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. **Credit may not be received for more than one of the following:** MATH 102, 118, 122.

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

Prerequisite: High School Algebra II and Geometry.


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

### Weeks

#### Graphs, Equations and Inequalities, Exponents, Algebraic Expression

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

#### Functions and their Graphs


#### Polynomial and Rational Functions


#### Exponential and Logarithmic Functions


#### Trigonometric Functions

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

#### Analytic Trigonometry

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

#### Applications of Trigonometric Functions

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

### Tests

- Quizzes & Selected Problems: 15 - 25%
- Tests (4): 50 - 60%
- Final Exam: 15 - 25%

**APPROXIMATE EVALUATION**

**Free tutoring is available for this course during the Spring and Fall semesters.**

MM/jlh 7/2013