## Syllabus

# Math 095 Elementary Algebra Foundations

# Three Rivers Community College Norwich, Connecticut 06360

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Course Title:	Elementary Algebra Foundations
Course Number:	MAT 095
Credits:	3 Semester Hours, Not applicable to degree

### Course Description

This course extends the basic algebra skills acquired in MATH 075. The topics include: exponents, polynomials, factoring, graphing, systems of linear equations, inequalities, radicals and scientific notation. Prerequisite: a C or better in MATH 075, its equivalent, or acceptable placement test score.

### MAT 095 Course Outcomes

- 1. Add, subtract, multiply, and divide real numbers and raise a real number to an integer power
- 2. Add, subtract, multiply, and divide Polynomials
- 3. Simplify, add, subtract, multiply, and divide Radicals
- 4. Rules for Exponents
- 5. Greatest Common Factor (factoring)
- 6. Factor by Grouping
- 7. Factor trinomials of the form  $x^2 + bx + c$
- 8. Factor trinomials of the form  $ax^2 + bx + c$
- 9. Factor Perfect Square Trinomials
- 10. Factor the Difference of Two Evaluate algebraic expressions
- 11. Determining if a given number is a solution to an equation or an inequality
- 12. Determining if an ordered pair is a solution to a linear equation in 2 variables

- 13. Squares
- 14. Factor Completely
- 15. Converting between Scientific Notation and standard notation
- 16. Order of Operations (manipulation)
- 17. Properties of Real Numbers (manipulation)
- 18. Simplifying Algebraic Expressions (manipulation)
- 19. Graphing in a Rectangular Coordinate System
- 20. Graphing Linear Equations by plotting points, using intercepts, and using the Slope-Intercept form
- 21. Graphing the solution to a Linear Inequality in one variable.
- 22. Graphing a System of Linear Equations in two variables
- 23. Rates of change (slopes)
- 24. Identifying Linear Equations (Linearity)
- 25. Solving Linear Inequalities in one variable
- 26. Finding the Equation of a Line (manipulation)
- 27. Solving Linear Equations in one variable
- 28. Solving formulas for a specified variable
- 29. Solving a System of Linear Equations in two variables (two methods)
- 30. Solving equations with degree 2 or greater by factoring
- 31. Two forms for the equation of a line (transforming back and forth)
- 32. Finding an unknown number word problem
- 33. Solving consecutive numbers (including odd and even) word problems
- 34. Solving dimension problems using geometric formulas
- 35. Solving Percent and Mixture problems
- 36. Solving table problems such as rate, time, and distance
- 37. Solving linear inequality problems
- 38. Solving linear equation in two variables problems
- 39. Solving System of 2 linear equations in 2 variables word problems
- 40. Solving factorable Quadratic Equation word problems

## Rationale

A basic understanding of algebra is necessary for many fields of study including business, science, economics, technical fields, and mathematics. Algebraic skills are an essential tool needed to comprehend future mathematics courses such as Statistics, Applied Calculus, Trigonometry, and/or Calculus. Since mathematical problems are not limited to mathematics courses, the skills of Elementary Algebra improve the student's ability to comprehend his/her environment as well as other college courses.

## **Required Materials**

Beginning Algebra 5th ed.- Martin-Gay (On-line)

### Grading Policy

A student will receive one of the following grades: A, A-, B+, B, B-. C+, C, C-, D+, D, D-, F, W, I, P, or Audit. Determination of your grade will be based on the following:

- 1. Tests. There will be four exams (each worth 100 points) and a comprehensive final exam (worth 300 points). The semester exams are taken on-line. The final exam is taken here at the college. If you live a far distance from the college, you and I make arrangements to have your exam proctored at a testing center. If this is the situation you must contact me as soon as possible so that we can arrange a testing site.
- 2. Two projects (details to come later) which will be graded and are worth 75 points each.
- 3. There are two required on-line postings. Details will follow and are worth 25 points each.
- 4. Homework is graded by the program. You must obtain at least an 80% on an assignment to move on. (You can get 100% on every assignment since you are allowed to try more than once.) Your overall homework grade will count 10% of the course grade.
- 4. Your final grade will be the sum of the four semester exams, the two projects, the two postings, your homework average plus the final exam, divided by ten. This means that the final exam is weighted 30% of your final grade.

### Grade Equivalents

A	93 - 100	C+	77 -79
A-	90 - 92	С	73 - 76
		C-	70 - 72
B+	87 - 89		
В	83 - 86	D+	67 - 69
B-	80 - 82	D	63 - 66
		D-	60-62
		F	59 or lower

## Please note that a grade of C or better is required to go on to the next course.

## Withdrawal Policy

A verbal "drop or withdrawal" from the course will be accepted through the 14<sup>th</sup> week of classes in accordance with the designated withdrawal deadlines. Students need to provide the following information: full name, address, date of birth, student identification number and social security number, course reference number (CRN) and descriptor/subject and instructor's name, and if

VA/FA benefits. Verbal drops/withdrawals are processed only through the Registrar's Office at (860) 892-5756. Students who do not withdraw, but stop attending will be assigned an "F".

### Disabilities Statement

If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact the disabilities Counseling Services at (860) 383.5217. To avoid any delay in the receipt of accommodations, you should contact the counselor as soon as possible. Please note that I cannot provide accommodations based upon disability until I have received an accommodation letter from the disabilities counselor.