**College Algebra Course Description** 3 credits

This course covers variables and symbols; scientific notation; formulas and literal equations; slope, intercepts, and equations of lines; graphs of linear and quadratic functions; graphs of linear inequalities; solving systems of linear equations; polynomials, products and factors; roots, rational exponents, and complex numbers; rational expressions; solving linear, quadratic, and higher order equations; solving linear inequalities; an introduction to exponential and logarithmic functions, and applied problem solving.

Learning Outcomes for College Algebra

POLYNOMIALS, FACTORING AND RATIONAL EXPRESSIONS

* Perform operations with rational algebraic expressions and solve rational equations
* Factor and perform operations with polynomials

LINEAR EQUATIONS AND INEQUALITIES

* Solve and graph linear equations and inequalities in one and two variables.
* Solve systems of two and three linear equations.

RATIONAL EXPONENTS/ RADICAL EXPRESSIONS

* Simplify, perform operations and solve equations with radical expressions and rational exponents.

EXPONENTS/ LOGARITHMS

* Apply the properties of exponential and logarithmic functions to solve equations.
* Graph exponential and logarithmic functions.
* Solve applications involving exponential growth and decay.

QUADRATIC EQUATIONS

* Solve quadratic equations and inequalities.
* Graph quadratic functions.

ABSOLUTE VALUE

* Solve absolute value equations and inequalities.
* Graph absolute value functions.

FUNCTIONS

* Use interval notation to identify the intervals where a function is increasing, decreasing and constant.
* Interpret function notation.
* Determine the domain and range of a function.

SUGGESTED ADDITIONAL COURSE OBJECTIVES:

* Perform operations with complex numbers.