SU DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
SYLLABUS *(Tentative)*
MATH 140 *College Algebra and Trigonometry*

Description: An applications-oriented college algebra and trigonometry course for students planning to study science or additional mathematics. Emphasizes computational, qualitative, visual and symbolic approaches. Four hours per week.

Objective: To develop a foundation for collegiate-level mathematics.

Prerequisite: High School Algebra II and Geometry.

Text: "Algebra & Trigonometry Enhanced with Analytic Geometry," by Swokowski &Cole; Brooks/Cole, ISBN: 9781111495916.

Technology: Webassign and a graphing calculator or Mathematica package (Computer software available in campus labs)

	Weeks
Graphs, Equations and Inequalities, Exponents, Algebraic Expression	2.0

Solving equations and inequalities. Graphing equations, lines and circles.

Functions and their Graphs 2.0

Functions. Definition of Functions, Linear and Quadratic Functions, Operations on Functions. Graphing Functions. Mathematical Models.

Polynomial and Rational Functions 2.0

Power Functions. Polynomial Functions. Rational Functions. Real Zeros. Complex Zeros.

Exponential and Logarithmic Functions 2.0

Composite Functions. Inverse Functions. Properties of Exponential Functions. Properties of Logarithms. Solving Exponential and Logarithmic equations. Compound interest. Growth and decay.

Trigonometric Functions 2.0

Angles. Right triangle trigonometry. Trigonometric values at special and at general angles. Unit Circle. Graphs of trigonometric functions.

Analytic Trigonometry 1.5

Inverse Trigonometric Functions. Trigonometric identities and formulas. Solving Trigonometric equations.

Applications of Trigonometric Functions 1.5

Solving right triangles. Laws of Sines and Cosines. Areas of triangles.

Tests <u>1.0</u>

14.0

APPROXIMATE EVALUATION
Quizzes & Selected Problems 15 - 25%
Tests (4) 50 - 60%
Final Exam 15 - 25%
Free tutoring is available for this course during the Spring and Fall semesters.

 NOTE: ONCE A STUDENT HAS RECEIVED CREDIT, INCLUDING TRANSFER CREDIT, FOR A COURSE, CREDIT MAY NOT BE RECEIVED FOR ANY COURSE WITH MATERIAL THAT IS EQUIVALENT TO IT OR IS A PREREQUISITE FOR IT.