

# COLLEGE ALGEBRA: MATH 1314-004

## ACR 204: 2:00-3:15 MW

### Spring, 2015

**Instructor:** Dr. Sherill Easterling

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**Office Hours:** 9:50-10:50 and 12:50-1:50 TR, 10:30-12:00 and 1:00-3:00 W or by appointment

**Office:** ACR 107C

**Phone:** (432)837-8069

**Prerequisites:** MATH 0301 or proper score on a placement exam.

**Learning Objectives:** Students will understand and be able to apply knowledge of quadratic equations and functions, graphs and zeros of polynomial functions, exponential and logarithmic functions, systems of equations, and matrices.

**Mathematics Program Learning Outcomes:** The graduating student will demonstrate that he/she is able to: (1) Apply knowledge of basic mathematics principles; (2) Identify and provide valid proof or solutions for theorems and problems; (3) Recognize and dispute invalid mathematical statements 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 learn. 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 understand concepts related to patterns, relations, functions and algebraic reasoning. CO 016 (Geometry and Measurement) The teacher understand concepts and principles of geometry and measurement. CO 017 (Probability and Statistics) The teacher understands concepts related to probability and statistics and their applications. CO 018 (Mathematical Processes) The teacher understand mathematical processes and knows how to reason mathematically, solve mathematical problems and make mathematical connections within and outside of mathematics.

**Assessment:** The assessment of students' mastery of the skills and concepts as specified in the Learning Objectives will occur, with grade assignment: 90-100 A, 80-89 B, 70-79 C, 60-69 D, below 60 F. The final grade in the course will be the mean of the four major tests and one quiz and/or homework average. Quizzes will often be given at the beginning of the class period and may not be made up unless prior arrangements have been made. You may drop the two lowest quiz grades. No major test grade will be dropped. The final exam will be Test #4 with selected comprehensive topics.

**Class Attendance:** Class attendance is expected and necessary to pass this course. Lecture material often adds to the textbook so missing classes causes undue hardship. After four absences, two points for each absence will be deducted from your final grade, with the exception of school sponsored activities. You need to email me regarding any absence. Tardiness will result in a student not having sufficient time to complete quizzes. Class notes are extremely important since many of the examples will be similar to homework, quiz, and test questions. It is up to the student to get these notes.

**Textbook & Calculator:** "College Algebra" by Robert Blitzer. Sixth Edition, Pearson, ISBN 978-0-321-78228-1. No particular calculator is required.

**Homework:** Like any activity, practice is an essential part of learning mathematics. You will be assigned homework problems from the textbook at the end of class which are due at the beginning of the next class. After attempting the assignment, if misunderstanding exists, it is up to the student to get help before class. There are ample office hours offered by the professor and emailing [seasterling@sulross.edu](mailto:seasterling@sulross.edu) often helps also. Take home quizzes are to be done by the student alone without the professor's or tutor's help.

**Conduct:** Cellphones and headphones must both be turned off and put away during class.

**Exams:** Exam questions will be very similar to homework and quizzes. They will be closed book and closed notes. Once an exam starts, a student is not to leave the room.

**Disabilities Accommodation:** It is Sul Ross State University policy to provide reasonable accommodation to students with disabilities. If you would like to request such accommodation because of a physical, mental or learning disability, please contact the ADA Coordinator, Grace Petty, in Counseling & Accessibility Services, Ferguson Hall 112, 432-837-8203.

### **Class Schedule and Topics :**

<b>Date</b>	<b>Sections and Topics</b>
1/20	P2,3,5 Exponents, Radicals, Factoring
1/22	1.5 Quadratic Equations
1/27	2.1-2 Functions and Graphs
1/29	2.5 Graphs and Transformations of Common Functions
2/3	2.6 Combinations of Functions; Composite Functions
2/5	Review for Test #1
2/10	TEST #1
2/12	3.1 Quadratic Functions
2/17	3.2 Polynomial Functions and Their Graphs
2/19	3.3 Synthetic Division; Remainder and Factor Theorems
2/24	3.4 Zeros of Polynomial Functions
2/26	3.5 Rational Functions and Their Graphs
3/3	Review for Test #2
3/5	TEST #2
3/10	2.7 Inverse Functions
3/12	4.1 Exponential Functions
3/16-3/20	Spring Break
3/24	4.2 Logarithmic Functions
3/26	4.3 Properties of Logarithms
3/31	4.4 Exponential and Exponential Equations
4/2	4.5 Exponential Growth and Decay
4/7	Review for Test #3
4/9	TEST #3
4/14	6.1 Matrix Solutions to Linear Equations
4/16	6.2 Inconsistent and Dependent Systems and Their Applications
4/21	6.3 Matrix Operations
4/23	6.4 Multiplicative Inverses
4/28	6.4 Applications of Multiplicative Inverses
4/30	Extra Day
5/5	Review for Final

