

**Sul Ross State University**  
**Course Syllabus**  
**MATH 1314-001,ALP,FTD,HF1,MFA: College Algebra**  
**Fall 2014**

**Instructor:** Dr. Angela Brown

**Office Number:** ACR 107D

**Office Telephone Number:** (432)837-8223

**Email Address:** abrown4@sulross.edu

**Office Hours:** 10-11 MWF, 3-4 T, 2-4 R, others by appointment

**Time and Place of Class Meetings:** MWF 9-9:50 am ACR 204 (Other locations provided by distance locations)

**Course Prerequisites:** Undergraduate level Math 0301 Minimum Grade of D or high enough score on one of the math placement exams ( ASSET 38, ACCUPLACER 63, MAPS 613, THEA 230, TASP 230, COMPASS 39).

**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.

**EC-6 Core Teacher Competencies:**

- CO 013 (Mathematics Instruction) The teacher understands how students learn mathematical skills and uses that knowledge to plan, organize and implement instruction and assess learning.
- CO 014 (Number Concepts and Operation) The teacher understands concepts related to numbers, operations and algorithms and the properties of numbers.
- CO 015 (Patterns and Algebra) The teacher understands concepts related to patterns, relations, functions and algebraic reasoning.
- CO 016 (Geometry and Measurement) The teacher understands concepts and principles of geometry and measurement.
- CO 017 (Probability and Statistics) The teacher understand concepts related to probability and statistics and their applications.
- CO 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.

**Required Textbooks:** *College Algebra* 6th ed, Blitzer, ISBN 978-0321782281.

**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:

Homework/In Class Assignments: 20%

Exams: 50%

Final Exam: 30%

**Homework:** Homework will be assigned daily from the textbook. This homework will be due on Mondays at the beginning of class. These assignments will be posted to Blackboard along with their due date, so check Blackboard often. Copying off other people or from other sources is cheating and will be prosecuted as such.

**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. 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. No cell phones should be on during exams.

Final Exam Date: Wednesday, December 10 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 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 25 First Day of Classes  
 August 28 Last Day for Late Registration and Schedule Changes  
 September 10 12th Class Day  
 November 14 Last Day to Withdrawal from University or Drop Classes with a Grade of "W" (by 4 pm)  
 November 26-28 Thanksgiving Holiday  
 December 3 Last Day of Classes  
 December 4-5 Dead Days  
 December 8-11 Final Exams  
 December 13 Commencement

Tentative Schedule-Subject to Change

|          | Monday  |         | Wednesday  |         | Friday                                     |
|----------|---|---------|--|---------|--|
| Aug. 25  | Graphs  | Aug. 27 | and Rational Equations<br>Linear Equations       | Aug.29  | and Quadratic Equations<br>Complex Numbers |
| Sept. 1  | Labor Day Holiday                             | Sept. 3 | Quadratic Equations                              | Sept. 5 | Other Types<br>of Equations                |
| Sept 8   | Linear and Absolute<br>Value Inequalities     | Sept 10 | Functions  | Sept 12 | Linear Functions                           |
| Sept 15  | Function Transformations                      | Sept 17 | Function Composition and<br>Algebra of Functions | Sept 19 | Inverse Functions                          |
| Sept 22  | Distance and Midpoint<br>Formulas and Circles | Sept 24 | Catch Up/Review                                  | Sept 26 | Exam 1                                     |
| Sept. 29 | Quadratic Functions                           | Oct. 1  | Other Polynomial Functions                       | Oct.3   | Polynomial Functions                       |
| Oct. 6   | Polynomial Functions                          | Oct. 8  | Rational Functions                               | Oct.10  | Polynomial and<br>Rational Inequalities    |
| Oct. 13  | Exponential Functions                         | Oct. 15 | Logarithmic Functions                            | Oct.17  | Properties of Logs                         |
| Oct. 20  | Exponential and<br>Logarithmic Equations      | Oct. 22 | Exponential Growth<br>and Decay                  | Oct.24  | System of Equations<br>in Two Variables    |
| Oct. 27  | System of Equations<br>in Three Variable      | Oct. 29 | Catch Up/Review                                  | Oct. 31 | Exam 2                                     |
| Nov 3    | Partial Fractions                             | Nov. 5  | Systems of Inequalities                          | Nov. 7  | Matrices and Vectors                       |
| Nov 10   | Matrices and Vectors                          | Nov. 12 | Matrices and Vectors                             | Nov. 14 | Conic Sections                             |
| Nov 17   | Conic Sections                                | Nov. 19 | Conic Sections                                   | Nov. 21 | Catch Up/Review                            |
| Nov 24   | Exam 3  | Nov. 26 | Thanksgiving Holiday                             | Nov. 28 | Thanksgiving Holiday                       |
| Dec. 1   | Review  | Dec.3   | Review   | Dec. 5  | Dead Day                                   |