Minnesota State University Moorhead

MATH 142: Pre-Calculus

A. COURSE DESCRIPTION

Credits: 5

Lecture Hours/Week: 5

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites:
This course requires any of these five prerequisite categories
  1. MATH 099 - Intermediate Algebra
     Or
  2. MATH 095 - Elementary/Intermediate Algebra
     Or
  3. MATH 127L - College Algebra with Lab
     Or
  4. A score of 1 on test Transfer Equivalent to MATH 127
     Or
  5. MSUM Math Above MATH 127

Corequisites: None

MnTC Goals: Goal 04 - Mathematical/Logical Reasoning

Includes equations, complex numbers, functions, polynomials, exponential and logarithmic functions, and trigonometric functions, equations and applications. Students who have successfully completed MATH 127 College Algebra are encouraged to take MATH 143 Trigonometry rather than MATH 142. Requires a B- or better in MATH 099. MnTC Goal 4.

B. COURSE EFFECTIVE DATES: 03/04/2013 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Working with radicals, rational exponents, polynomials including simplifying and factoring.
2. Graphs (lines, quadratic, exponential, logarithmic, polynomial, rational, transformations of graphs, trigonometric graphs)
3. Solving equations (linear, quadratic, polynomial, rational, exponential, logarithmic, trigonometric, etc.)
4. Linear, polynomial, and rational inequalities
5. Functions (including inverse functions, exponential functions, logarithmic functions, and trigonometric functions)

D. LEARNING OUTCOMES (General)

1. Solve a variety of algebraic and trigonometric equations.
2. Create and understand graphs.
3. Work with a variety of functions.
4. Apply a variety of algebraic and trigonometric techniques to real world problems and applications.

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

Goal 04 - Mathematical/Logical Reasoning

1. No Competencies Indicated
2. Illustrate historical and contemporary applications of mathematical/logical systems.
3. Clearly express mathematical/logical ideas in writing.
4. Explain what constitutes a valid mathematical/logical argument(proof).
5. Apply higher-order problem-solving and/or modeling strategies.

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted