Minnesota State University Moorhead

MATH 143: Trigonometry

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites:
- MATH 127 - College Algebra

Corequisites: None

MnTC Goals: Goal 04 - Mathematical/Logical Reasoning

Trigonometric functions, identities, applications. Must have successfully completed College Algebra or acceptable placement score. MnTC Goal 4.

B. COURSE EFFECTIVE DATES: 06/01/1995 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Angles and radian measure
2. Trigonometric functions in triangles, the unit circle, and any circle; and inverse trigonometric functions.
3. Trigonometric graphs and graph transformations.
4. Trigonometric formulas and identities.
5. Trigonometric equations.
6. Trigonometric applications, including the Law of Sines and Law of Cosines.
7. Complex numbers.

D. LEARNING OUTCOMES (General)

1. Use trigonometric functions and their inverses to solve a variety of real-world problems.
2. Work with and understand trigonometric graphs.
3. Be able to prove trigonometric identities using a variety of problem solving and algebraic skills.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal 04 - Mathematical/Logical Reasoning

1. Illustrate historical and contemporary applications of mathematical/logical systems.
2. Clearly express mathematical/logical ideas in writing.
3. Explain what constitutes a valid mathematical/logical argument(proof).
4. Apply higher-order problem-solving and/or modeling strategies.

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted