# Mathematics

**Algebra 1a/1b Block** 1200370/1200380 ***Prerequisite:*** *None* ***Length:*** *1 year* ***GL:*** *9* ***Credit:*** *2*
This course will be given during a two-period block that will allow students to complete both Algebra 1a and Algebra 1b during one school year. The two courses combined are equivalent to Algebra 1. At the completion all students will take the state mandated FSA Algebra 1 exam.

**Algebra 1** 12003100 ***Prerequisite:*** *None* ***Length:*** *1 year* ***GL:*** *9-12* ***Credit:*** *1*
The purpose of this course is to provide the foundation for more advanced mathematics courses and to develop the algebra skills needed to solve real-world and mathematical problems. Topics shall include, but not be limited to, sets, ratios, proportions, radical expressions, variables, the real number system, equations ad inequalities, integral exponents, polynomials, factoring, irrational numbers, quadratic equations, Venn diagrams, coordinate geometry, problem solving strategies, and literacy strategies. Grades are assigned through completion of course work. **Obtaining an achievement level of 3, 4, or 5 on the Algebra End-Of-Course (EOC) assessment is required for graduation.**

**Algebra 1 for Credit Recovery** 1200315 ***Prerequisite:*** *Algebra 1* ***Length:*** *1 semester* ***GL:*** *9-12* ***Credit:*** *0.5*
Credit Recovery courses are credit bearing courses with specific content requirements defined by the Next Generation Sunshine State Standards and/or Common Core State Standards. Student enrolled in a Credit Recovery course must have previously attempted the Algebra 1 course (and/or End-Of-Course Assessment for Algebra). Credit Recovery courses should ONLY be used for credit recovery, grade forgiveness, or remediation for students needing to prepare for the Algebra End-Of-Course assessment retake.

**Geometry** 12063100 ***Prerequisite:*** *Algebra 1* ***Length:*** *1 year* ***GL:*** *9-12* ***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. Topics shall include, but not be limited to logic, equivalent propositions, Euclidean Geometry, direct and indirect proofs, constructions, lines, polygons, transformations, quadrilaterals, triangles, circles, polyhedral, spheres, trigonometric ratios, problem solving strategies and literacy strategies. **Students are required to take the Geometry End of Course Examination.**

**Geometry Honors** 12063200 ***Prerequisite:*** *Algebra 1 with a EOC score or 4 or 5, or Algebra 1 Honors* ***Length:*** *1 year* ***GL:*** *9-12* ***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. Topics shall include but not be limited to truth tables, logic, equivalent propositions, Euclidean Geometry, direct and indirect proofs, vectors, Fibonacci sequence, golden ratio, constructions, lines, polygons, transformations, quadrilaterals, triangles, circles, polyhedral, cross sections spheres, coordinate geometry trigonometric ratios, problem solving strategies and literacy strategies. **Students are required to take the Geometry End of Course Examination.**

**Liberal Arts Mathematics 1** 12073000 ***Prerequisite:*** *Algebra 1* ***Length:*** *1 year* ***GL:*** *10-12* ***Credit:*** *1*
The purpose of this course is to strengthen Algebra 1 skills and to explore informal geometry. State assessment skills will be reinforced. Topics shall include but not be limited to laws of exponents, real number properties, and operations, graphs, functions, equations and inequalities, quadratic equations, coordinate geometry, polygons, quadrilaterals, triangles, solids, data sets, measures of central tendency, real-world applications, problem solving strategies and literacy strategies.
Note: *This course is not recognized by the State University System as meeting one of the core courses required for freshman admissions.*

**Algebra 2** 12003300 ***Prerequisite:*** *Algebra 1 and Geometry* ***Length:*** *1 year* ***GL:*** *9-12* ***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** 12003400 ***Prerequisite:*** *Algebra 1* ***Length:*** *1 year* ***GL:*** *9-12* ***Credit:*** *1*
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 Readiness** 12007000 ***Prerequisite:*** *Geometry or equivalent* ***Length:*** *1 year* ***GL:*** *11-12* ***Credit:*** *1*
This course is targeted for grade 12 students, whose test scores on the Postsecondary Educational Readiness Test are below the established cut scores for mathematics, indicating that they are not yet college ready in mathematics. This course incorporates the Common Core State Standards for Mathematical Practices as well as the following Common Core Standards for Mathematical Content: an introduction to functions, linear equations and inequalities, solving systems of equations, rational equations and algebraic fractions, radicals and rational exponents, factoring and quadratic equations, complex numbers, and the Common Core Standards for High School Modeling. The standards align with the Mathematics Postsecondary Readiness Competencies deemed necessary for entry-level college courses.
***Note:*** *This course is required for seniors who do not demonstrate proficiency on the mathematics portion of the Postsecondary Education Readiness Test (PERT) administered during their junior year.*

**Financial Algebra** 1200387 ***Prerequisite****: None* ***Length:*** *1 year* ***GL:*** *10-12* ***Credit:*** *1*
This course is targeted for students who need additional instruction in content to prepare them for success in upper-level mathematics. This course incorporates the Florida Standards for Mathematical Practices as well as the following Florida Standards for Mathematical Content: Algebra, Geometry, Number and Quantity, and Statistics, and the Florida Standards for High School Modeling.

**Pre-Calculus Honors** 12023400 ***Prerequisite:*** *Algebra 2* ***Length:*** *1 year* ***GL:*** *10-12* ***Credit:*** *1*
The purpose of this course is to emphasize the study of functions and other skills necessary for the study of calculus. Topics shall include but not be limited to polynomial, rational, trigonometric/circular functions, arithmetic and geometric series, concepts of limits, vectors, conic sections, polar coordinate systems, mathematical induction, parametric equations, complex numbers, real-world applications, problem solving strategies and literacy strategies.

**Q Advanced Placement Calculus AB** 12023100 ***Prerequisite:*** *Trigonometry and Analysis of Function or PreCalculus* ***Length:*** *1 year* ***GL:*** *11-12* ***Credit:*** *1*
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.**

**Q Advanced Placement Statistics** 1210320 ***Prerequisite:*** *Algebra 2* ***Length:*** *1 year* ***GL:*** *11-12* ***Credit:*** *1*
The purpose of this course is to provide study in exploratory data, planning a study, anticipating patterns in advance, and statistical inference. Topics shall include, but not be limited it, graphical displays, summaries and comparisons of distributions of univariate data, bivariate data and categorical data, overview methods of data collection, planning and conducting surveys and experiments, anticipating patterns using probability simulation, and confirming models through statistical inference. Credit in this course precludes credit in Probability and Statistics with Applications. **Students are required to take the Advanced Placement examination.**