Minnesota State University Moorhead

MATH 143: Trigonometry

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites:

This course requires any of these three prerequisite categories

- 1. MATH 127 College Algebra
 - Or
- 2. MATH 127L College Algebra with Lab
- Or
- 3. MSUM Math Above MATH 127

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