MAT 0900
ALGEBRA 1

I. COURSE DESCRIPTION
Algebra 1 takes the student beyond the basic mathematics skills learned at lower level classes of mathematics and introduces them to topics that explore higher mathematic principles and skills. The student will investigate and solve problems that use both real numbers and variables. The skills learned will be used to solve real life problems to help students function better in the world around them. An emphasis will be placed on solving equations, including linear, quadratic, inequalities, multistep, and variations. Factoring and graphing will be used to solve a variety of equations and systems of equations. Also, skills related to exponents, statistics, and probability will be explored and related to practical application.

II. RATIONALE
In order to function in the real world, a basic knowledge of mathematics is essential for being successful in a variety of fields and occupations. Every day we use mathematics to solve everything from balancing a checkbook to determining the amount of shingles needed for a roof to the angle of elevation when surveying property for road improvements. Algebra 1 offers applicable math skills and practice to solve problems we encounter in the real world both at the personal and global level.

III. PREREQUISITES
Pre-Algebra

IV. MATERIALS LIST
Microsoft Office or compatible software, calculator, graph paper, lined or blank paper

V. MEASURABLE LEARNING OUTCOMES TOPICS
A. Real Numbers, Order of Operations, and Simplifying Expressions
B. Solving Equations, Percent, and Inequalities
C. Linear Functions, Sequences, and Rate of Change
D. Slope-Intercept, Point-Slope, and Solving Systems of Equations by Substitution and Elimination
E. Linear Inequalities – Graphing and Solving
F. Exponents and Polynomials
G. Factoring Methods and Quadratic Functions and Equations
H. The Quadratic Formula, Probability, and Graphing Data
I. Exponential, Radical and Rational Functions
J. Solving Rational Equations – Multiplying, Dividing, Adding and Subtracting

VI. Course Requirements and Assignments

A. Individual lesson assessments (1 per lesson)
B. 1 - 4 Quizzes per Module
C. 1 Test per Module
D. 1 Final Exam

VII. Course Grading and Policies

A. Grading Weights
   Lesson Assignments 25%
   Quizzes and Written Assignments 35%
   Tests 40%

B. Scale
   A 90 – 100
   B 80 – 89
   C 70 – 79
   D 60 – 69
   F Below 60

VIII. Other Policies

A. Academic Misconduct
   See your Student Handbook for specifics.

B. Repeating Assignments
   Students may repeat each lesson once. Quizzes and tests cannot be repeated to gain a higher grade. Quizzes and tests may be reset for technical issues, but a new set of questions will be generated.