PRE-CALCULUS/PRE-CALCULUS HONORS

CREDIT HOURS: 1.0      COURSE LENGTH: 2 Semesters

COURSE DESCRIPTION
The purpose of this course is to enable students to develop concepts and skills in advanced algebra, analytic geometry, and trigonometry. This course covers the traditional topics needed as a preparation for calculus and other higher math classes. Upon successful completion of this course a student will understand polynomial and rational functions, logarithmic and exponential functions, right triangle trig, the trigonometric functions, trig equations, and trig identities, polar coordinates and complex numbers, sequences and series, and data analysis.

The honors level course requires students to utilize higher order thinking skills such as analysis and synthesis, while completing more rigorous assignments. In addition, more emphasis is placed on research mastery and project based learning.

COURSE PREREQUISITES
Successful completion of Algebra 2

REQUIRED TEXTBOOK (S) and/or MATERIALS
Graphing Calculator

TOPIC OUTLINE

Semester I:

1. Introduction to Pre-Calculus and Polynomial Functions
2. Polar Form of Complex Numbers
3. Conic Sections
4. Exponents and Logarithms
5. Discrete Mathematics
MATH COURSE OUTLINE

Semester II:

1. Introduction to Trigonometry: Linear Relationships and Functions
2. Trigonometric Ratios
3. Graphing Trigonometric Functions
4. Trigonometric Laws and Identities

University of Miami Global Academy reserves the right to revise the course outline as needed throughout the duration of the course.