

Sul Ross State University
Course Syllabus
MATH 2318-001,MC1: Linear Algebra
Fall 2018

Instructor: Dr. Angela M. Brown

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Office Hours: 10:00-11:00 MWR, 3:30-4:30 MTWR, others by appointment

Time and Place of Class Meetings: TR 11:00-12:15 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 and Its Applications* 4th ed, Lay ISBN 978-0-321-38517-8. 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: 30%

Project: 15%

Exams: 30%

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 taken up at the beginning of class on Monday. Homework will be graded on completion and accuracy. Copying answers out of the back of the book is plagiarism and will be prosecuted.

Project: Chapters 7-10 will not be covered in class. Each student will need to pick one section to write up a set of notes for and complete 10 additional problems from the section. Students will present this information, if time remains, on the last two days of class.

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 10 at 10:15 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 can not 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: Sul Ross State University is committed to equal access in compliance with the Americans With Disabilities Act of 1973. As an instructor I am required to give students reasonable accommodations in each course. It is the student's responsibility to initiate a request for accessibility services. Contact Mary Schwartz, the ADA Coordinator in Counseling and Accessibility Services Ferguson Hall, Room 112. Her phone number is 432-837-8203 or you can email her at mschwartz@sulross.edu.

Important Dates:

August 27	First Day of Classes
August 30	Last Day for Late Registration and Schedule Changes
September 3	Labor Day Holiday
September 12	12th Class Day
November 16	Last Day to Withdrawal from University or Drop Classes with a Grade of "W" (by 4 pm)
November 21-23	Thanksgiving Holiday
December 5	Last Day of Classes
December 6	Dead Day
December 7-12	Final Exams
December 14	Commencement

Tentative Schedule-Subject to Change			
Tuesday		Thursday	
August 28	Intro, Systems of Linear Equations	August 30	Row Reduction, Echelon Forms
September 4	Vector Equations	September 6	Matrix Equations
September 11	Solutions of Linear Systems	September 13	Linear Transformations
September 18	Linear Transformations	September 20	Matrix Operations
September 25	Inverses	September 27	Exam 1
October 2	Partitioned Matrices and Factorizations	October 4	Determinants and Cramers Rule
October 9	Vector Spaces	October 11	Nul and Column Spaces and Linear Transformations
October 16	Linear Independence and Bases	October 18	Coordinate Systems, Rank
October 23	Eigenvalues and Eigenvectors	October 25	Exam 2
October 30	Characteristic Equations	November 1	Diagonalization
November 6	Eigenvectors and Linear Transformations	November 8	Inner Products
November 13	Orthogogonal Sets and Projections	November 15	Graham Schmidt, Least Squares
November 20	Exam 3	November 22	Thanksgiving Holiday
November 27	Inner Product Spaces	November 29	Applications of Inner Products
December 4	Review	December 6	Dead Day