Department: Mathematics
Course Name: Algebra III Trigonometry

Course Description:
This course reviews, strengthens and expands skills necessary to develop a strong foundation in algebra. Emphasis is placed on using these skills as tools for solving real-life problems. The trigonometry component is a careful approach to the trigonometric functions as defined in terms of right triangles as well as the unit circle. Students evaluate and manipulate the functions for graphing and problem solving. An emphasis on critical thinking, communication, collaboration, and creativity will prepare students for college work.

Content:
Algebraic functions and their graphs
Polynomial and rational functions
Exponential and logarithmic functions and their graphs
Similar triangles to the definition of trigonometric ratios in the right triangle
Trigonometric functions using the unit circle
Trigonometry related to technical problem solving
Periodic nature of trigonometric functions
Formulas and identities useful in the study of higher mathematics

Skills:
Extend knowledge of functions and their related graphs
Develop expertise in evaluation of polynomial and rational functions
Develop basic proficiency of exponential and logarithmic functions and their graphs
Develop familiarity with the functions of 30°, 45°, 60° angles and quadrantal angles
Apply trigonometry to right and oblique triangle situations
Extend knowledge of translations of graphs
Expand equation solving techniques
Develop calculator expertise in graphing functions and finding values of trigonometric functions, finding angles, and graphing

Text and Materials:
Algebra and Trigonometry A Graphing Approach, 5th Edition 2008 written by Larson, Hostetler, and Edwards; published by Houghton Mifflin

Methods of Instruction:
Group Projects and Activities
Lecture
Guided Practice
DeltaMath

Methods of Evaluation:
Tests
Quizzes
Classwork
Homework
Informal questioning
Observation