Inver Hills Community College

MATH 0940: Intermediate Algebra

A. COURSE DESCRIPTION

Credits: 5

Lecture Hours/Week: 5

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites:
This course requires either of these prerequisite categories
1. MATH 0840 - Introductory Algebra (Minimum grade: 2.0 GPA Equivalent and Number of Years Valid: 2)
   Or
2. A score of 76 on test Accuplacer Elementary Algebra

Corequisites: None

MnTC Goals: None

Prepares students for course work in College Algebra (1118) or Pre-Calculus (1127). Course topics include graphing linear, quadratic, absolute value, square root, exponential and logarithmic functions using transformations; graphing piecewise-defined functions; factoring polynomials; solving polynomial, rational, radical, exponential, logarithmic equations and applied problems; the arithmetic of rational expressions and radical expressions; simplifying rational and radical expressions.

B. COURSE EFFECTIVE DATES: 05/31/2011 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Factor polynomials 14%
2. Solve equations, inequalities, and applied problems with rational expressions 14%
3. Simplify radical expressions and solve equations with radicals 14%
4. Solve polynomial equations, inequalities, and applied problems 14%
5. Graph linear and non-linear functions; domain, range 24%
6. Composition of functions and inverses 6%
7. Solve exponential and logarithmic equations and applied problems 14%

D. LEARNING OUTCOMES (General)

1. Factor polynomial expressions.
2. Perform operations on rational expressions and simplify them. Solve applied problems & equations that contain rational expressions.
3. Perform operations on radical expressions and simplify them - using radical or rational exponent notation. Solve applied problems & equations that contain radicals.
4. Solve quadratic equations and other types of equations using quadratic methods, and use these methods to solve applied problems.
5. Graph linear and nonlinear functions (square root, absolute value, quadratic, exponential, logarithmic) and apply translations and vertical reflections to the graphs of these functions. Graph piecewise-defined functions.
6. Simplify logarithmic expressions and solve logarithmic equations. Solve exponential equations and use exponential equations to solve applied problems.
7. Demonstrate an understanding of function notation and functional attributes such as domain and range, and inverses of one-to-one functions.
8. Solve inequalities that contain polynomials or rational expressions.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted