Math 200 – Elementary Linear Algebra
Math 201 – Intermediate Linear Algebra
Winter 2026

Instructor Information

Professor: Dr. Ryan Loga
Office Location: Hickman Science Center, Room 3403D
Office Phone: (423) 236-2866
Email: cloga@southern.edu

Office Hours: Tuesday 2:00 - 5:00pm, Wednesday 3:00 - 5:00pm, Thursday 2:00 - 5:00pm

Office hours are times that instructors set aside specifically for helping students.
The instructor is committed to being available for *all* students enrolled in the course *regardless of the students' availability*. In addition to the times listed for office hours, the instructor is also available by appointment (set-up via email or in-person). If an in-person meeting is not possible, Zoom (or other like technology) may be used to assist students from a distance.

Boundaries on Communication:
- The best way to contact Dr. Loga is by email or in-person.
- All communication from the professor will be between the hours of 8am and 5pm on weekdays.
- Dr. Loga will try to answer any emails sent within the above time frame as speedily as possible (within 24 hours).

Course Description and Materials

Math 200 Course Description: Systems of linear equations, matrices and determinants, vector spaces, linear transformations, eigenvalues and eigenvectors, applications. (2 credits)

Math 201 Course Description: Systems of linear equations, matrices and determinants, vector spaces, linear transformations, eigenvalues and eigenvectors, orthogonality and inner product spaces, applications. (3 credits)

Prerequisite: MATH 191.

Required Materials:
1. Textbook: *Elementary Linear Algebra, 8th ed.,* by Larson (included with WebAssign)
2. A scientific, non-graphing calculator; only such a calculator will be allowed during tests.
WebAssign access (which will be billed directly to your student account after a couple weeks into the course)

Instructional Methodology
- Class time will be spent engaging in lecture interspersed with discussion of the course content.
- Homework will be completed online via the WebAssign homework platform.
- The students content knowledge will be assessed via tests taking (and limited to) the entirety of a 50 minute class period. **There are only 2 tests in the semester (3 if you are in Math 201), so be sure to take each one seriously.**

Learning Outcomes
At the end of the course, the student will be able to
- Solve systems of equations using basic matrix algebra.
- Compute determinants using several different methods.
- Apply determinants to solve problems.
- Investigate a variety of real vector spaces.
- Determine linear independence, spanning sets, and a basis set.
- Analyze and apply facts about linear transformations.
- Solve for eigenvalues and eigenvectors.
- Apply linear algebra to problems in other fields.

Course Policies

Dress Code: Please adhere to the university dress code policy as presented in the student handbook.

Academic Integrity: You may discuss homework problems, however, simply copying another person's work is prohibited. Use of AI, such as ChatGPT, or other online resources can be a valuable learning tool, but not when used to simply answer homework without understanding on the part of the student. Cheating on anything (homework or tests) will result in a zero on that assignment or test and possibly a failing grade in the course. See the university catalog for more.

Use of Online Resources and AI: Recently there has been a trend of students completing homework with outstanding scores and then struggling to perform on tests. One reason is the usage of online resources and ChatGPT when working through homework and studying for tests. While usage of said resources can be beneficial, some caution should be exercised on the part of the learner:
- Using any resource to "get an answer" to an exercise without proper thought and consideration will *not* lead to the quality understanding developed by struggling to understand a question on one's own beforehand.
- There are multiple methods for doing statistical analysis, not all of which will be considered in this course. Usage of techniques and knowledge outside the scope of the course material should be avoided due to the tendency for limited (at best) understanding.
- Without some understanding of what you are doing, AI will tend to lead one into more confusion as there is no way to determine what is legitimate and what is not. (Since it is prompt driven, the situation can easily turn into a "blind" prompter having AI lead them into further obscurity all the while with the information looking legitimate and informed).

Calculators: The use of any calculator is allowed, and for the most part encouraged, on homework. You may use a non-programmable, non-graphing, scientific calculator on tests, assuming a calculator is allowed at all. **You will not be allowed to use a graphing calculator, a cell phone, or any other wireless device, as a calculator during tests.**

Class Attendance: Attendance is vital to your success in class, in part, because it facilitates your engagement and provides the best opportunity for direct interaction with your professor and other students. You are expected to be present and punctual for each class meeting and actively participate in any in-class discussions, work, and/or activities. The student should not be working on homework for this or any other class during the class period. Attendance will be recorded as part of your in-class participation.

