MATH 099 Pre-Algebra

This course introduces the rules of algebra, equations, inequalities, graphs, circles and lines, functions, transformations of functions, one-to-one and inverse functions, exponential functions, logarithmic functions, trigonometric functions and their identities, zeros of polynomials, complex numbers, the fundamental theorem of algebra, and systems of equations.
(Pre-requisites: None)

Course Learning Outcomes:

By the end of the course, students will be able to:

1. To demonstrate generalized knowledge and understanding of the main theories and concepts behind the rules of algebra that are basic to calculus
2. To be able to work with the rules of algebra that are basic to calculus and relate this knowledge to simple real-life situations.
3. To work in teams while solving questions, problems, and carrying out projects

Textbook & Course Materials:

- James Stewart, Lothar Redlin, Saleem Watson, Precalculus: Mathematics for Calculus, 5th Edition. Brooks/Cole - Cengage Learning

Course Content:

1. Fundamentals
2. Functions
3. **Polynomial and Rational Functions**
4. **Exponentials and Logarithmic Functions**
5. **Trigonometric Functions of Real Numbers**
6. **Trigonometric Functions of Angles**
7. **Analytic Trigonometry**
8. **Systems of Equations**