Algebra 1, Part 1 (ALG-051-302-001)

ALG-051 Syllabus

Course Description

This course is designed to introduce students to the fundamental algebraic principles necessary for success in upper-level math courses, foster math inquiry and problem-solving skills. Students will study algebra foundations, inequalities, absolute value, function patterns, linear equations, line of best fit, piecewise functions, and systems of equations. This is the first course in a two-part Algebra 1 series. This course also encompasses Common Core State Standards (CCSS).

Prerequisites

There are no prerequisites for this course.

Course Materials and Technology

All the information is included in this course. Students do not need to buy additional textbooks.

Students must buy these materials and technology to complete the course:

- a webcam for the proctored final exam

Students may use a handheld graphing or scientific calculator or a Desmos online calculator (found at desmos.com/scientificLinks to an external site. or desmos.com/calculatorLinks to an external site. only) during the final exam; no other calculator is allowed.

1. ### Course Outcomes

   As students complete the course assignments, they will increase their knowledge,

improve a 21st-century skill, and develop an attribute.

Knowledge: Algebra

In this course, *knowledge* refers to the subject matter and content students will learn while completing the readings, practices, quizzes, and assignments.

On successful completion of this course, students will be able to do the following:

1. Linear Equations: Evaluate, create, analyze, and interpret linear equations from context, equation, and graph forms.
2. Systems of Linear Equations: Solve problems using a variety of methods, including elimination, substitution, and graphing.
3. Functions: Understand the basic characteristics of functions, identify parent functions, and know how to perform transformations of functions on the coordinate plane.
4. Inequalities: Solve for solution sets of inequalities graphically and algebraically with both one and two variables.

21st-Century Skill: Collaboration—Responsibility and Productivity.

As students complete this course's assignments, they will gain skills in responsibility and productivity. This skill is part of collaboration.

Attribute: Responsibility

This course focuses on developing the attribute of responsibility in the context of algebra.

Grading and Assignments

The letter grade in this course will be based on these assignments and exams.

Assignment or Exam	Grading	Percent of Total Grade
Study Guides	Computer-Graded	10%
Written Problems	Teacher-Graded	15%
Assignments	Teacher-Graded	20%

Module Quizzes	Computer-Graded	35%
Midcourse Quiz and Final Exam*	Computer-Graded	20%

*Students must pass the final exam with a 60% or higher to earn credit for the course. They may retake the final exam once for a fee.

Due Dates

The due dates in the course are only suggestions to help the students pace themselves. You do *not* need to complete assignments, quizzes, and exams by the due date set in the course.

Study Guides

Study guides are provided for each module. They will help students focus on the important concepts needed to be successful in this course and in life. Study guides will be due in each module, and points will be awarded upon submission.

Assignments

There are 56 assignments—one for each learning topic. These assignments consist of between five and ten questions that are completed via Derivita, an external math software.

Written Problems

Written problems give the students opportunities to apply the concepts they have learned. They also evaluate the students' mastery of the skill for the course. The written problems are only submitted in modules 2, 4, 6, 10, 12, and 14.

Module Practice Quizzes and Module Quizzes

Module Practice Quizzes

At the end of each learning module, there will be a practice quiz to help prepare you for the module quiz. These quizzes are not graded and do not impact your overall course grade.

Module Quizzes

In addition to practice quizzes at the end of each module, there will also be a graded quiz. These quizzes are graded and are calculated into your overall course grade. Module quizzes cannot be resubmitted for a fee, but you will be allowed two attempts on each question. Each quiz is open-book and note and is untimed.

Midcourse Quiz

This computer-graded quiz covers the material up to the midcourse quiz. The questions on the midcourse quiz are similar in format to the questions on the final exam. The midcourse quiz cannot be resubmitted.

Final Exam

Students must pass the final exam to earn credit for the course; they may retake it once, for a fee, upon request.

Course Grade

The letter grade will be calculated according to these percentages.

Percent to Letter Grade Calculation	
A	100–93%
A–	<93%–90%
B+	<90%–87%
B	<87%–83%

B–	<83%–80%
C+	<80%–77%
C	<77%–73%
C–	<73%–70%
D+	<70%–67%
D	<67%–63%
D–	<63%–60%
F (fail)	<60%–0%