

# Syllabus for Math 3260 sec. 55 (CRN: 11999)

Spring 2018

**Instructor:** L. R. Ritter

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**Office Hours:** M & W 10 am–11 am, T & R 10:50 am–11:30 am and by appointment

**Course Home Page** [http://facultyweb.kennesaw.edu/lritter/Ritter3260\\_Sp2018.php](http://facultyweb.kennesaw.edu/lritter/Ritter3260_Sp2018.php)

**Course Description** This is a three hour first course in Linear Algebra. Topics covered will include the theory and solution of linear systems of equations, matrix operations, vector spaces, bases, subspaces, linear transformations, inner product spaces, eigenvalues, and diagonalization. We will meet for lecture two times weekly TR 9:30 am to 10:45 am in D107. Students are expected to attend all lectures and to keep up with course assignments.

**Prerequisites:** A grade of C or better in Math 1190, or approval of the math department chair

**Required Course Materials:** Text: *Linear Algebra and its Applications* 5<sup>th</sup> Edition by David Lay, Steven Lay, and Judi McDonald (ISBN 978-0-321-19991-1), Calculator: A calculator capable of performing matrix arithmetic and operations will be needed.

**Optional Course Materials:** Homework: MyMathLab with Course ID ritter91854.

**Learning Outcomes:** Upon completing this course, students will be able to

1. determine whether a linear system is consistent and find general solutions of systems via elimination or matrix operations;
2. perform matrix operations including inversion and computing determinants as well as identify rank, nullity, and various spaces associated with a matrix;
3. identify vector spaces and describe bases, subspaces, dimension, and associated coordinates;
4. identify inner product spaces, use inner products, determine if vectors are orthogonal, perform orthogonal projections, and apply the Gram-Schmidt process;

5. use the characteristic equation of a matrix to find eigenvalues and eigenvectors and perform matrix diagonalization.

**Grading and Evaluation:** There are two grading schemes for this class. You can choose which one you wish to use. You must commit to the grade scheme you wish to use by Wednesday January 31.

**Scheme 1: No online homework**

Your course grade will be the weighted average of your score on 3 midterm exams, one final exam, and an in-class assignment grade. The grades will be weighted as follows:

Table 1: Grade Weights

Exam I (R 2/8)	Exam II (R 3/15)	Exam III (R 4/19)	In Class Worksheets (regularly)	Final (T 5/1)
20%	20%	20%	15%	25%

**Scheme 2: With online homework**

Your course grade will be the weighted average of your score on 3 midterm exams, one final exam, homework using MyMathLab, and an in-class assignment grade. The grades will be weighted as follows:

Table 2: Grade Weights

Exam I (R 2/8)	Exam II (R 3/15)	Exam III (R 4/19)	Homework (regularly)	In Class Worksheets (regularly)	Final (T 5/1)
15%	15%	15%	20%	10%	25%

$$A = 90\%–100\%, \quad B = 80\%–89\%, \quad C = 70\%–79\%, \quad D = 60\%–69\%, \quad F = 0\%–59\%$$

**Homework:** Homework will be completed using the MyMathLab software that accompanies the text. To use homework, you must purchase and enroll in this class with Course ID ritter91854. Due dates for online homework will be set in MyMathLab. The two lowest homework grades will be dropped.

**In Class Work:** In-class worksheets will be provided regularly to be done during class time. You will work in groups of 3 or 4 with each group handing in one paper. Except in the case of an excused absence, any student not present to participate will receive a grade of zero on that day’s worksheet. Two worksheets grades will be

dropped. **No student will be allowed to come late or to leave early solely for the purpose of participating in a worksheet.**

**Exams:** We will have three midterm exams. All midterm exams are mandatory. The exam dates are shown in the grade table 2 as well as the important dates table 3 at the end of this syllabus. You will need a calculator with matrix operation functions; **NO device with internet access may substitute for a calculator.** Except in the case of an excused absence (see attendance and make-up policy), a missed exam will be assigned a grade of zero. We will have one comprehensive final during the time designated by the University. The final is 25% of the semester grade. Your grade on the final exam may replace your lowest semester exam grade provided

- **Grading scheme 1:** your in-class work grade is  $\geq 80\%$ , or
- **Grading scheme 2:** your combined homework & in-class work grade is  $\geq 75\%$ .

**Attendance and Make-up Policy:** Regular class attendance is critical to academic success. Hence I strongly encourage you to attend all classes and keep up with assignments and course events. An unexcused absence will result in a grade of zero for any graded item missed that day. That said, I will excuse an absence if (1) I am informed as soon as possible (via email or voicemail), and (2) there is a good reason. Good reasons include (but are not limited to) your illness or the illness of someone who depends on you, an academic or University sports commitment, a legal obligation, or an unforeseen travel issue. Reasons that are not excusable include (but are not limited to) over sleeping, or working on a project for another class.

**Missing an Exam:** All exams are mandatory. In order to be excused from an exam, you must notify me in advance (or as soon as circumstances allow), and provide documentation (e.g. doctor's note, order to appear, notification from a faculty adviser) of your reason for missing the exam. If you meet both of these criteria, I will allow your grade on the final exam to substitute for the missed exam.

**Academic Integrity** Every KSU student is responsible for upholding the provisions of the Statement of Student Rights and Responsibilities, as published in the Undergraduate and Graduate Catalogs. Section II of the Statement of Student Rights and Responsibilities addresses the University's policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to University materials, misrepresentation/falsification of University records or academic work, malicious removal, retention, or destruction of library materials, malicious/intentional misuse of computer facilities and/or services, and misuse of student identification cards. Incidents of alleged academic misconduct will be handled through the established

procedures of the Department of Student Conduct and Academic Integrity (SCAI), which includes either an "informal" resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of Conduct's minimal one semester suspension requirement.

**Notice on Course Withdrawal:** Students are solely responsible for managing their enrollment status in a class; nonattendance does not constitute a withdrawal. Per university policy, I will assign a grade of WF to all students who do not complete the semester, where not completing the semester is defined as ceasing to attend class and participated in graded items during or prior to the last two weeks of the semester. I am required to report the last date of attendance when assigning a grade of WF. **My compliance with this policy may affect your financial aid.**

**Students with Disabilities** I will attempt to accommodate all students with special needs to the best of my ability, but it is the responsibility of the student to make their needs known to me. Students with disabilities who believe they may need accommodations in this class are encouraged to contact the counselor working with disabilities at 678-915-7244 (Marietta) or 470-578-2666 (Kennesaw) as soon as possible to better assure that such accommodations are implemented in a timely fashion. (Additional contact information email: sds@kennesaw.edu and webpage: <http://studentsuccess.kennesaw.edu/sds/index.php>).

**Cell Phone, Tablet, Laptop Policy** Unless otherwise stated, use of cell phones, laptops, or tablets is **not allowed during class**. Any student who must be repeatedly asked to refrain from texting or surfing the web will be invited to leave. **At no time will still or video photography be allowed during class.**

Table 3: Important Dates

Jan. 8	First Day Spring Classes	Jan. 15	Martin Luther King Jr. Day
Feb. 8	Exam 1	Feb. 28	Last Day to Withdraw with a W
March 15	Exam 2	April 2–6	Spring Break
April 19	Exam 3	April 30	Last Day of Spring Classes
May 1	Final Exam	10:30 am to 12:30 pm	D120