

## **TRIGONOMETRY**

Grade: 11, 12

Credit: 0.5 (NCAA approved)

Prerequisite: Algebra 1, Algebra 2, Geometry

The Trigonometry course is designed for the students who will continue to Pre-Calculus or for the college-bound student. Trigonometric topics include graphing, analyzing, and applying the six trigonometric functions. Scientific calculators and/or graphing calculators are integrated throughout the course.

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### **Trigonometry Lessons**

#### **Teacher Message**

**Lesson 1: Introduction to Trig; Degrees, Minutes, and Seconds; Degrees and Radians**

**Lesson 2: The Six Functions; The Unit Circle and Polar Coordinates; Tangent and other Undefined Values**

**Lesson 3: Reciprocal Identities; Ratio Identities; Pythagorean Identities; Negative Angle Identities**

**Lesson 4: Double Angle Identities**

**Lesson 5: Inverse Trigonometric Functions; Domain of Inverse Trigonometric Functions; Conditional Equations**

**Lesson 6: Graphs of Trigonometric Functions; Graphs of Inverse Trigonometric Functions; Understanding the Form  $y=A\sin(Bx+C)+D$ ; Modeling Periodic Data**

**Lesson 7: Oblique Triangles; Law of Sines; Law of Cosines; The Ambiguous Case; Area of a Triangle**

**Lesson 8: Complex Numbers and Graphing; Complex Numbers Polar Form; Operations on Complex Numbers; De Moivre's Theorem**

**Lesson 9: Vectors; Vector Addition; Aviation Problems**



## Lesson 10: Trigonometry Review