Class Absences: Any class absence will be counted as either excused or unexcused. For an absence to be excused it must be **communicated *before* the missed class** and **have documentation to prove the rationale for the absence.**
        Any absence without clear communication *before* class is missed will count as an unexcused absence. Based upon communication with the student, what counts as an excused or unexcused absence is at the professor's discretion.

Make-Up Work: Consistent engagement in this course is a necessity for meeting the learning objectives. **No missed work for this course can be made up with full points, regardless of reason for an absence, excused or unexcused.** In extremely exceptional circumstances, the professor will work directly with students to make-up work as needed. All make-up work, including tests, is at the discretion of the professor.
        Missed in-class work cannot be made up for any credit. If an absence is excused, automatic credit will be given for the in-class work missed.
        All late homework can be completed for half credit on what was *not* completed by the due date.
        If a testing period must be missed, (1) the student should plan to take the test early by scheduling a time with the professor. (2) No test can be made up once students have been given their results, which is usually the next class period; any make-up test must be taken before test results are provided. (3) In the event of an unavoidable last-minute excused absence where the test could not be made up in time, the final exam will count as the test score. (4) Missing a test for an unexcused absence will result in a zero for that test.

Much of success in the workforce is consistency in showing up (on time) and completing projects on a time frame with hard deadlines. This is the rationale for the above attendance and make-up work policies.

Disabilities: In keeping with the University's policy, if you are a student who believes you may need an accommodation based on the impact of a disability or learning challenge (i.e. physical, learning, psychological, ADHD or other type), you are strongly encouraged to contact Disability Support Services (DSS) at 423-236-2544 or stop by the 3rd floor of the Bietz Center for Student Life, Office 3900. Please note, accommodations are not retroactive and cannot be implemented until faculty or staff members have received the official Letter of Accommodation from DSS. Specific details of disabilities remain confidential between students and DSS unless a student chooses to disclose or there is a legitimate academic need for disclosure, which is on a case-by-case

basis. For further details, visit the Disability Support Services website at
www.southern.edu/administration/student-success/disability.

Student Success Team: Offers helpful resources to all students who strive to make the most of their college experience. The team implements timely support for students facing circumstances that may impede their academic success. This is accomplished through personalized, one-on-one meetings with a specially trained academic support manager. Topics include time management, taking notes, test taking tips, learning styles, etc. Schedule an an appointment, email, call 423-236-2838 or visit the Student Success office in McKee Library, suite 2126.

Disclaimer: The professor reserves the right to modify, supplement, and make changes to the course syllabus as needs arise. Students will be notified in writing and face-to-face, in class, if/when any change is made.

Grading, Assessment, and Course Requirements

Grades: Grades will be determined using the grading scale provided. Your letter grade is a measure of your mastery of course material and your fulfillment of course objectives. Letter grades are not assigned on the basis of a curve or the class average.

Students may view their scores and grades at any time on eClass.

ASSESSMENT INDICATORS	PERCENTAGE OF FINAL GRADE
WebAssign Homework	40%
Tests	60%
Total	**100%**

GRADING SCALE:

A	**93 – 100%**		**C**	**73 – 76.9%**
A-	**90 – 92.9%**		**C-**	**70 – 72.9%**
B+	**87 – 89.9%**		**D+**	**67 – 69.9%**
B	**83 – 86.9%**		**D**	**63 – 66.9%**
B-	**80 – 82.9%**		**D-**	**60 – 62.9%**
C+	**77 – 79.9%**		**F**	**0 – 59.9%**

Note: If at the end of the semester your grade is within half a percent of the next grade level (e.g. a 92.51 or higher) the grade may be rounded up depending on class attendance and homework completion

Assignment Specifics

WebAssign Homework: Homework is to be completed online using a program called *WebAssign*. You will access your account through Eclass.

       Homework assignments are due at the start of the next class period. There will be no deadline exceptions. Sometimes technology fails, sickness occurs, or other issues may arise as a deadline approaches, which is why it is imperative that you do not wait until the last minute to attempt/submit your assignments.

       No assignment can be made up for full points after the due date, regardless of the reason for the missed deadline. To compensate for this, three homework assignments will be dropped on an on-going basis throughout the semester. Any part of any homework can be completed for half credit after the due date. Please see the make-up work policy for more details. Each part of every WebAssign question has a total of *100 attempts* with the following exceptions:

- True/False and other two option questions have *1 attempt.*
- Multiple choice questions (with three options or more) have *2 attempts.*
- "Select all that apply" questions have *3 attempts.*

Tests: There will be two tests throughout the semester, with an additional test for *Math 201. All tests are equally weighted. Students should plan to take each test on the day it is given. The approximate dates for the tests are as follows:

         Test 1   Wednesday, February 18
         Test 2   Wednesday, April 1
         *Test 3   Thursday, May 7

All tests will be proctored in-class, closed book tests. No test score is dropped. If you cheat on a test, you will get a 0% for that test. It is at the teacher's discretion to implement any policy to avoid cheating during tests. Each test will be graded and handed back within a week (at the latest) after being proctored.

