Course Syllabus
Math 215: Linear Algebra, Fall 2019

Instructor: Bill Kinnersley

Office: Lippitt 101B   Office phone: (401) 874-2989
Office hours: Monday 2-4 PM, Wednesday 10-12 PM   Email: billk@uri.edu

Textbook: *Linear Algebra and its Applications*, 5th Ed. by Lay, Lay, and McDonald. (ISBN: 9780321982384)

This course *will not* be using Pearson's MyMathLab, so you *do not* need to purchase an access code. In particular, it's totally safe to buy a used copy of the textbook.

Course Description

Systems of linear equations are ubiquitous in science and engineering, with applications ranging from computer graphics to quantum mechanics. Loosely speaking, linear algebra is the study of these systems – which makes it an incredibly versatile branch of mathematics. Math 215 provides an introduction to the fundamental ideas, tools, and techniques of linear algebra. This course will prepare you both for basic applications of linear algebra and for advanced study in the field.

Assessment and Grading

The course grade will be based on weekly quizzes, daily questions, three Mathematica projects, two midterm exams, and a final exam. In addition, there will be ungraded homework assignments that will not directly impact your course grade, but are nonetheless an important component in mastering the material.

Homework (ungraded)

After each lecture, homework questions for that lecture's material will be posted on Sakai. *These questions will not be collected or graded.* However, it's crucial that you take them seriously, because practicing the material is a vital step toward understanding it. Try to work through the homework as soon as possible, ideally on the same day it's posted; this will help you stay on top of the course material, and it'll make it easier for you to keep up during class. To give you a bit of added incentive to take the homework seriously, many questions on the weekly quizzes will be taken directly from the homework (see below for more on the quizzes).

Quizzes (20% of course grade)

Quizzes will be given during most Tuesday classes. Each quiz will cover the preceding week's lectures. On each quiz, at least one question will come *directly* from the homework, and the rest of the quiz will usually look very similar to the homework. Quizzes are a valuable way for you to get regular feedback on your progress, and to help you identify areas where you might need some extra practice. (On top of that, it's a lot easier to study for a quiz than for an exam!) Each student's lowest quiz grade will be dropped at the end of the semester.

Daily questions (5%)

At the end of most Thursday classes, you will be given a short question over that day's lecture material. This is meant to be a low-pressure situation; you will be allowed to use your lecture notes, and most of the credit will be awarded simply for submitting a complete answer (even if it's not correct). The purpose of the daily question is to reinforce the the lecture material by giving you an opportunity to try it out on your own, as well as to encourage you to ask questions during lecture when things are unclear.

Mathematica projects (15%)

During the semester there will be three projects, in which you will use the computer software Mathematica to explore real-world applications of the course material. Mathematica is a powerful too that can help you solve problems that would be too large or complex to solve by hand, and it's available for free to all URI students. More details about the projects (and about Mathematica) will be given later in the semester.

Exams (15% for each midterm, 30% for final)

There will be two midterm exams, held in class on Tuesday October 8 and Tuesday November 12. Exams will assess not only your knowledge of the material, but your ability to apply it to solve problems. Most exam questions will loosely resemble homework and quiz questions; however, each exam will also contain one or two questions that challenge you to apply course concepts in new ways or to otherwise demonstrate a deep understanding of the material.

In addition, there will be a cumulative final exam at the end of the semester; the date, time, and location have not yet been determined, and will be announced later in the semester.

Grading Scale

Letter grades will be assigned using the following scale:

A: 93.00% and above		A-: 90.00% - 92.99%
B+: 87.00% - 89.99%	B: 83.00% - 86.99%	B-: 80.00% - 82.99%
C+: 77.00% - 79.99%	C: 73.00% - 76.99%	C-: 70.00% - 72.99%
D+: 67.00% - 69.99%	D: 60.00% - 66.99%	
F: 59.99% and below		

Grade cutoffs may be lowered if deemed necessary (but this is unlikely and should *not* be expected).

Policies and Procedures

Calculator Policy: *No calculators!* You may not use calculators on any quiz or exam, nor should you need to. (I will try to be very forgiving of any arithmetic mistakes.)

Absence Policy: If you miss any evaluation due to illness or emergency, you must contact me – in person, by phone, or through email – *within 24 hours*. If you know that you will need to miss an evaluation due to religious observances or University-sanctioned events, then you must contact me at least *48 hours* before the relevant evaluation. When reasonably possible, *you must provide documentation* for an absence.

Academic Accommodation: If you require academic accommodations and have documentation from Disability Services (874-2098), please get in touch with me as soon as possible.

Academic Integrity: Cheating is prohibited in all aspects of the course. Cheating includes but is not limited to: communication with other students during a quiz or exam, reading another student's written work during a quiz or exam, and use of any electronic device (including calculators) during a quiz or exam. I take cheating very seriously; *any* cheating will result in severe consequences.

Suggestions for Success

- *Do the homework, and do it right away!* Mastering the course material requires practice – lots of practice. Working through the homework is essential. Since homework reinforces understanding of the material, you should work through it as soon as possible; if you do the homework right away, you'll have an easier time picking up new material in lecture (which means you'll have an easier time with the next homework assignment, etc.).

- *Make use of office hours!* You don't need to make an appointment; you can just walk in start asking questions. (If you'd like to see me outside of my office hours, then you *should* make an appointment. Shoot me an email and we can arrange something.)

- *Make use of free tutoring!* The math department will offer free tutoring on a regular basis in Lippitt Hall. The tutoring sessions will be run by other students, who've been where you are now and lived to tell the tale. In addition, tutoring is also available through the Academic Enhancement Center. Times and locations for tutoring will be announced in class.

- *Read the textbook before class!* Reading through material in the textbook before we cover it in class might seem like a strange idea, but some students find it very helpful. You might not understand everything you read – or even most of it – but acquainting yourself with the basic ideas will make it easier to pick up the details during lecture.

Good luck!