MTH 122 - TRIGONOMETRY

Course Description

This course covers the definitions and graphic representations of the trigonometric functions. Triangles, angle measure, equations, identities, and inverse functions are discussed in detail. Law of Sines, Law of Cosines, and equations of the conic sections will also be covered. Group 1 course.

Credit Hours

3

Contact Hours

3

Lecture Hours

3

Required Prerequisites

A grade of 2.0 or better in MTH 121 or higher (excluding MTH 131) or appropriate placement.

Recommended Prerequisites or Skills Competencies

Placement into ENG 111

General Education Outcomes supported by this course

Quantitative Reasoning

Course Learning Outcomes

Knowledge:

- Show proper usage of angle measures, 6 trigonometric ratios, and functions and their inverses, basic trigonometric identities, Law of Sines, and Law of Cosines.
- Determine the proper usage of mathematical terminology and symbolization associated with: conic sections, solving trigonometric equations, verification of trigonometric identities.
- Use procedures to: graph and identify key features of conic sections, graph the trigonometric functions and their transformations, solve any type of triangle, solve trigonometric equations, and verify trigonometric identities.

Application:

- Apply the appropriate procedure in simplifying trigonometric expressions, solving equations and identities and solving triangles.
- Apply appropriate procedures to identify specific features of conic sections and then graph the conic section.

Integration:

- Apply mathematical models to solve equations including applications.
- Interpret the solution in the context of the problem and justify the result.

Human Dimension:

- Strive to improve areas of mathematical weakness based on feedback.
- Collaborate with peers during group work.

Caring - Civic Learning:

- Recognize the impact mathematics plays in civic situations such as politics, education and income.

Learning How to Learn:

- Relate mathematical skills to real-life situations.