

**Sul Ross State University**  
**Course Syllabus**  
**MATH 2318-001,VMC: Linear Algebra**  
**Fall 2024**

**Instructor:** Dr. Angela M. Brown

**Office Number:** ACR 102

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**Office Hours:** 10:00-11:00 MW, 3-5 W, 3:30-5:00 TR, others by appointment

**Time and Place of Class Meetings:** TR 9:30-10:45 am ACR 206

**Course Prerequisites:** Passing grade in MATH 1316: Trigonometry

**Mathematics Program Learning Objectives:** The graduating student should be able to

- Apply knowledge of basic mathematics principles.
- Identify and provide valid proofs or solutions for theorems or problems.
- Recognize and dispute invalid mathematical statements by using counter-examples.

**Course Objectives:**

- The student will be able to evaluate matrices using matrix operations.
- The student will apply their knowledge of matrices to real world problems.
- The student will be able to define what a vector space is.
- The student will be able to change from one basis to another using various techniques.
- The student will be able to apply their knowledge of linear algebra to other courses in the program.

**Required Textbooks:** *Linear Algebra* 4th ed, Hefferon. Homework will be assigned from the text.

**Other Equipment Needed:** paper and pencils.

**Grading Scale:** 90-100 A, 80-89 B, 70-79 C, 60-69 D, 59-Below F

**Grading Policy:** The grade weighting will be as follows:

Quizzes/Homework/in Class Assignments: 15%

Project: 20%

Exams: 40%

Final Exam: 25%

**Quizzes:** Quizzes will be given periodically. You will have advanced warning of most quizzes. Additional in class assignments will be given and counted the same as quiz and homework grades.

**Homework:** Homework will be assigned daily and homework will be turned in on blackboard. After turning the initial assignment in, you will be given the answers, so it is important that assignments are turned in on time. Once you have the answers, in a different color you will go through and correct your works for any that you missed and explain why you did so. This will also then be turned in as a separate file.

**Project:** At the end of chapter are topics. These will be used for the projects. The expectation will be that you do a short recorded presentation (15 minutes minimum) and to work the corresponding exercises (not as part of the presentation). There are 23 topics and won't be due until the end of the semester. Once someone picks a topic, it cannot be chosen by anyone else.

**Exams:** No make-up exams will be given. If there is a valid reason for missing an exam, then the grade for the missed exam will be replaced by the grade on the final exam. Otherwise, a missed exam will be a zero. Exams will be closed notes, closed book, and no calculator will be allowed. Any restroom breaks need to be taken before an exam starts. You cannot leave the classroom in the middle of an exam under any circumstances.

Final Exam Date: Monday, December 9 at 8:00 am

**Attendance Policy:** Students are expected to attend every class. If class must be missed, the student is expected to get the notes from a classmate, and to check with me or on Blackboard for announcements and updated assignments.

Students are expected to arrive to class on time. If a student is perpetually late, they will be asked to not attend class unless they arrive on time. If tardiness becomes a problem for the class as a whole, people who arrive late will not be permitted to enter the class. If this stricter policy becomes necessary, there will be an announcement made in class.

It is policy of the university to drop a student with a grade of "F" if 9 hours or more of class are missed. For this course that would be 9 or more class sessions missed.

**Cell Phone Policy:** Cell phones are not allowed in class. They cannot be used as calculators on any assignment. Any phone ringing during class will be taken up until the end of class. If a phone rings during a test or quiz, the student will forfeit their right to finish said test or quiz.

**Americans With Disabilities Act:** SRSU Disability Services. Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. Alpine students seeking accessibility/accommodations services must contact Mary Schwartz Grisham, M.Ed., LPC, SRSU's Accessibility Services Coordinator at 432-837-8203 (please leave a message and we'll get back to you as soon as we can during working hours), or email [mschwartz@sulross.edu](mailto:mschwartz@sulross.edu). Our office is located on the first floor of Ferguson Hall (Suite 112), and our mailing address is P.O. Box C-122, Sul Ross State University, Alpine. Texas, 79832.

**Counseling:** Sul Ross has partnered with TimelyCare where all SR students will have access to nine free counseling sessions. You can learn more about this 24/7/365 support by visiting [Timelycare/SRSU](http://Timelycare/SRSU). The SR Counseling and

Accessibility Services office will continue to offer in-person counseling in Ferguson Hall room 112 (Alpine campus), and telehealth Zoom sessions for remote students and RGC students.

