Precalculus, Part 1

(PRECALC-041-300-006)

Mathematics Precalculus Part 1 Syllabus

Course Description

Precalculus Part 1 is designed to introduce students to the foundational principles necessary for success in calculus courses, as well as foster math inquiry and problem solving skills. The course has been divided into four units:

Unit 1: Introduction to Functions

Unit 2: Polynomials and Rational Functions

Unit 3: Exponential and Logarithmic Functions

Unit 4: Introduction to Trigonometry

In addition, the course will also have you develop 21st Century Skills in *Critical Thinking* as well as the attribute of Gratitude. You will find more information on the skill and attribute in the Getting Started module.

Prerequisites

There are no prerequisites for this class. However, we recommend that you take the classes that come before this course. There are different course tracks that students take before precalculus. Two common tracks are:

Track A: Algebra 1, Algebra 2, Geometry

or

Track B: Secondary 1, Secondary 2, Secondary 3

Other similar tracks may use different names. Be sure you have taken the courses that prepare you for precalculus before you start this course.

Canvas Information

If you're new to online courses, or if you just need a quick refresher, be sure to take a look at these video tutorials!

Course Materials

There are no textbooks required for this course, all content can be found within the course lesson pages.

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 Learning Outcomes

By the end of this course, you will be able to:

- Evaluate, create, analyze, and interpret linear equations, systems of linear equations, and absolute value equations, from context, equation, and graph forms.
- Evaluate, create, analyze, and interpret polynomial functions and rational equations with real or complex solutions.
- Evaluate, create, analyze, and interpret exponential and logarithmic functions.
- Evaluate, interpret, and apply trigonometric functions and inverse trig functions to arcs, angles, and triangles.

Grading and Assignments

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

Assignment or Exam	Grading	Percent of Total Grade
Topic Assignments	Computer Graded	20%
Application Problems and Project	Teacher Graded	15%
Module Quizzes	Computer Graded	35%
Content Guides	Teacher Graded	10%
Mid-Course 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.

Topic Assignments

Each module consists of four topics. Each topic has one assignment where you will be asked to demonstrate your knowledge of the content learned from the lesson material. In total there are 56 assignments in the course. You will have unlimited attempts.

Content Guides

Every module will have a Content Guide to help you take notes on the key topics in the lessons. Be sure to fill out the Content Guides because you will submit it for a grade

You will submit your completed content guides at the end of the last module in each unit. Content Guides are graded based on completion, so you will get full points if you have everything filled out.

You will have the option to resubmit Content Guides for a fee.

Application Problems and Final Project

Each module has four application problems of which you will choose two to complete. You will get a sneak peek of one of the module application problems in module lesson. At the end of each module is where you will complete the two application problems of your choice. You will submit the application problems according to the submission schedule that can be found at the top of each application problem page.

These application problems are meant to challenge you to apply what you learned to real-world problems. There are instructions, templates, and a rubrics provided to help you be successful in completing this portion of the course.

The module application problems are meant to prepare you for the mid-course project in module 8 and the final project in module 16. These projects will require a presentation of material where you will need to video yourself initially and provide ID.

The 21st Century Skill of *Critical Thinking* is taught through the completion of these projects as well. Be sure to integrate the practices shared in the instructions and feedback to ensure that you earn the optional micro-credential at the end of the course.

You will have the option to resubmit Application Problems for a fee.

Module Quizzes

At the end of each module you will take a quiz that covers all topics taught. While you have unlimited attempts for assignment questions, module quizzes will only allow for 2 attempts at each question, and do not generate additional questions.

Module Quizzes can not be resubmitted for a fee.

Exams

You will complete these exams during the course.

Mid-Course Quiz: The mid-course quiz is found in Module 8 and covers all of the material learned in Modules 1-7. The Mid-Course Quiz can not be resubmitted for a fee.

Final Exam: The final exam is found in Module 16 and is a comprehensive final that covers all material learned in the course from Module 1-15.

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

Final Grade

Your letter grade will be calculated according to these percentages.

Percent to Letter Grade Calculation	
A	100% – 93%
A–	92% – 90%
B+	89% – 87%
B	86% – 83%
B–	82% – 80%
C+	79% – 77%
C	76% – 73%
C–	72% – 70%
D+	69% – 67%
D	66% – 63%
D–	62% – 60%
F (Fail)	59% – 0%