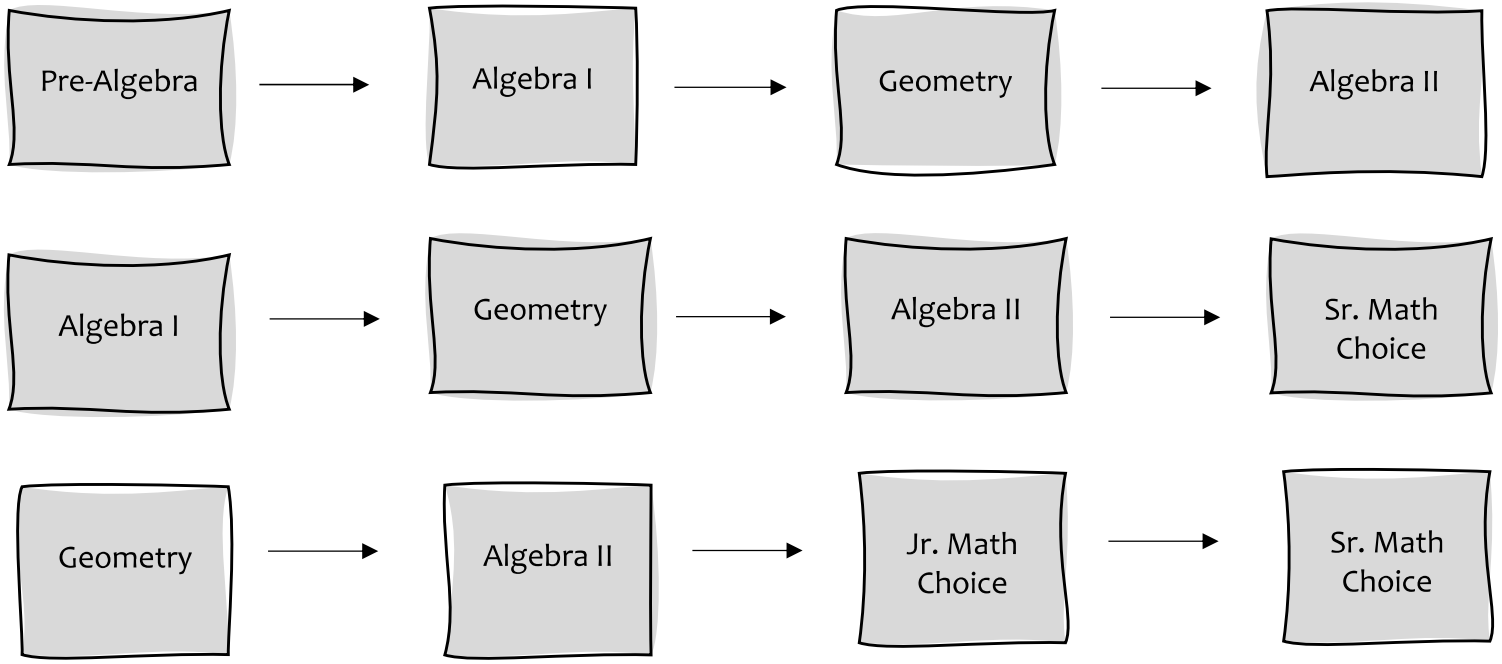
Mathematics

Requirements:

- **Algebra I**
- **Geometry**
- **Algebra II**
- **One credit in additional mathematics classes**
- **Math class taken during 12th grade**

Courses Offered	9	10	11	12
Pre-Algebra	•			
Algebra I	•	•		
Geometry	•	•	•	
Algebra II		•	•	•
Pre-Calculus			•	•
AP Calculus				•
Probability & Statistics			•	•
College Algebra				•
Worldly Math			•	•

Suggested Course Sequence



Algebra I Required Course Grades 9, 10 2 Trimesters | 1 credit

Course topics include solving, graphing, and writing linear equations and inequalities; solving systems of equations; properties of exponents; exponential growth and decay; operations with polynomials; factoring; solving and graphing quadratic functions; data and statistics; and ratios, proportions, and percent.

