

COMMON COURSE OUTLINE: Course discipline/number/title: MATH 0098: Elementary Algebra

A. CATALOG DESCRIPTION

1. Credits: 4

2. Hours/Week: 4

3. Prerequisites (Course discipline/number): Appropriate RCTC Placement score or successful completion of MATH 0093 with grade C or better.

4. Co-requisites (Course discipline/number): None

5. MnTC Goals (if any): NA

This course is a basic algebra course designed to provide the fundamentals of algebra including sets of numbers, numeric and algebraic expressions, fractions, polynomials, exponents, linear equations and inequalities, and the rectangular coordinate system. Knowledge of basic mathematics expected. **RECOMMENDED ENTRY SKILLS/KNOWLEDGE:** Operations with whole numbers, Operations with decimals, Operations with fractions, Operations with signed numbers, Percent, Ratios, and Proportions.

B. DATE LAST REVISED (Month, year): November, 1999

C. OUTLINE OF MAJOR CONTENT AREAS:

1. Operations with real numbers
2. Order of operations
3. Translation and simplification of algebraic expressions
4. Linear equations and inequalities
5. Rectangular coordinate system
6. Graphing linear equations and inequalities
7. Systems of linear equations
8. Polynomial expressions
9. Exponents
10. Scientific notation
11. Linear and polynomial functions
12. Factoring polynomials
13. Rational expressions and equations

D. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Master the following topics at the Elementary level:
 - a) Order of Operations
 - b) Solving Equations: Linear, Rational, Radical
 - c) Solving Linear Inequalities
 - d) Graphing linear Equations (two variable)
 - e) Exponents-rules of exponents
 - f) Simplifying Polynomials Expressions-all operations
 - g) simplifying Rational Expressions-all operations
 - h) Simplifying Radical Expressions-all operations
 - i) Graphical Interpretation
 - j) Factoring Algebraic Expressions-GCF, Quadratics with integer factors
2. Introductory
 - a) Equations of Lines
 - b) Functions and Function Notation
 - c) Factoring-group method, AC method, sum and difference of cubes
 - d) Systems of Linear Equations-two variables
 - e) Algebraic Methods/Solving of Application Problems
 - f) Quadratic Equations

E. LEARNING OUTCOMES (MNCTC): NA



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F. METHODS FOR EVALUATION OF STUDENT LEARNING:

1. Tests
2. Quizzes
3. Homework
4. Group assignments
5. Comprehensive Final Exam

G. SPECIAL INFORMATION (if any): None