ALGEBRA I – FALL SEMESTER

(Syllabus is subject to change)

St. Augustine High School
Room # 207
Lynn M. Williams
Mathematics Teacher
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Textbook:
Algebra Structure and Method Book 1
McDougal Littell

Required Materials: Bring the following to class each day.

- Textbook (with cover)
- No. 2 Mechanical Pencil with eraser
- College Ruled White Loose Leaf Paper
- College Ruled Spiral
- Binder (1 ½ ")

Course Description: This course provides an integrated technological approach to algebraic topics used in problem solving. Emphasis is placed upon equations and inequalities; polynomials, rational, exponential, logarithmic functions; and graphing and data analysis/modeling.

Grading Policy:
Daily assignments will count for 10% of the grade.
Quizzes will count for 30% of the grade.
Tests will count for 60% of the grade.

NOTICE: Missed assignments, quizzes, or tests should be made up within three school days. Arrangements need to be made with the teacher about when this can be done.

TUTORING: Students needing more help outside the class time should make arrangements with the teacher either from 3:15-4:00 PM.

Topics:
1-1 Variables
1-2 Grouping Symbols
1-4 Translating Words into Symbols
1-5 Translating Sentences into Equations
1-8 Number Lines
1-9 Opposites and Absolute Values

2-1 Basic Assumptions
2-2 Addition on a Number Line
2-3 Rules for Addition
2-4 Subtracting Real Numbers

2-5 Distributive Property
2-6 Rules for Multiplication
2-7 Problem Solving: Consecutive Integers
2-8 The Reciprocal of a Real Number
2-9 Dividing Real Numbers

3-1 Transforming Equations: Addition and Subtraction
3-2 Transforming Equations: Multiplication and Division
3-3 Using Several Transformations
3-4 Using Equations to Solve Problems
3-5 Equations with the Variable on Both Sides

4-1 Exponents
4-2 Adding and Subtracting Polynomials
4-3 Multiplying Monomials
4-4 Powers of Monomials
4-5 Multiplying Polynomials by Monomials
4-6 Multiplying Polynomials
4-7 Transforming Formulas
4-8 Rate—Time—Distance

5-1 Factoring Integers
5-2 Dividing Monomials
5-3 Monomials Factors of Polynomials
5-4 Multiplying Binomials Mentally
5-5 Differences of Two Squares
5-6 Squares of Binomials
5-7 Factoring Pattern for $x + bx + c$, positive
5-8 Factoring Pattern for $x + bx + c$, negative
5-9 Factoring Pattern for $ax + bx + c$
5-10 Factoring by Grouping
5-11 Using Several Methods of Factoring
5-12 Solving Equations by Factoring

6-1 Simplifying Fractions
6-2 Multiplying Fractions
6-3 Dividing Fractions
6-4 Least Common Denominator
6-5 Adding and Subtracting Fractions
6-6 Mixed Expressions
6-7 Polynomial Long Division

7-1 Ratios
7-2 Proportions
7-3 Equations with Fractional Coefficients
7-4 Fractional Equations

7-5 Percent
7-6 Percent Problems
7-8 Negative Exponents
7-10 Scientific Notation

8-1 Equations in Two Variables
8-2 Points, Lines, and their Graphs
8-3 Slope of a Line
8-4 The Slope – Intercept Form of a Line
8-5 Determining an Equation of a Line
8-7 Functions Defined by Equations
8-8 Linear and Quadratic Functions

9-1 The Graphing Method
9-2 The Substitution Method
9-4 The Addition or Subtraction Method
9-5 Multiplication with the Addition or Subtraction Method

10-1 Order of Real Numbers
10-2 Solving Inequalities
10-4 Solving Combined Inequalities
10-5 Absolute Value in Open Sentences
10-6 Absolute Value of Products in Open Sentences
10-7 Graphing Linear Inequalities
10-8 Systems of Linear Inequalities

11-3 Rational Square Roots
11-4 Irrational Square Roots
11-5 Square Roots of Variable Expressions
11-6 The Pythagorean Theorem

12-1 Quadratic Equations with Perfect Squares