Algebra II Required Course Grades 10, 11, 12 2 Trimesters | 1 credit

Prerequisite: Geometry

This course will provide an in-depth study of the fundamental skills of Advanced Algebra. Students will factor, solve, graph, find models, and use technology when working with linear, quadratic, polynomial, radical, exponential, logarithmic, rational, and trigonometric functions. Students will also study basic probability and statistics. The skills learned in Algebra II are essential to future success in both college and skilled trade programs.

A.P Calculus Grade 12 3 Trimesters | 1.5 credits

Prerequisite: Pre-Calculus

Advanced Placement Calculus is a year-long, college-level class designed to give the student with exceptional skills the opportunity to take the Advanced Placement test and earn college credit. This course covers graphing functions, differential calculus including rates of change and maximum-minimum applications, integral calculus including areas bounded by curves, volumes, and areas of solids of revolution and length of plane curves, transcendental functions, and techniques of integration. AP classes will not be dropped after August 15.

College Algebra Grade 12 2 Trimesters | 1 credit

Prerequisite: Algebra II

This course is designed for students who intend to go to college and feel that they need to strengthen their understanding of fundamental math concepts. Its purpose is to help students make connections between and within previous math concepts taught in Algebra I, Geometry and Algebra II. By better developing student understanding, the course will be able to take students' previous knowledge to the next level, which will allow them to face math problems and algorithms that have an increased level of difficulty similar to what students will see in introductory college math courses.

Geometry Required Course Grades 9, 10, 11 2 Trimesters | 1 credit

Prerequisite: Algebra I

In this course students will develop and strengthen their reasoning and problem-solving skills through the study of geometry concepts. Skills that were developed in Algebra will be reinforced throughout this course as students investigate topics such as parallel and perpendicular lines, congruence, similarity, right triangle trigonometry, circles, quadrilaterals, transformations, perimeter, area, surface area, volume and comparisons between 1, 2, and 3 dimensional measurements. Students will be asked to make sense of problems and persevere in solving them by reasoning abstractly and quantitatively, constructing viable arguments, modeling real world applications, using appropriate tools strategically, and attend to precision.

Pre-Algebra Required Course Grade 9 2 Trimesters | 1 credit

Pre-Algebra reinforces math concepts presented in earlier grades. It also introduces new mathematical concepts and extends students' critical thinking skills. The primary focus of this course is on algebraic concepts. Other topics include number properties and operations, measurement, geometry, data analysis and probability.

Pre-Calculus Grades 11, 12 2 Trimesters | 1 credit

Prerequisite: Algebra II

This course is intended for the student who plans to take mathematics at the college level. Any student who will major in math, science, medicine, or engineering in college should plan to take this course. This course includes analytic geometry, rational functions and their graphs, polynomial functions, circular functions, trigonometric functions and their graphs, trigonometric identities, logarithmic and exponential functions as well as sequences, series, and limits.

Probability & Statistics Grades 11, 12 2 Trimesters | 1 credit

Prerequisite: Algebra II

This course is an introduction to statistics comparable to a college "Elementary Statistics" course. Concepts to be covered include: an introduction to statistics, probability & probability distributions, confidence intervals, hypothesis testing, correlation and regressions, chi-squared tests, nonparametric tests, and introduction to calculus. This is an advanced level course, but it is NOT an Advanced Placement course. Students who complete this course may opt to take AP Statistics exam.

Worldly Math Grades 11, 12 2 Trimesters | 1 credit

Prerequisite: Algebra II

Examine many facets of the world and explore math's relativity. Topics to be explored include: Mental math skills, managing your personal finances, investing, income and payroll taxes, buying and leasing a vehicle, gambling, home improvement, bargain shopping, cooking, many more exciting real-life topics. Many projects inside and outside of the classroom will help you understand why math is important to everyone and everything in this world. NOTE: This class is one that prepares students for life, NOT college. For those students planning on attending college, they should take this class concurrently with a college bound math class.