**Library Services:** The Bryan Wildenthal Memorial Library in Alpine offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, [library.sulross.edu/](http://library.sulross.edu/). Off-campus access requires logging in with your LoboID and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email ([srsulibrary@sulross.edu](mailto:srsulibrary@sulross.edu)), or by phone (432-837-8123).

No matter where you are based, public libraries and many academic and special libraries welcome the general public into their spaces for study. SRSU TexShare Cardholders can access additional services and resources at various libraries across Texas. Learn more about the TexShare program by visiting [library.sulross.edu/find-and-borrow/texshare/](http://library.sulross.edu/find-and-borrow/texshare/) or ask a librarian by emailing [srsulibrary@sulross.edu](mailto:srsulibrary@sulross.edu).

Mike Fernandez, SRSU Librarian, is based in Eagle Pass (Building D-129) to offer specialized library services to students, faculty, and staff. Utilize free services such as InterLibrary Loan (ILL) and ScanIt to get materials delivered to you at home or via email.

**Distance Education Statement:** Students enrolled in distance education courses have equal access to the university's academic support services, such as Smarthinking, library resources, online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login information to verify students' identities and to protect students' information. The procedures for filing a student complaint are included in the student handbook. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website.

**Academic Integrity:** Students in this class are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. A scholar is expected to be punctual, prepared, and focused; meaningful and pertinent participation is appreciated. Examples of academic dishonesty include but are not limited to: Turning in work as original that was used in whole or part for another course and/or professor; turning in another person's work as one's own; copying from professional works or internet sites without citation; collaborating on a course assignment, examination, or quiz when collaboration is forbidden.

**Classroom Climate of Respect:** Importantly, this class will foster free expression, critical investigation, and the open discussion of ideas. This means that all of us must help create and sustain an atmosphere of tolerance, civility, and respect for the viewpoints of others. Similarly, we must all learn how to probe, oppose and disagree without resorting to tactics of intimidation, harassment, or personal attack. No one is entitled to harass, belittle, or discriminate against another on the basis of race, religion, ethnicity, age, gender, national origin, or sexual preference. Still, we will not be silenced by the difficulty of fruitfully discussing politically sensitive issues.

**Supportive Statement:** I am to create a learning environment for my students that supports various perspectives and experiences. I understand that the recent pandemic, economic disparity, and health concerns, or even unexpected life events may impact the conditions necessary for you to succeed. My commitment is to be there for you and help you meet the learning objectives of this course. I do this to demonstrate my commitment to you and to the mission of Sul Ross State University to create a supportive environment and care for the whole student as part of the Sul Ross Familia. If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. I want to be a resource for you.

## Important Dates:

August 26	First Day of Classes
August 30	Last Day for Late Registration and Schedule Changes
September 2	Labor Day Holiday
September 11	12th Class Day
November 8	Last Day to Withdrawal from University or Drop Classes with a Grade of "W" (by 4 pm)
November 27-29	Thanksgiving Holiday
December 4	Last Day of Classes
December 5	Dead Day
December 6-11	Final Exams
December 13	Commencement

## Tentative Schedule-Subject to Change

	Tuesday		Thursday
Aug 27	Intro, Systems of Linear Equations	Aug 29	Row Reduction, Echelon Form
Sept. 3	Vector Equations	Sept. 5	Matrix Equations
Sept. 10	Solutions of Linear Systems	Sept. 12	Linear Transformations
Sept. 17	Linear Transformations	Sept. 19	Matrix Operations
Sept. 24	Inverses	Sept. 26	Exam 1
Oct. 1	Partitioned Matrices and Factorizations	Oct. 3	Determinants and Cramers Rule
Oct. 8	Vector Spaces	Oct. 10	Nul and Column Spaces and Linear Transformations
Oct. 15	Linear Independence and Bases	Oct. 17	Coordinate Systems, Rank
Oct. 22	Eigenvalues and Eigenvectors	Oct. 24	Exam 2
Oct. 29	Characteristic Equations	Oct. 31	Diagonalization
Nov. 5	Eigenvectors and Linear Transformations	Nov. 7	Inner Products
Nov. 12	Orthogonal Sets and Projections	Nov. 14	Graham Schmidt, Least Squares
Nov. 19	Exam 3	Nov. 21	Inner Product Spaces
Nov. 26	Applications of Inner Products	Nov. 28	Thanksgiving Holiday
Dec. 3	Review	Dec. 5	Dead Day