

# COURSE SYLLABUS

## PRECALCULUS

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### COURSE DESCRIPTION

This course includes the study of functions, trigonometry, and geometry, preparing students for advanced studies in STEM-related courses. An emphasis is placed on building conceptual understandings, reasoning mathematically, and modelling with mathematics. This is accomplished using inquiry, real-world contexts, and explorations with technology.

#### BY THE END OF THE COURSE, STUDENTS WILL GAIN THE FOLLOWING:

- Reason with definitions and theorems
- Connect concepts and processes
- Implement algebraic and computational processes
- Engage with graphical, numerical, analytical, and verbal representations and demonstrate connections among them
- Demonstrate notational fluency
- Communicate mathematical ideas in words, both orally and in writing
- Use a graphing calculator and other technology to explore and interpret concepts, as well as to solve problems

Having completed this course, students will be prepared for the study of calculus, as well as advanced studies in other STEM-related courses.

### COURSE MODULES

- Unit 1 – Review of Functions
- Unit 2 – Exploring Functions
- Unit 3 – Sequences and Series
- Unit 4 – Solving Triangles and Trigonometric Equations
- Unit 5 – Trigonometric Functions and Identities
- Unit 6 – Analytic Geometry
- Unit 7 – Vectors and Matrices
- Unit 8 – Limits

## COURSE MATERIALS

The following items are suggested for this class:

- folder
- pencils/pens
- college ruled paper

## COURSE ASSIGNMENTS

Course lessons contain instructional videos, video notes pages, readings, interactive explorations, and practice problems. Students submit their video notes for a grade.

Other course components include lesson quizzes, chapter review assignments, chapter tests, discussion-based assessments, projects, and semester exams. The course will follow the high school grading scale:

### ASU PREP GRADE SCALE

Letter Grade	Percent Range	Grade Points
<b>A</b>	100% to 90%	4.0
<b>B</b>	89% to 80%	3.0
<b>C</b>	79% to 70%	2.0
<b>D</b>	69% to 60%	1.0
<b>F</b>	59% to 0%	0

## TECHNOLOGY REQUIREMENTS

### DEVICES

Devices that are less than 5 years old is recommended.

- Desktop
- Laptop
- Chromebook
- Microphone and webcam

## OPERATING SYSTEMS

- Windows 10 and newer
- Mac OSX 10.6 and newer
- Linux
- ChromeOS

## INTERNET SPEED

- High speed internet (recommended)

## SUPPORTED BROWSERS

- Edge (latest version)
- Safari (latest version)
- Chrome (latest version)
- Firefox (latest version)

## SUPPORTED BROWSER PLUGINS AND SETTINGS

- Javascript enabled
- Flash - latest version is recommended
- 1024x768 is recommended
- Pop-up blockers should be disabled
- Cookies should be enabled.

## VIRTUAL REALITY (VR) /AUGMENTED REALITY (AR)

Some courses have Virtual and Augmented Reality experiences which are best viewed with devices that are AR/VR enabled. These experiences can have large file sizes and it is recommended that they are downloaded over wi-fi. Minimum Devices:

- iPhones 5S
- Samsung Galaxy S5
- Newer VR/AR enabled devices (Recommended)

Please contact [support.asuprep.org](https://support.asuprep.org) for further assistance.

## ACADEMIC INTEGRITY

In this course we practice the “ASU Prep Way,” and as a part of this policy, it is essential for students to complete their own work at all times. Cheating means using the work of another person as their own, copying information or answers from another student, plagiarizing, allowing another student to copy work, excessive collaboration on an assignment meant to be done individually, or sharing test/quiz questions/answers with

students who have not yet taken the test/quiz. If a student is caught violating these guidelines, he/she will receive disciplinary action according to school policy.