd	Dec 7	7.3 Online: Written:	2, 4, 9 1, 3ab, 8, 9, 11
Oct 19	4.2 Online: Written:	1, 4, 9, 18 6, 7, 23, 25, 27, 28, 29, 30, 32, 33	Dec 12	7.4 Online: Written:	3, 8, 9, 11, 15 7, 13, 17, 18, 19, 22
Oct 22	4.3 Online: Written:	3, 6, 8, 10, 16, 22 1, 14, 15, 21, 23, 25, 29, 31, 33, 34			
Oct 24	4.4 Online: Written:	1, 7, 9, 13, 16 4, 6, 15, 19, 21, 23, 24, 29, 32a			