

Wall High School  
**MATHEMATICS**

**Algebra I (2002)**

Prereq: None

Grades: 8 - 9

Credit: 1

Students will build on the knowledge and skills from mathematics in Grades 6-8, which provide a foundation in linear relationships, number and operations, and proportionality. Students will study linear, quadratic, and exponential functions and their related transformations, equations, and associated solutions. Students will connect functions and their associated solutions in both mathematical and real-world situations. They will use technology to collect and explore data and analyze statistical relationships. In addition, students will study polynomials of degree one and two, radical expressions, sequences, and laws of exponents. Students will generate and solve linear systems with two equations and two variables and will create new functions through transformations.

**Geometry (2004)**

Prereq: Algebra I

Grades: 9 - 10

Credit: 1

In Geometry, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra I to strengthen their mathematical reasoning skills in geometric contexts. Within the course, students will begin to focus on more precise terminology, symbolic representations, and the development of proofs. Students will explore concepts covering coordinate and transformations geometry; logical argument and constructions; proof and congruence; similarity, proof, and trigonometry; two-and three-dimensional figures; circles; and probability.

**Mathematical Models with Applications (2007)**

Prereq: Alg. I and Geom.

Grades: 11 - 12

Credit: 1

In this course students use mathematical methods to model and solve problems involving algebra, geometry, probability, ratio, proportion, money and statistics. Math Models is primarily used as a course to help students who need another year of preparation prior to taking Algebra II.

**Algebra II (2003)**

Prereq: Alg. I and Geom.

Grades: 10-12

Credit: 1

This course covers a vast number of algebraic skills including: linear functions, systems of equations, quadratic functions and equations, complex numbers, polynomials, rational equations, inequalities, radical functions, exponents, logarithms and conics. Students will gain a better understanding of these skills and how to apply them to solve a diverse set of problems.

### **Pre-AP Algebra II (2011)**

Prereq: Algebra I, Geom, teacher rec.      Grade: 10-11      Credit: 1

This course provides an in-depth treatment of algebraic concepts through the study of functions using a transformational approach. The student is no longer just doing the arithmetic or finding values of unknowns. Instead they are evaluating the practices to see if the data can be sorted, expressed differently or reversed. The students determine if limits need to be placed, or if maximums or minimums have been reached. The level of instruction will focus on preparing the student for advanced placement courses. Students in this course will take Pre-Calculus the next year.

### **Pre-Calculus (2005)**

Prereq: Alg. I, II and Geom.      Grades: 11 - 12      Credit: 1

Students will use symbolic reasoning and analytical methods to represent mathematical situations, to express generalizations, and to study mathematical concepts and the relationships among them. They will use functions trigonometry, equations, and limits as useful tools for expressing generalizations and as means for analyzing and understanding a broad variety of mathematical relationships. Pre-calculus provides students with good critical-thinking skills needed to succeed in any endeavor and it assures background knowledge for calculus related concepts.

### **Calculus AB (2006)**

Prereq: Pre-Calculus      Grades: 12      Credit: 1

This is a two semester course designed for students who are going to major in any technical field in college such as medicine, engineering, architecture, mathematics, etc. Calculus makes extensive use of plane geometry, algebra, and trigonometry. Topics covered include limits, derivatives (a rate of change), and integrals (bounded areas). The derivative and integral have many diverse uses. Students may take a competency test at the end of this course to obtain college credit.

### **College Prep Math (2010)**

Prereq: 3 Math Credits      Grades: 12      Credit: 1

House Bill 5 requires that school districts partner with at least one institution of higher education to develop and provide courses in college preparatory mathematics to prepare students for success in entry-level college courses. The courses must be designed for students in the 12th grade who have demonstrated (through assessments or coursework) that they are not ready to “perform entry-level college coursework.” A student who “successfully completes” such a course is exempt from the requirements of the Texas Success Initiative in that content area at the partnering higher education institution. Currently, Wall ISD partners with Howard College. At the end of the

first semester, the student is required to pass the Texas Success Initiative, TSI, test for acceptance into online College Algebra.