**South Plains College**

**Learning Outcomes College Prep Course**

Successful completion of this course should reflect mastery of the following objectives:

**(Developmental Algebra Concepts)**

1. Define, add, subtract, multiply and divide whole numbers.
2. Use the order of operations to simplify an expression containing whole numbers.
3. Define, add, subtract, multiply and divide integers.
4. Use the order of operations to simplify an expression containing integers.
5. Define, add, subtract, multiply and divide rational numbers.
6. Use the order of operations to simplify an expression containing rational numbers.
7. Use ratios and proportions to solve application problems.
8. Change percentages to decimals and fractions, decimals to fractions and percentages, and fractions to decimals and percentages.
9. Solve application problems involving percentages.
10. Evaluate algebraic expressions.
11. Simplify algebraic expressions by using the Distributive Property and combining like terms.

**(Beginning Algebra Concepts)**

1. Solve linear equations including equations containing decimals and fractions.
2. Solve linear inequalities, graph the solution set on a number line and write the solution in interval notation.
3. Graph and recognize the equations of vertical and horizontal lines.
4. Graph linear equations in two variables by finding the ***x-*** and ***y-***intercepts and by using the slope-intercept method ().
5. Solve systems of linear equations containing two equations and two variables by graphing, substitution and elimination methods.
6. Simplify expressions using exponent rules.
7. Define, add, subtract, multiply and divide polynomials.
8. Factor polynomials.
9. Solve polynomial equations by factoring.

**(Intermediate Algebra Concepts)**

1. Define, simplify, multiply, divide, add and subtract rational expressions.
2. Solve rational equations.
3. Define, simplify, add, subtract, multiply and divide (rationalize the denominator) radical expressions.
4. Define, add, subtract, multiply and divide complex numbers.
5. Solve radical equations.
6. Solve quadratic equations by the Square Root Property, completing the square and the quadratic formula.
7. Solve absolute value equations.
8. Define, recognize and evaluate functions.
9. Translate and solve application problems.