

# Minnesota State College Southeast

## MATH 0544: Pre-College Math (4 cr)

### A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 4

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course covers real numbers, variable expressions, general and literal equations, solve and graph linear equations in two variables, graph and evaluate functions, sets, solving and graphing inequalities and solving systems of equations. Related practical application problems are explored. (4 credits: 4 lecture/0 lab)

**B. COURSE EFFECTIVE DATES:** 12/15/2014 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Measurement Systems
2. Linear and Exponential Functions
3. General and Literal Equations
4. Systems of Linear Equations and Inequalities
5. Polynomial Expressions and Equations

### D. LEARNING OUTCOMES (General)

1. Recognize quantities associated with physical measurement must be assigned units, apply units correctly, and convert between measurement systems
2. Understand the order of operations and use them to evaluate and simplify rational expressions
3. Recognize and simplify exponential and radical expressions
4. Represent sets of real numbers in multiple forms
5. Recognize and solve linear equations and inequalities in one variable
6. Identify and solve linear application problems involving mixtures and uniform motion
7. Solve literal equations
8. Sketch linear functions, and translate between graphs, tables, and symbolic representations
9. Find and interpret slope as a constant rate of change using points, graphs, and equations
10. Represent and solve systems of linear equations and inequalities in two variables using a variety of methods
11. Develop fluency with simplifying, adding, subtracting, multiplying, and dividing polynomials in multiple variables
12. Factor polynomials using a common monomial factor as well as the grouping method
13. Evaluate a function at a given point in its domain
14. Understand the laws of exponents and scientific notation

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

None

**F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted