Course Name: Algebra II	
Department: Math	Grade Level(s): 10-12
Duration/Credits: 1 Year/ 1.0 Credit	Prerequisites: Any Algebra I Course
BOE Approval Date:	Course Code: 2295

Course Description:

In this course, the Algebra I concepts are extended and enriched. Topics studied include graphing, analyzing, and interpreting functions including polynomial, rational, and exponential functions; systems of linear equations and inequalities; exponents, matrices and radicals; and statistics and probability concepts. Computer software may be used when appropriate to enhance instruction.

Course Rationale:

The need to understand and be able to use mathematics in everyday life and in the workplace has never been greater and will continue to increase. Just as the level of mathematics needed for intelligent citizenship has increased, so too has the level of mathematical thinking and problem solving needed in the workplace. Those who can problem solve, think critically, and communicate will have significantly enhanced the opportunities and options for shaping their futures. Mathematical competence opens doors to productive futures. This course allows the student to develop these problem solving, critical thinking, and communication skills within the context of higher level algebraic reasoning.

Course Objectives:

1. The student will use the relationship between rational exponents and radicals and orally justify their reasoning and critique the reasoning of others. (A+ Speaking and Listening)
2. The student will use complex numbers.
3. The student will solve equations and inequalities.
4. The student will solve general systems of equations and inequalities and produce written explanations of their solutions within the context of a real-life situation. (A+ Writing)
5. The student will perform operations on polynomials and rational expressions.
6. The student will use and interpret functions.
7. The student will create new functions from existing functions.
8. The student will research real world problems and use use functions to model solutions to those problems. (A+ Research)
9. The student will draw inferences from written mathematical situations and justify conclusions. (A+ Reading)
10. The student will fit a data set to a normal distribution.