

# Inver Hills Community College

## MATH 0840: Introductory Algebra

### A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 4

Lab Hours/Week: 0

OJT Hours/Week: \*.\*

Prerequisites:

This course requires either of these prerequisite categories

1. A score of 25 on test Accuplacer Elementary Algebra
- Or
2. A score of 5 on test ACCP local Math History

Corequisites: None

MnTC Goals: None

Designed for students who need work in beginning algebra and who are preparing for Intermediate Algebra (0940), Introduction to Statistics (1103), Math for Liberal Arts (1101), or Mathematical Foundations (1107). The topics in this course include real number operations and properties; solving linear equations and inequalities; graphing linear equations; rules of exponents; polynomial operations; factoring polynomials; solving quadratic equations by factoring and with quadratic formula; solving systems of linear equations; functions; applications are embedded throughout the course. This course will not fulfill any degree requirements.

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

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Real Numbers: Properties, Arithmetic, Order of Operations 14%
2. Solve Linear Equations, Inequalities and Applied Problems 18%
3. Lines: Graphing, Slope, Intercepts, Applied Problems 12%
4. Functions: Domain, Range, Graphing Linear Functions, Applied Problems 6%
5. Solve Systems of Linear Equations (2x2) & Applied Problems 12%
6. Rules of Exponents and Polynomial Arithmetic (add, subtract, multiply) 18%
7. Factor Polynomials 10%
8. Solve Quadratic Eq'ns by Factoring & Quadratic Formula & Applied Problems 10%

### D. LEARNING OUTCOMES (General)

1. Translate words into algebraic expressions, equations, and inequalities; as well as simplify algebraic expressions.
2. Perform arithmetic of real numbers.
3. Perform arithmetic of polynomials (add, subtract, multiply) and factor polynomials.
4. Solve linear, literal, quadratic, and systems of linear equations (2x2); as well as linear inequalities.
5. Solve applied problems using the equations and inequalities in Outcome 4.
6. Use laws of exponents to simplify expressions with integer exponents.
7. Graph linear equations using slope and intercept, find equations of lines, and interpret linear models.
8. Evaluate functions using proper notation and find the domain and range of functions based on their graphs.

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

None

**F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted