Math 150 Pre-Calculus

The following learning targets represent the major concepts studied and assessed in this course.

- Students will be able to evaluate functions, graph functions, and analyze the graphs of functions. In particular, a student will be able to perform these tasks for linear, quadratic, polynomial, rational, exponential, logarithmic, trigonometric, and piecewise-defined functions.
- Students will understand and be able to calculate slope and rates of change at a level of proficiency sufficient for success in calculus.
- Students will understand the relationship between exponential and logarithmic functions, demonstrate proficiency with the properties of logarithms, and use logarithms to solve exponential equations, and vice versa.
- Students will understand the definitions of the six basic trigonometric functions, use these functions to solve simple geometry problems, make use of basic trigonometric identities, solve equations involving these functions.
- Students will be able to perform various aspects of mathematical modeling using functions.

Topics:
- Study of Functions & Graphs
- Equations and Inequalities
- Polynomial and Rational functions
- Exponential and Logarithmic functions
- Systems of linear equations in two and three variables
- Matrices and Determinants
- Trigonometric Functions
- Analytic Trigonometry
- Additional Topics in Trigonometry
- Law of Sines/Cosines, Polar Coordinates, Vector Basics