

# Pre-Calculus Honors Course Outline

## Course Description

The course content encompasses functions and graphing techniques, conics, trigonometric functions, exponential and logarithmic equations, polynomial functions, sequences and series, polar coordinates, and vectors. Geometry concepts and algebra skills are used throughout the course.

During the course of the year we will cover the following topics:

- Characteristics and Applications of Functions
- Transformations, Compositions, and Inverses of Functions
- Introduction to Trigonometry
- Trigonometric Functions and Graphs
- Trigonometric Equations, Identities, and Proofs
- Vectors and Applications
- Polynomial Functions and Applications
- Rational Functions and Applications
- Exponential and Logarithmic Functions and Applications
- Parametric Functions, Equations, and Applications
- Conic Sections and Applications
- Sequences and Series