



COURSE NAME:	MATH 0098: Algebra Foundations I
TEXTBOOK	Martin-Gay, Elayn. <i>Developmental Mathematics</i> . 3rd Ed. Upper Saddle River, NJ: Pearson, 2015. ISBN-13: 9780321936875 (Not required to purchase). Instructors will provide MyMathLab access codes.
COURSE CREDIT	3 Units

### MATH 0098 Algebra Fundamentals I

#### Course Objectives:

1. Simplify expressions using the distributive property and combining like terms.
2. Evaluate algebraic expressions containing exponents, absolute value, and radicals.
3. Translate algebra into algebraic expressions.
4. Use the addition property of equality to solve equations.
5. Use the multiplication property of equality to solve equations.
6. Solve linear equations of the form  $ax + b = c$ .
7. Solve linear equations with variables on both sides.
8. Solve equations containing fractions and decimals.
9. Solve proportions.
10. Solve application problems with linear equations and proportions.
11. Use formulas and solve literal equations. (Simple and Compound Interest)
12. Solve absolute value equations. \*
13. Solve problems involving direct and inverse variation. \*
14. Solve linear inequalities and represent solutions graphically and using interval notation.
15. Solve compound inequalities and represent solutions graphically and using interval notation.
16. Solve application problems with linear inequalities.
17. Solve absolute value inequalities. \*
18. Use the rules of exponents to simplify basic expressions.
19. Evaluate expressions with negative exponents.
20. Add and subtract polynomials.
21. Multiply two binomials.
22. Divide a polynomial by a monomial.
23. Divide a polynomial by a binomial and synthetic division. \*
24. Plot ordered pairs on the coordinate plane.
25. Find the slope of a line given two points.
26. Graph linear equations using various methods (intercepts,  $y=mx+b$ , table).
27. Write the equation of a line given a point and a slope.
28. Find the value of a function written using function notation. \*
29. Graph linear inequalities on the coordinate plane. \*
30. Graph a system of linear equations in two variables. \*
31. Solve a system of linear equations in two variables. \*
32. Solve applications of systems of equations. \*

**Objectives marked with an \* are optional and may be added at the discretion of the instructor.**

