

COLLEGE ALGEBRA

Course Description

This course will benefit those students who have successfully completed Algebra 1 and would like to review Algebra concepts before transitioning to post-secondary schooling. This course will focus on Pre-Algebra concepts, solving linear inequalities and graphing, evaluating exponents and polynomials, factoring polynomials, and performing operations on rational expressions. This course will also help students prepare to take the Algebra portion of the ACCUPLACER College Entrance Test. This course will culminate with a Final Exam.

Prerequisite

Algebra 1: Session 1 & Algebra 1: Session 2

Credit Requirement Area

Math

Learning Objectives

Students will study and master the following concepts:

- evaluate order of operations with absolute value;
- distribute and combine like terms;
- solve linear equations (simple, dual side variables, infinite or no solution, and rational coefficients);
- solve algebraic formulas with several variables for one of the variables;
- solve, graph, and give interval notation for basic linear inequalities and tripartite inequalities;
- solve distance, rate, and time problems;
- find the equation of a line from a graph, standard form, two points, parallel lines, and perpendicular lines.
- simplify exponential expressions with positive and/or negative exponents;
- multiply or divide expressions in scientific notation;
- perform operations with polynomials;
- factor and solve quadratics;
- multiply and divide rational expressions (with and without factoring);
- find least common denominators;
- add and subtract rational expressions (with and without common denominators);
- convert units using dimensional analysis (with one and two units).

Suggested Weekly Schedule

Week	Graded Activities	Suggested Due Date	% Points
1	Assignment 1: Practice Order of Operation	Monday of Week 1	12.5%
	Assignment 2: Simplify Algebraic Expressions	Monday of Week 1	12.5%
	Assignment 3: Two Step Problems	Tuesday of Week 1	12.5%
	Assignment 4: Linear Equations	Tuesday of Week 1	12.5%
	Assignment 5: Fraction Equations	Wednesday of Week 1	12.5%

Week	Graded Activities	Suggested Due Date	% Points
	Assignment 6: Formulas	Wednesday of Week 1	12.5%
	Assignment 7: Absolute Value Equations	Thursday of Week 1	12.5%
	Assignment 8: Word Problems	Friday of Week 1	12.5%
Week 1 Total Percentage Towards Final Grade			17%
2	Assignment 9: Solve and Graph Inequalities	Monday of Week 2	12.5%
	Assignment 10: Compound Inequalities	Monday of Week 2	12.5%
	Assignment 11: Points and Lines	Tuesday of Week 2	12.5%
	Assignment 12: Slope	Tuesday of Week 2	12.5%
	Assignment 13: Slope-Intercept	Wednesday of Week 2	12.5%
	Assignment 14: Point Slope Form	Wednesday of Week 2	12.5%
	Assignment 15: Parallel and Perpendicular Lines	Thursday of Week 2	12.5%
	Assignment 16: Distance, Rate and Time Problems	Friday of Week 2	12.5%
Week 2 Total Percentage Towards Final Grade			17%
3	Assignment 17: Exponent Properties	Monday of Week 3	14.3%
	Assignment 18: Negative Exponents	Monday of Week 3	14.3%
	Assignment 19: Scientific Notation	Tuesday of Week 3	14.3%
	Assignment 20: Introduction to Polynomials	Wednesday of Week 3	14.3%
	Assignment 21: Multiply Polynomials	Thursday of Week 3	14.3%
	Assignment 22: Multiply Special Products	Thursday of Week 3	14.3%
	Assignment 23: Divide Polynomials	Friday of Week 3	14.2%
Week 3 Total Percentage Towards Final Grade			17%
4	Assignment 24: Greatest Common Factor	Monday of Week 4	16.6%
	Assignment 25: Grouping	Tuesday of Week 4	16.6%
	Assignment 26: Trinomials Where $a=1$	Wednesday of Week 4	16.7%
	Assignment 27: Trinomials Where a does not equal 1	Wednesday of Week 4	16.7%
	Assignment 28: Special Products	Thursday of Week 4	16.7%
	Assignment 29: Solve by Factoring	Friday of Week 4	16.7%
Week 4 Total Percentage Towards Final Grade			17%
5	Assignment 30: Reduce Rational Expressions	Monday of Week 5	20%
	Assignment 31: Multiply and Divide Fractions	Tuesday of Week 5	20%

Week	Graded Activities	Suggested Due Date	% Points
	Assignment 32: Least Common Denominator	Wednesday of Week 5	20%
	Assignment 33: Add and Subtract Rational Expressions	Thursday of Week 5	20%
	Assignment 34: Dimensional Analysis	Friday of Week 5	20%
Week 5 Total Percentage Towards Final Grade			17%
6	Assignment 35: College Algebra Final Exam	Friday of Week 6	100%
Week 6 Total Percentage Towards Final Grade			15%
WEIGHTED TOTAL			100%