



## Online Courses for High School Students

1-888-972-6237

### Trigonometry\*

#### COURSE DESCRIPTION:

This course is designed to go through the topics of Trigonometry and the related real world applications of trigonometric topics. After students complete this course they will have an understanding of how trigonometry is used in day to day life and how it relates to other mathematical topics.

#### COURSE OBJECTIVES:

After completing the course, students will be able to:

- Understand the major topics of Trigonometry
- Identify how the major Trigonometry topics relate to real world situations
- Apply the topics in Trigonometry to various problems
- Explain how Trigonometry is used within the greater context of mathematics

**PREREQUISITES:** Algebra II

**COURSE LENGTH:** One semester

**REQUIRED TEXT:** None

#### COURSE OUTLINE:

Trigonometry Introduction

- Functions and Relations
- Domain and Range
- Composition of Functions
- Adding/Subtracting/Multiplying/Dividing Functions
- Graphing Functions

Trigonometric Ratios

- Angles and Angle Measures
- Right Triangles
- Six Trigonometric Ratios
- Special Right Triangles
- Unit Circle

Graphing Trigonometric Functions

- Graphs of the Six Trigonometric Functions
- Graphs of Inverse Trigonometric Relations
- Sinusoidal Functions and Their Real World Applications

Trigonometric Laws and Identifies

- Law of Sines
- Law of Cosines
- Trigonometric Identities
- Linear and Angular Velocity
- Area and Length