MATH 107 Plane Trigonometry

Course objectives:

Provides the basic topics in plane trigonometry including angles, trigonometric functions and their graphs, trigonometric equations and identities, as well as related topics including oblique triangles and complex numbers.

Usual course content:

Unit One: Right angle trigonometry. Angles and degree measures; Similar triangles; Trigonometric functions defined as trigonometric rations; Solving right triangles; Angles and arc length.
Unit Two: Trigonometric functions. Radian measure of angles; Trigonometric functions of any angles; Fundamental identities.
Unit Three: Graphs and inverses of trigonometric functions. Graphs of the standard and general trigonometric functions; Inverse trigonometric functions.
Unit Four: Trigonometric equations and identities. Basic trigonometric equations; Trigonometric identities; Additions laws; Double-angle and half-angle identities.
Unit Five: Oblique triangles. Solving oblique triangles including the law of cosines and the law of sines.
Unit Six: Complex numbers. The imaginary unit and complex numbers; Operations of complex numbers; Trigonometric form of complex numbers and De Moivre's Theorem.

Technology:

A graphing calculator is required.

Students who may benefit:

All mathematics, science and technology students.

Follow up courses:

This course, along with MATH 105 College Algebra, is a prerequisite for Math 120 Calculus I.