Disclaimer

This syllabus is current and accurate as of its posting date, but will not be updated. For the most complete and up-to-date course information, contact the instructor.

Instructor Information

Leslie Cope
Mason High School, 1105 West College Avenue, Mason TX
Phone: 325-347-1122 ext 260
Email: leslie.cope@masonisd.net

Major Course Requirements

Tests - Students may expect a test at the end of each chapter-oriented topic. The exact dates and coverage of these tests will be announced in class. The final exam will be held as specified in the Mason High School semester exam schedule.

Daily Work - Daily work will consist primarily of traditional homework problems completed on paper or via Google Drive.

Quizzes - Biweekly quizzes will be completed in class using paper and pencil or via Google Forms.

Calculation - Your homework and quizzes will count 20%, tests throughout the semester 65%, and the final exam (semester exam) 15%. Then 90 and above is an A, 80-89 is a B, 70-79 is a C, 60-69 is a D, and less than 60 is an F.

Student Learning Outcomes

1. Students will demonstrate factual knowledge including the mathematical notation and terminology used in this course. Students will read, interpret, and use the vocabulary, symbolism, and basic definitions used in college algebra including the real numbers, exponents, radicals, polynomials, factoring, functions, equations, inequalities, and graphs.

2. Students will describe the fundamental principles including the laws and theorems arising from the concepts covered in this course. Students will identify and apply the laws and formulas that result directly from the definitions; for example, the quadratic formula, rules of exponents, and properties of logarithms.
3. **Students will apply course material along with techniques and procedures covered in this course to solve problems.** Students will use the facts, formulas, and techniques learned in this course to simplify algebraic expressions, graph functions, and solve inequalities, equations and systems of equations.

4. **Students will develop specific skills, competencies, and thought processes sufficient to support further study or work in this field or related fields.** Students will acquire a level of proficiency in the fundamental concepts and applications necessary for further study in academic areas requiring college algebra as a prerequisite, or for work in occupational fields requiring a background in algebra. These fields might include education, business, finance, marketing, computer science, physical sciences, and engineering, as well as mathematics.

**Required Texts or Readings**


**P. Prerequisites: Fundamental Concepts of Algebra**

P.1 Real Numbers and Algebraic Expressions

P.2 Exponents and Scientific Notation

P.3 Radicals and Rational Exponents

P.4 Polynomials

P.5 Factoring Polynomials

P.6 Rational Expressions

**1. Equations, Inequalities, and Mathematical Models**

1.1 Graphs and Graphing Utilities

1.2 Linear Equations

1.3 Formulas and Applications

1.4 Complex Numbers

1.5 Quadratic Equations

1.6 Other Types of Equations

1.7 Linear Inequalities

1.8 Quadratic and Rational Inequalities

**2. Functions and Graphs**

2.1 Lines and Slope

2.3 Basics of Functions

**3. Polynomial and Rational Functions**

3.1 Quadratic Functions
4. Exponential and Logarithmic Functions
4.1 Exponential Functions
4.2 Logarithmic Functions
4.3 Properties of Logarithms
4.4 Exponential and Logarithmic Equations

5. Systems of Equations and Inequalities
5.1 Systems of Linear Equations in Two Variables
5.2 Systems of Linear Equations in Three Variables
5.3 Partial Fractions

Subject Matter
We will be studying the basics of algebra including exponents and radicals, logarithms, factoring, algebraic quotients, systems of equations, inequalities, absolute value, complex numbers, and quadratic equations.

The subject matter schedule listed below is tentative, and subject to change and adaptation. For current, updated information about course topics, contact the instructor.

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Honor Code
Angelo State University students shall maintain complete honesty and integrity in their academic pursuits. The University expects all students to engage in all academic pursuits in a manner that is above reproach and to maintain complete honesty and integrity in the academic experiences both in and out of the classroom.