Math Course Offerings

SY 2023 – 2024
Math Course Progression

Students	9th	10th	11th	12th
Regular Progression	• Algebra 1A • Pre-AP Algebra 1	• Pre-AP Algebra 1 • Pre-AP Geometry	• Pre-AP Geometry • Algebra 2 • Algebra 2 Honors	• Math for College Liberal Arts • Math for Data & Financial Literacy • Algebra 2 ___ • Math for College Algebra • AP Precalculus • AP Statistics
College Preparatory	• Pre-AP Algebra 1 • Pre-AP Geometry	• Pre-AP Geometry • Algebra 2 • Algebra 2 Honors	• Math for College Liberal Arts • Math for Data & Financial Literacy ___ • Math for College Algebra • Algebra 2 Honors • AP Precalculus • AP Statistics	• Math for Data & Financial Literacy • Math for College Algebra • AP Precalculus • AP Statistics • Intermediate Algebra **(Dual Enrollment)** ___ • AP Precalculus • AP Statistics • AP Calculus AB • Intermediate Algebra **(Dual Enrollment)**
Advanced College Preparatory	• Pre-AP Geometry • Algebra 2 Honors	• Algebra 2 Honors • AP Precalculus • AP Statistics	• AP Precalculus • AP Statistics • Intermediate Algebra **(Dual Enrollment)** ___ • AP Statistics • AP Calculus AB	• AP Precalculus • AP Statistics • AP Calculus AB • College Algebra **(Dual Enrollment)** ___ • AP Calculus BC • College Algebra **(Dual Enrollment)**

Please Note: Since math is a sequential subject, course prerequisites must be satisfied. In many instances, scholars are scheduled for math courses too early in the school year to determine whether or not scholars have fulfilled all necessary prerequisites for a math course. If it is determined that a student has not satisfied all prerequisites for a math course, the student will be rescheduled from that course to a more appropriate one.

Course Descriptions:
Algebra 1A
Course #   1200370
Grade Level   9
Length   1 year
Prerequisite   None
Credit   1

The fundamental purpose of this course is to formalize and extend the mathematics that students learned in the middle grades. The critical areas, called units, deepen and extend understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data that exhibit a linear trend, and students engage in methods for analyzing, solving, and using quadratic functions. The Standards for Mathematical Practice apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

Pre-AP Algebra 1

Course #   1200310
Grade Level   9-12
Length   1 year
Prerequisite   FSA Math scores of Level 3 or higher
Credit   1

The purpose of this course is to provide the foundation for more advanced mathematical courses and to develop the algebra skills needed to solve real-world and mathematical problems. **At the completion of the course, all students will take the state mandated FSA Algebra 1 exam which counts 30% of the student's final grade. Passing the FSA Algebra 1 exam is required for graduation.**

Pre-AP Geometry

Course #   1206310
Grade Level   9-12
Length   1 year
Prerequisite   Completion of the Pre-AP Algebra course; Liberal Arts Mathematics
Credit   1

The purpose of this course is to develop the geometric relationships and deductive strategies that can be used to solve a variety of real world and mathematical problems. **At the completion of this course, all students will take the state mandated FSA Geometry exam which counts 30% of the student's final grade.**

Mathematics for College Liberal Arts

Course #   1207350
Grade Level   10-12
Length   1 year
Prerequisite   Pre-AP Geometry
Credit   1

The purpose of this course is to study analyzing and applying linear and exponential functions within a real-world context; utilizing geometry concepts to solve real-world problems; extending understanding of probability and theory; representing and interpreting univariate and bivariate data; developing understanding of logic and set theory. This course will continue to add to the students' Algebraic and Geometric Thinking using data and logic.

Mathematics for Data and Financial Literacy

Course #   1200387
Grade Level   10-12
Length   1 year
Prerequisite   Pre-AP Geometry
Credit   1

This course is a math credit and is totally different from the *Personal Financial Literacy Honors Course* that is an elective semester course. The purpose of this course is to extending knowledge of ratios, proportions, and functions to data and financial context; develop an understanding of basic economic and accounting principles; determine advantages and disadvantages of credit accounts and short-and long-terms loans; develop an understanding of planning for the future through investments, insurance, and retirement plans; extend knowledge of data analysis to create ad evaluate reports and to make predictions. This course will extend knowledge for everyday life for our students incorporating finance. If students are interested in business, this would be a great course for them.

Algebra 2

Course #   1200330
Grade Level   9-12
Length   1 year
Prerequisite   Pre-AP Geometry
Credit   1

The purpose of this course is to continue the study of the structure of algebra and to apply these skills to fields such as science, social science, statistics, and health-related fields. Topics shall include, but not be limited to, complex numbers, functions, equations and inequalities, rational expressions and equations, absolute value, direct, inverse and joint variation, arithmetic and geometric sequences and series, systems of equations and inequalities, parabolas, quadratic equations, powers, roots, exponents and logarithms, polynomials, problem solving strategies and literacy strategies.

Algebra 2 Honors

Course #   1200340
Grade Level   9-12
Length   1 year
Prerequisite   Pre-AP Geometry and Geometry EOC score of level 3 or higher
Credit   1 Half-weight

The purpose of this course is to study algebraic topics in-depth with emphasis on theory, proof, and development of formulas and their applications. Topics shall include, but not be limited to, complex numbers, functions, equations and inequalities, absolute value, direct, inverse and joint variation, systems of equations and inequalities, parabolas, quadratic equations, powers, roots, exponents and logarithms, polynomial equations and inequalities, Binomial Theorem, radical expressions, non-linear systems of equations, conic sections, sigma notation, arithmetic and geometric sequences, equations of circles, real-

world applications, problem solving strategies and literacy strategies.

Mathematics for College Algebra

Course #   1200710
Grade Level   10-12
Length   1 year
Prerequisite   Algebra 2
Credit   1

This course is a math credit that emphasizes five core areas to include: developing fluency with the Laws of Exponents with numerical and algebraic expressions; extending arithmetic operations with algebraic expressions to include rational and polynomial expressions; solving one-variable exponential, logarithmic, radical and rational equations and interpreting the viability of solutions in real-world contexts; modeling with and applying linear, quadratic, absolute value, exponential, logarithmic and piecewise functions and systems of linear equations and inequalities; extending knowledge of functions to include inverse and composition.

Advanced Placement Statistics

Course #   1210320
Grade Level   11-12
Length   1 year
Prerequisite   Algebra 2
Credit   1 Weighted

This is a college level course designed to explore the concept of probability and elementary statistics. To provide study in exploratory data, planning a study, anticipating patterns in advance, and statistical inference. **Students are required to take the Advanced Placement examination.**

AP Precalculus

Course #
Grade Level   10-12
Length   1 year
Prerequisite   Algebra 2 H
Credit   1 Half-weight

The purpose of this course is to provide a foundation for the study of advanced mathematics, including elementary functions and techniques of calculus. Topics shall include, but not be limited to, concept of limits, derivatives, anti-derivatives, tangent lines, integration, real-world applications, problem solving strategies and literacy strategies.

Advanced Placement Calculus AB / BC

Course #   1202310
Grade Level   11-12
Length   1 year
Prerequisite   Pre-Calculus H
Credit   1 Weighted

The purpose of this course is to provide study of elementary functions and the general theory and techniques of calculus. The content is specified by the Advanced Placement Program.
Students are required to take the Advanced Placement examination.