BEGINNING ALGEBRA

MATH 095

INSTRUCTOR------Roger Williams   e-mail----- Rwilliams@rrcc.commnet.edu

TEXT: Beginning Algebra   5th edition   by   K. Elayn-Gay   Prentice-Hall

This course is intended for the student to begin the development of algebraic skills and

understanding of number properties. SKILLS by their very nature require practice, which means do the

homework. These skills are very necessary in the study of further mathematics courses.

TESTS   There will be four tests given during the semester.

First test in class 5   covers material discussed IN CLASSES 1, 2, 3

Second test in class 8   covers material discussed in classes 4, 5, 6

Third test in class 11   covers material discussed in classes 7, 8, 9

Fourth test in the last class   covers all material

GRADE POLICY   The grades are based on an average of the four test grades

A 93 – 100   A 90 – 92

B+ 87 – 89   B 83 – 86   B- 80 – 82

C+ 77 – 79   C 73 – 76   C- 70 – 72

D+ 67 – 69   D 63 – 66   D- 60 – 62

F 59 or lower

WITHDRAWAL (important)   If, for whatever reason you find it necessary to withdraw from a course,

you must complete a withdrawal form from the registrar's office at the time of withdrawal. This

process assigns a grade of W for the course. If you stop attending class and do not follow the

withdrawal process, you will be assigned an F for the course

General Course Outline

Chapter 1   Numbers, Order of operations

              Sections   1.1 to 1.8

Chapter 2   Equations and Inequalities

              Sections 2.1 to 2.9

Chapter 3   Graphing linear equations

              Sections 3.1 to 3.5

Chapter 4   Systems of equations

              Sections 4.1 to 4.4

Chapter 5   Exponents and polynomials

              Sections 5.1 to 5.6

Chapter 6   Factoring

              Sections 6.1 to 6.6

Chapter 7   Rational Expressions

              Sections 7.1 to 7.5

MAT095 Course Outcomes

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