

Algebra 1 Part 2

Syllabus



Course Description

This course is designed to introduce students to the fundamental algebraic principles necessary for success in upper-level math courses and foster math inquiry and problem-solving skills. Students will study exponential functions and sequences, polynomial equations and factoring, quadratic functions, and radical and rational functions. This is the second 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.

It is recommended, but not required, that students take Algebra 1 Part 1 prior to taking this course.

Course Materials and Technology

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

Course Outcomes

As students complete the course assignments, they will increase their knowledge, improve a 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 familiar with the following:

1. Exponential functions and sequences: Evaluate, create, analyze, and interpret exponential equations from context, equation, and graph forms.
2. Polynomial equations and factoring: Evaluate, analyze, and interpret polynomial equations using various methods, including factoring and graphing.
3. Solving quadratic functions: Identify problems involving quadratic equations and solve them through various methods, including factoring, graphing, completing the square, and using the quadratic formula.
4. Radical and rational functions: Evaluate, analyze, and interpret radical and rational equations using various methods, including graphing.



Skill: Critical Thinking—Interpretation and Analysis

As students complete this course's assignments, they will gain skills in interpretation and analysis. This skill is part of critical thinking.



Attribute: Diligence

This course focuses on developing the attribute of diligence 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	10
Written Problems	Teacher	15

Assignment or Exam	Grading	Percent of Total Grade
Assignments	Computer	20
Module Quizzes	Computer	35
Midcourse Quiz and Final Exam	Computer	20

Assignments and Exams

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 5 and 10 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. You will be allowed two attempts on each question. Each quiz is open book and open note and untimed.

Midcourse Quiz

This 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.

Final Exam

The final exam will cover all course content.

Course Grade

The letter grade will be calculated according to these percentages.

Percent to Letter Grade Calculation	
A	93–100%
A–	90–<93%
B+	87–<90%
B	83–<87%
B–	80–<83%
C+	77–<80%
C	73–<77%
C–	70–<73%
D+	67–<70%
D	63–<67%
D–	60–<63%
F (fail)	0–<60%

Grading Scale