Math 213: Elementary Linear Algebra

Sections 1-3

Syllabus: Fall 2020

**Section 7 Time and Location:** 1:00am - 1:50am, TTh in TMCB 159 (the Math Lab Space)

**Section 8 Time and Location:** 2:00am - 2:50am, TTh in TMCB 159 (the Math Lab Space)

**Instructor:** Brother Douglas Corey

**Office:** 171A TMCB

**Phone:** 422-3781

**Email:** corey@mathed.byu.edu

**Web Page:** BYULearning Suite Class Website**.**

**Text:** *Linear Algebra: A Modern Introduction* by David Poole

**DO NOT PURCHASE THE BOOK!!!** We have negotiated a special price with the publisher for access to both the online ebook and the online homework system WebAssign. You will be given immediate access to the ebook through WebAssign (see below for instructions on enrolling in WebAssign). You will automatically be charged $70.75 through your university student financial account for the ebook and WebAssign access after the add/drop deadline, unless you opt out.

**Learning Objectives:** This course is aimed at majors in mathematics, the physical sciences, engineering, and other students interested in applications of mathematics to their disciplines. Linear algebra is used more than any other form of advanced mathematics in industry and science. A key idea is the mathematical modeling of a problem via systems of linear equations, but applications include systems of differential equations, long-term behavior of systems, data analysis, and data compression. For more detailed information visit the Math 213 Wiki page.

**Prerequisite:** Successful completion of Math 112.

**Class Structure**:

BEFORE CLASS: For this class, you will be expected to do some study before class. You will read the section of the textbook, possibly watch some instructional videos, possibly do some other assigned readings, and do the online homework. The online homework is aimed at basic understanding of the material. Feeling comfortable with the online homework is a good test to know that you are ready for class. The online hw allows multiple attempts and gives you a chance to test out your understanding and to figure out what you might not fully understand. Although the type and level of the material we expect you to learn outside of class should be able to be understood through your own study of the materials most of the time, I know that there may be times when an idea or technique isn’t clear even after your best efforts. That is ok. The grading of the online hw accounts for this (explained below). You are also strongly encouraged to email or meet with one of the TAs or Brother Corey to answer major questions you have before class.

DURING CLASS: Class time will be used to dive deeper into the material, work on understanding more difficult concepts, and solidifying what you learned before class. I anticipate that you will spend some time in class working on problems, certainly by yourself, but I also hope in groups maintaining social distancing. We will do some applications as well (after all, what good is learning this mathematics if I don’t help you understand it’s power in solving real-world problems).

AFTER CLASS: After class you will have a written homework assignment from problems in the textbook (and perhaps some other supplemental problems). These assignments are due before the next class period.

W**ebAssign Information:** Approximately half of the homework will be done with the online homework system WebAssign at

<https://www.webassign.net/>

To enroll in WebAssign and gain access to the ebook, see the instruction page at the end of the syllabus. You will need to enter the class key

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to enroll in the course. Please note that you **do not** need to purchase a WebAssign key for this course, and that there is NO physical book to purchase at the BYU Store (you will be billed directly to your student financial account).

Generally, these assignments are due BEFORE CLASS but for the first week they will be due after class, on Wednesday (for the Tuesday class) and Friday (for the Thursday class) at 11:59pm. Since that vast majority of the online hw will be done before class (more about why later) we know there may be some material that might be difficult to figure out from your pre-class study, so at the end of the semester 85% of the total points will earn you 100% of the possible points for the online homework. No online homeworks will be dropped.

**Written Assignments:** Approximately half of the homework is in written format. Written assignments will be due at the beginning of the next class period. The lowest two written homework will be dropped from your ﬁnal grade. This accommodates for minor illnesses or other disruptions to your regular schedule that might prevent you from turning an assignment in on time. If you experience extended illness, injury, hospitalization, or other major disruption during the semester and cannot complete your work please speak to your instructor.

Solutions to homework problems should be clearly labeled and in order. The style of your written solutions should be very much like that of a textbook example; solutions should contain enough explanation so that one of your classmates would be able to easily understand what you have done. Generally, it is inadequate to merely write down a ﬁnal answer. You are strongly encouraged to study together and work together on homework assignments (in a safe, socially-distanced environment). However, you each must submit your own assignment. Everything you turn in should be in your own words and you should thoroughly understand everything you write down. The homework grader will only grade selected exercises. Therefore, it is important for you to solve each one. Include your name and BYU ID number written clearly at the top of your assignments before handing them in.

**Midterm Exams:**  There will be two midterm exams on the following dates:

* Midterm I – October 7-9 (late day October 9, covers sections 1.1-3.3)
* Midterm II – November 11-13 (late day November 11, covers sections 3.5-4.4)

For now, the Midterms will be done online and electronically proctored.

**Final Exam:** The final exam will be cumulative and held during the final exam week, done online.

**Grading:**

25% Written Homework

15% Online Homework

40% Midterm Exams (two exams worth 20% each)

20% Final Exam

**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 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; contact the Equal Employment Oﬃce at 801-422-5895 or 1-888-238-1062 (24-hours), or http://www.ethicspoint.com; or contact the Honor Code Oﬃce at 801-422-2847.

**Students with Disabilities:** BYU is committed to providing reasonable accommodation to qualiﬁed persons with disabilities. If you have any disability that may adversely aﬀect your success in this course, please contact the University Accessibility Center at 422-2767. Services deemed appropriate will be coordinated with the student and instructor by that oﬃce.

