Sinclair Community College
444 E. Third St.
Dayton, OH 45402

Master Syllabus

MAT 1570 - Trigonometry

Division: Science, Mathematics and Engineering

Department: Mathematics

Credit Hour Total: 3.0 **Lecture Hrs:** 3.0

Prerequisite(s): MAT 1470

Other Prerequisite(s): AND Other with a grade of C or better or satisfactory score on math placement test

Date Revised: December 2015

Course Description:

Trigonometric functions of angles, solving right and oblique triangles, identities, trigonometric and inverse trigonometric equations, vectors, radian measure, graphs of trigonometric functions and inverse trigonometric functions, conic sections, sequences, and series. Traditional testing (proctored or in Testing Center) is used in all online sections.

General Education Outcomes:

- Critical Thinking/Problem Solving Competency

Course Outcomes:

Solving triangles, equations, and applications
Solve right and oblique triangles; trigonometric and inverse trigonometric equations; and application problems involving triangles and vectors.

Assessment Method: Locally developed exams
Performance Criteria:

Passing Grade (Score of 70% or better)

Derive Equations
Derive equations of conic sections from geometric properties.

Assessment Method: Locally developed exams
Performance Criteria:

Passing Grade (Score of 70% or better)

Graphing
Graph trigonometric functions and their inverses.

Assessment Method: Locally developed exams
Performance Criteria:

Passing Grade (Score of 70% or better)

Prove Identities
Prove trigonometric identities.

Assessment Method: Locally developed exams
Performance Criteria:

Passing Grade (Score of 70% or better)

Outline:

Define, graph, and analyze trigonometric functions.Express angles in both degree and radian measure.Solve trigonometric and inverse trigonometric equations.Solve application problems using right and oblique triangles, trigonometric equations, and trigonometric functions.Verify trigonometric identitiesRepresent vectors graphically, perform vector operations, and solve application problems using vectors. Identify and express conics in standard rectangular form, graph conics, and solve applied problems. Express general terms of sequences, and evaluate the sum of arithmetic and geometric sequences.