       If you are going to miss a test period for any reason contact me IN-ADVANCE so that you can take the test before missing the period. **There will be no make-up tests given.** All students must either take the test before or during the testing period. No retakes of a test will be given in class. In the event of poor test scores, there will either be a curve or opportunities provided for getting credit back outside of the normal class time.

Extra Credit: While there are several opportunities for extra credit, including reviews for the test, such credit will never be provided on demand. **Any extra credit opportunity will be equally available to every student and will not be provided based on a specific student's need.** Extra credit is applied to a test (including the final exam) by completing the associated review assignment before said test.

Feedback Plan

Philosophy: Feedback works best as a two-way street. Your feedback and suggestions will be requested and appreciated. Education is a learning experience for both professor and students, and I want to offer the best possible methods of instruction in order to facilitate learning. However, there may be times when I make a mistake. Please feel free to speak to me when you believe I have erred.

Feedback timeframe: WebAssign assignments give instant feedback as to whether an answer is right or wrong. For in-class work that is turned in, completion credit will be recorded in the gradebook and the papers (with any pertinent comments from the grader) will be handed back the next class period. Test will always be graded, recorded, and returned to the class as a whole within one week.

Giving feedback: Students are encouraged to email questions to the professor, who will typically respond within a few hours. Students are also encouraged to schedule an office appointment with the professor if they desire to receive feedback.

Receiving feedback: Students will be offered opportunities to give feedback during the class with active teaching methods. Responses to papers and questionnaires will be kept confidential. Students are encouraged to ask questions during class. Students are also encouraged to schedule an office appointment with the professor if they desire to give feedback.

Course Evaluation: Near the end of this semester, you will be asked to evaluate this course. These course evaluations are required by the university and are part of the process to improve course delivery and academic standards. Access the evaluation at myaccess.southern.edu. Log in using your Southern email address and password. Select Course Evaluation. All comments are evaluations are anonymous and results of these evaluations are made available to professors AFTER final grades are submitted to the Records Office. Your honesty is appreciated.

<u>Tentative</u> (Ambitious) Schedule for MATH 200 & 201 in Winter 2026

Monday	Wednesday	Friday
1/12/2026 Syllabus, 1.1	1/14/2026 1.1, 1.2	1/16/2026 1.2, +1.3
1/19/2026 **MLK Day**	1/21/2026 2.1	1/23/2026 2.2
1/26/2026 2.3	1/28/2026 2.4	1/30/2026 +2.6
2/2/2026 3.1	2/4/2026 3.2	2/6/2026 3.3
2/9/2026 +3.4	2/11/2026 4.1	2/13/2026 5.1
2/16/2026 Review	2/18/2026 **TEST 1**	2/20/2026 4.3
2/23/2026 4.4	2/25/2026 4.4, 4.5	2/27/2026 4.5
3/2/2026 4.6	3/4/2026 4.7, +4.8	3/6/2026 6.1
3/9/2026 6.3	3/11/2026 6.4, +6.5	3/13/2026 **Spring Break**
3/16/2026 **Spring Break**	3/18/2026 **Spring Break**	3/20/2026 **Spring Break**
3/23/2026 7.1	3/25/2026 7.2	3/27/2026 7.3 and More
3/30/2026 Review	4/1/2026 **TEST 2**	*4/3/2026 4.2
*4/6/2026 4.3 / 4.4	*4/8/2026 4.5 / 4.7 / +4.8	*4/10/2026 5.2
*4/13/2026 5.3	*4/15/2026 5.4	*4/17/2026 +5.5
*4/20/2026 6.1 / 6.3	*4/22/2026 6.2	*4/14/2026 6.2, +6.5
*4/27/2026 7.1 / 7.2 / 7.3 / +7.4	*4/29/2026 Additional Results	*5/1/2026 Review
*TEST 3: Thursday May 7, 2026 from 10:00 am to 11:50 am		

*These class days are only for MATH 201.
+These sections provide a variety of applications; they will be discussed in class as time allows. All such sections will have homework that can be done for extra credit.