

**Brandywine Heights Area School District
200 W. Weis Street, Tipton, PA 19562**

**Course Syllabus for Honor's Trigonometry with Analytic Geometry
(2006-2007)**

Overview:

Trig is the study of triangles. After a brief review of algebra and geometry topics, we introduce the trig using the unit circle approach. Students then apply this information to reading questions. We also cover a section on analytic geometry before we go back into the trig. Students taking trig are requested to have a minimum of a A average in the prerequisite courses. Students need to take a pretest to get into this course. This test will be administered at the end of the Algebra II course and the date and time will be posted at least a week in advance.

Textbook(s) and Other Resources used:

Trigonometry – Larson and Hostetler- 7th edition- Houghton Mifflin

Tentative coverage:

First Quarter:

Topics: Functions and their graphs: rectangular coordinates, graphs of equations and circles, functions, properties of functions, transformations, 1-1 functions, and inverse functions. Trigonometric functions: Angles and their measures and the unit circle.

Projects, papers, tests-schedule and types:

Quizzes, unit tests and a notebook given.

Second Quarter:

Topics: Trigonometric functions: Properties of trig functions, graphs of the trig functions, phase shift, sinusoidal curve fitting. Analytic Trigonometry: Inverse functions, trig identities, sum and difference formulas, double and half angle formulas, and trig equations.

Projects, papers, tests-schedule and types:

Quizzes, unit tests and a notebook given.

Third Quarter:

Topics: Applications of trig functions: right triangle trig, law of sines and cosines, area of a triangle, and simple harmonic motion. Analytic Geometry: Conics, Parabolas, ellipses, hyperbolas, and rotation of axes. Exponential and logarithmic functions: exponential functions, logarithmic functions, and properties of the above type.

Projects, papers, tests-schedule and types:

Quizzes, unit tests and a notebook given.

Fourth Quarter:

Topics: Polar Coordinates; Vectors: polar coordinates, polar equations and graphs, vectors, dot product and DeMoivre's theorem if time. Review for final.

Projects, papers, tests-schedule and types:

Quizzes, unit tests and a notebook given.

Miscellaneous:

Internet Usage (optional):