Trigonometry

Course Overview and Syllabus

Course Number: MA1403

Grade level: 12

Prerequisite Courses: Algebra II

Credits: 0.5

Course Description

In this one-semester course, students use their geometry and algebra skills to begin their study of trigonometry. Students will be required to express understanding using qualitative, quantitative, algebraic, and graphing skills. This course begins with a quick overview of right triangle relationships before introducing trigonometric functions and their applications. Students explore angles and radian measures, circular trigonometry and the unit circle. Students extend their understanding to trigonometric graphs, including the effects of translations and the inverses of trigonometric functions. This leads to the Laws of Sines and Cosines, followed by an in-depth exploration of trigonometric identities and applications. The course ends with an introduction to the polar coordinate system, complex numbers, and DeMoivre's Theorem.

Course Objectives

Throughout the course, you will meet the following goals:

- Define and apply the six trigonometric functions
- Understand the connection between trigonometric and circular functions
- Graph all six trigonometric functions and their transformations
- Solve problems in oblique triangles using the Law of Sines, Cosines, and area formulas
- Use the basic trigonometric identities to verify other trigonometric identities and to simplify complex trigonometry expressions
- Solve trigonometric equations
- Plot points and graph equations in the polar coordinate system
- Use trigonometry concepts to solve real-world problems

Student Expectations

This course requires the same level of commitment from you as a traditional classroom course would. Throughout the course, you are expected to spend approximately 5–7 hours per week online on the following activities:

- Interactive lessons that include a mixture of instructional videos and tasks
- Assignments in which you apply and extend learning in each lesson
- Assessments, including quizzes, tests, and cumulative exams

Communication

Your teacher will communicate with you regularly through discussions, email, chat, and system announcements. You will also communicate with classmates, either via online tools or face to face, as you collaborate on projects, ask and answer questions in your peer group, and develop your speaking and listening skills.

Grading Policy

You will be graded on the work you do online and the work you submit electronically to your teacher. The weighting for each category of graded activity is listed below.

Grading Category	Weight
Assignments	10%
Lesson Quizzes	20%
Unit Tests	40%
Cumulative Exams	20%
Lab	10%
Additional	0%

Scope and Sequence

When you log into Edgenuity, you can view the entire course map—an interactive scope and sequence of all topics you will study. The units of study are summarized below:

Unit 1: Right Triangle Relationships
Unit 2: Applying Trigonometric Functions
Unit 3: Trigonometric Angles
Unit 4: Circular Trigonometry
Unit 5: Trigonometric Graphs
Unit 6: Translations of Trigonometric Graphs
Unit 7: Law of Sines
Unit 8: Trigonometric Identities
Unit 9: Trigonometric Identity Application
Unit 10: Polar Coordinate System