



## ISS Course Syllabus

Teacher: **Mr. Marcus**  
Course Title: **Algebra 2**

Grade: **11**  
HS Credit Value:

### Course Objectives:

Each level listed on the under fold is an integral part of a complete and comprehensive Course in **Algebra 2**.

While each section has a specific theme, this course continuously reviews and integrates previously mastered concepts.

This gives the students an opportunity to develop self-confidence while broadening their scope of appreciation for **Algebra 2**.

The Course Sequence is specially structured so that each month has a specific objective. Once these objectives are met and mastered, the students will be able to apply these acquired skills to problem solving in a wide range of applications as it prepare them for **Pre-Calculus**.

## General Course Objectives:

**Throughout this course sequence, the students will learn the following concepts and their applications.**

### **Radical Expressions**

- . Multiplying & dividing fractions
- . Adding & subtracting fractions
- . Equations with fractions
- . Applications of fractions

### **Real Numbers**

- . Rational & irrational numbers
- . Laws of radicals
- . Quadratic equations
- . Quadratic formulas

### **Quadratic Relations**

- . Distance formulas
- . Conic sections
- . Systems of equations
- . Application of conic sections

### **Exponential Functions**

- . Exponents
- . Exponential equations
- . Logarithmic functions
- . Matrices

### **Counting Principles**

- . Progressions
- . Permutations
- . Combinations
- . Probability

## **Set, Structures & Function**

- . Properties & operation of sets
- . Axioms & applications
- . Relations & functions
- . Algebraic expression

## **Numbers & sentences**

- . Orders and absolute values
- . Sums and products
- . Algebraic sentences
- . Number and motion problems

## **Polynomials**

- . Multiplying polynomials
- . Factoring
- . Operation with polynomials
- . Variations

## **Radical Expressions**

- . Multiplying & dividing fractions
- . Adding & subtracting fractions
- . Equations with fractions
- . Applications with fractions

## **Review**

- . Integers and open sentences
- . Graphs and polynomials
- . Fractions quadratics
- . Exponential fractions

**Evaluation System:**

- The students will be given formal end of term examinations.
- The students will be informally assessed in the following ways:
  - a. Weekly or by unit, informal teacher generated tests.
  - b. Daily, this includes class work, participation, and behavior.
  - c. Homework assignments

<b>Examination</b>	<b>30%</b>
<b>Graded Class Work</b>	<b>25%</b>
<b>Home work</b>	<b>20%</b>
<b>Participation</b>	<b>15%</b>
<b>Behavior</b>	<b>10%</b>
<b>Total</b>	<b>100%</b>

**Strategies and Instructional Methods**

- Demonstrations
- Direct problem solving
- Note taking
- Review and practice
- Weekly quizzes

**Resources/ Textbooks:**

- **Algebra 2**; McDougal Littell