Algebra 1, Part 2 (ALG-053-301-003)

Syllabus

Prerequisites

There are no prerequisites for this class. However, we recommend that you take the class that comes before this course:

- Algebra 1 Part 1

Course Learning Outcomes

Algebra 1, Part 2, is designed to introduce students to the fundamental algebraic principles necessary for success in upper-level math courses and to foster math inquiry and problem-solving skills. The course has been divided into four major sections, so by the end of the course, diligent students will be able to master the following skills.

- Exponential Functions and Sequences: evaluate, create, analyze, and interpret exponential equations from context, equation, and graph forms.
- Polynomial Equations and Factoring: evaluate, analyze, and interpret polynomial equations using various methods, including factoring and graphing.
- 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.
- Radical and Rational Functions: evaluate, analyze, and interpret radical and rational equations using various methods, including graphing.

Course Materials

All the materials you need are included in the course. You do not have to buy any additional textbooks.

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.

Assignments

This course is divided up into 16 modules with modules 8 and 16 review and assessment modules. Each learning module 1-7 and 9-15 is split into 4 topics and a review and quiz.

Topic Assignments

There are 56 Topic Assignments, one for each learning topic. These Topic Assignments consist of between 5 and 15 questions that are completed via Derivita, an external math software.

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.

Application Problems and Project

Problems

At the end of each learning module there are application problems that apply the concepts from the module to real world scenarios. Complete each of the problems using the application problem template. The completed templates are only submitted in modules 3,5 7, 11, 13, and 15.

Projects

In addition to the application problems, in modules 8 and 16 you will be asked to complete a project that uses these same skills. Projects are started and submitted in both modules (8 and 16). These projects will require a presentation of material where you will need to video yourself initially and provide ID.

Content Guides

You will be asked to complete content guides as you work through the course. These guides will help prepare you for the assessments by creating notes of the essential material provided in the lessons. These guides can be used on your module quizzes and exams.

Content guide templates are provided in every learning modules and submitted at the end of each unit in modules 3, 7, 11, and 15.

Exams

You will complete 2 exams in the course, one in module 8 and one in module 16. The Mid-Course Quiz covers Modules 1-7, and the Comprehensive Final covers all Modules 1-15. The mid-course quiz can not be resubmitted for a fee, but like module quizzes, they allow for two attempts on each question.

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

Grading

Your grade in this course will be based on these assignments and exams:

Assignment or Exam	Grading	Percent of Total Grade
56 Topic Assignments	Computer	20%
14 Module Quizzes	Computer	35%
14 Content guides (submitted by Unit)	Teacher	10%
14 Module Application Problem Assignments 2 Application Projects	Teacher	15%
1 Mid Course Quiz 1 Final Exam*	Computer	20%

* You must pass the final exam with at least a 60% to earn credit for the course. You may retake the final exam once for a fee.

Grade Scale

Your letter grade is 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%