

Sul Ross State University
Course Syllabus
MATH 1314-1W1: College Algebra
Summer 2025

Instructor: Dr. Angela M. Brown

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Office Hours: 11 am-12 pm MTWR. These will be virtual meetings unless requested of me ahead of time.

Time and Place of Class Meetings: Online

Prerequisites: Completion of MATH 0314 (A,B, or C) or passing TSI or Concurrent Enrollment

Description of Course Content: Quadratic and higher order polynomial equations and inequalities solved algebraically, graphically and numerically; graphs and operations on relations and functions; real and complex zeros of polynomials and rational functions; exponential and logarithmic functions; systems of linear equations; matrices.

Required Textbooks: College Algebra, 3rd edition. Hawkes. You will need access to the online textbook and homework. You should be able to buy an access code through our bookstore or the link for the instructions is under the Start Here link on Blackboard.

Other Equipment Needed: Paper and pencils. You can use a basic or scientific calculator, but no graphing calculators. A basic calculator will be available on the screen for exams and quizzes.

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

- The student will be able to demonstrate content knowledge of basic mathematical principles.
- The student will be proficient in logic, able to negate statements, provide counterexamples to false statements, and determine the validity of arguments.
- The student will be able to communicate mathematical content clearly and with valid reasoning.

Student Learning Outcomes for Core Courses:

- Students will develop critical thinking skills to include creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.
- Students will develop communication skills to include effective development, interpretation, and expression of ideas through written, oral, and visual communication.

Marketable Skills-Mathematics BS:

- Students Demonstrate Logical and Analytical Skills.
- Students Demonstrate Problem-Solving Using Analytic and Algebraic Methods.
- Students Use Technology in Problem-Solving and Presentation.
- Students Use Communication and Pedagogical Skills.

EC-6 Teaching Competencies

- Competency 013 (Mathematics Instruction) The teacher understands how students learn mathematical skills and uses that knowledge to plan, organize, and implement instruction and assess learning.
- Competency 014 (Number Concepts and Operation) The teacher understands concepts related to numbers, operations and algorithms and the properties of numbers.
- Competency 015 (Patterns and Algebra) The teacher understands concepts related to patterns, relations, functions and algebraic reasoning.
- Competency 016 (Geometry and Measurement) The teacher understands concepts and principles of geometry and measurement.
- Competency 017 (Probability and Statistics) The teacher understands concepts related to probability and statistics and their applications.
- Competency 018 (Mathematical Processes) The teacher understands mathematical processes and knows how to reason mathematically, solve mathematical problems and make mathematical connections within and outside of mathematics.

Course Objectives:

- The student will be able to solve linear, quadratic, rational and radical equations and inequalities using various methods.
- The student will be able to graph functions by plotting points and performing transformations on certain parent functions.
- The student will be able to graph polynomial functions by finding roots using synthetic or long division and distinguish the end behavior of graphs.
- The student will be able to model growth and decay problems using exponential functions.
- The student will be able to solve systems of equations in two and three variables.

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:

Homework/In Class Assignments 10%

Quizzes: 25%

Exams: 40%

Final Exam: 25%

Homework: Homework will be assigned daily through the online homework system. Homework is graded on mastery. All homework along with due dates will be posted on the Hawkes Learning System. You can attempt a homework until you complete it, but you will be forced to go back to the practice mode if you miss too many problems. There will be a graduated point exemption for late assignments, but if unforeseen circumstances come up, please talk to me.

Diagnostic Exam: Each chapter will have a posted diagnostic exam. These should be treated like exams that are closed note, closed book, with a calculator allowed, but they do not have a time limit **These are not required assignments!** If you look at the topics of a chapter and think that you know the information from that chapter well enough, you can do the diagnostic exam before completing any assignments. If you get a 90% or greater, this exam can replace all of the homeworks for that chapter. These are not short or easy, but if you feel you are especially skilled on a particular topic, this could save you some time. You also only get one chance for each diagnostic test.

Quizzes: You will have quizzes over material covered. These quizzes will be graded out of 100 points. These are closed book and notes.

Exams: No make-up exams will be given. If an exam is missed with a valid excuse, the grade on the final can replace this exam. Any exams missed beyond one will be an automatic zero. Exams will be closed notes, closed book, and no calculator will be allowed unless otherwise stated by your instructor. Once an exam is started, it needs to be finished in one sitting. No cell phones should be on during exams or quizzes.

For all exams and quizzes, you will be required to use the respondus lock down browser. You will have to have your web cam on on your computer to do so.

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. Since this is an online class, this means keeping up with the assignments for the course as assigned.

You are expected to check your Sul Ross e-mail account. Absences due to school functions should be discussed with me ahead of time.

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 5 or more class sessions missed.

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 Schwartze 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. Our office is located on the first floor of Ferguson Hall (Suite 112), and our mailing address is P.O. Box C-122, SUI 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 24/7/356 support by visiting [Timelycare/SRSU](https://www.timelycare.com/sulross). 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/. 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), 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/ or ask a librarian by emailing 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:

May 28	First day of classes
May 30	Last day for late registration and schedule changes Payment deadline for students, 4 p.m.
June 2	Census day
June 13	Mid-term
June 20	Last day to drop a session I course with a 'W'. Drops must be processed and in the University Registrar's office
July 2	Final Examinations

Tentative Schedule-Subject to Change

Week	Topics	Assignments
Week 1	Intro Fundamental Concepts	Read Chapter 1 1.1-1.4 Homework Due
Week 2	Linear Equations and Inequalities Inequalities, Quadratic Equations, Polynomial Equations, Rational and Radical Equations	Read Chapter 2 1.5-2.6 Homework Due 1.1-1.6 Quizzes Due
Week 3	Cartesian Coordinates, Circles, Functions, Linear Functions, Linear Functions, Quadratic Functions, Other Functions	Read Chapters 3 and 4 3.1-4.4 Homework Due 1.7-2.6 Quizzes Due Exam 1: Ch 1 and 2 Due
Week 4	Variation, Models, Transformations, Function Properties, Function Inverses, Polynomial Functions	Read Chapters 5 and 6 4.5-6.4 Homework Due 3.1-5.4 Quizzes Due Exam 2: Ch 3 and 4 Due
Week 5	Rational Functions and Inequalities, Exponential Functions, Logarithmic Functions, Exponential and Logarithmic Equations, Systems Of Equations and Matrices	Read Chapter 7 and 9 6.5-9.4 Homework Due 6.1-7.5 Quizzes Due Exam 3: Chapters 5, 6, and 7 Due
Week 6	Matrices Continued, Final Exam (July 2)	9.5 Homework Due Final Exam: Ch 1-9 (except 8)