Mathematics

Course Title	Course #	Term	Grade(s)	Prerequisite(s)	Major Topics
GSE Algebra 1	27.0990000	Y	9	Placement Criteria	Students will formalize and extend the mathematics that they learned in the middle grades; deepen and extend understanding of linear relationships, in part by contrasting them with exponential phenomena, and in part by applying linear models to data that exhibit a linear trend; use algebra to deepen and extend understanding of geometric knowledge from prior grades; and tie together the algebraic and geometric ideas studied
GSE Algebra 1 Support	27.0997000	Y	9	Placement Criteria	Elective that is a companion class to GSE Algebra for students who need additional mathematics support
GSE Accelerated Algebra 1 / Geometry A Honors	27.0994040	Y	9	Placement Criteria	Formalize and extend the mathematics that students learned in the middle grades; deepen and extend understanding of linear relationships, in part by contrasting them with exponential phenomena, and in part by applying linear models to data that exhibit a linear trend. use algebra to deepen and extend understanding of geometric knowledge from prior grades; tie together the algebraic and geometric ideas studied In addition, transformations on the coordinate plane provide opportunities for the formal study of congruence and similarity. The study of similarity leads to an understanding of right triangle trigonometry and connects to quadratics through Pythagorean relationships. The study of circles uses similarity and congruence to develop basic theorems relating circles and lines and rounds out the course.
GSE Geometry	27.0991000	Y	10	Placement Criteria	Transformations on the coordinate plane provide opportunities for the formal study of congruence and similarity. The study of similarity leads to an understanding of right triangle trigonometry and connects to quadratics through Pythagorean relationships. The study of circles uses similarity and congruence to develop basic theorems relating circles and lines. The need for extending the set of rational numbers

					arises and real and complex numbers are introduced so that all quadratic equations can be solved. Quadratic expressions, equations, and functions are developed, comparing their characteristics and behavior to those of linear and exponential relationships. The link between probability and data is explored through conditional probability.
GSE Geometry Support	27.0998000	Y	10	Placement Criteria	Elective that is a companion course to GSE Geometry for students who need additional support
GSE Geometry Honors	27.0991040	Y	9	Placement Criteria	Course description is same as above. The distinction is that the course is only offered to students who are a year ahead in mathematics.
GSE Accelerated Geometry B / Algebra 2 Honors	27.0995040	Y	9-10	Placement Criteria	The need for extending the set of rational numbers arises, and real and complex numbers are introduced so that all quadratic equations can be solved. Quadratic expressions, equations, and functions are developed, comparing their characteristics and behavior to those of linear and exponential relationships. The link between probability and data is explored through conditional probability. Methods from probability and statistics are used to draw inferences and conclusions from data. Students expand their repertoire of functions to include polynomial, rational, and radical functions. They expand their study of right triangle trigonometry to model periodic phenomena. Students bring together all of their experience with functions and geometry to create models and solve contextual problems.
GSE Algebra 2	27.0992000	Y	11	Placement Criteria	Students will pull together and apply the accumulation of learning from their previous mathematics courses. Methods from probability and statistics will be used to draw inferences and conclusions from data. Students will expand their repertoire of functions to include polynomial, rational, and radical functions. The study of right triangle trigonometry will be expanded and then used to model periodic phenomena. Experiences with functions and geometry will help students to create models and solve contextual problems.

GSE Algebra 2 Support	27.0999000	Y	11	Placement Criteria	Elective that is a companion course to GSE Algebra 2 for students who need additional support
GSE Algebra 2 Honors	27.0992040	Y	10 Because this course offers honors points, it is only offered to students who are a year or more ahead in mathematics.	Placement Criteria	Course description is the same as above. The distinction is that the course if only offered to students who are a year ahead in mathematics.
GSE Pre-Calculus	27.0974000	Y	12	Placement Criteria	The study of circles and parabolas is extended to include other conics such as ellipses and hyperbolas. Trigonometric functions are further developed to include inverses, general triangles, and identities. Matrices provide an organizational structure in which to represent and solve complex problems. Students expand the concepts of complex numbers and the coordinate plane to represent and operate upon vectors. Probability rounds out the course using counting methods, including their use in making and evaluating decisions.
GSE Pre-Calculus Honors	27.0974040	Y	11	Placement Criteria	Course description is the same as above. The distinction is that the course if only offered to students who are a year ahead in mathematics.
GSE Accelerated Pre-calculus Honors	27.0977040	Y	10-11	Placement Criteria	This course is intended to prepare students for a more intense study of mathematics. The study of circles and parabolas is extended to include other conics such as ellipses, and hyperbolas. Trigonometric functions are further developed to include inverses, general triangles, and identities. Matrices provide an organization structure in which to represent and solve complex problems. The concept of complex numbers is extended, and the coordinate plane is used to represent and operate upon vectors. Probability rounds out the course using counting methods.
Advanced Math Decision Making (AMDM)	27.0850000	Y	12	Placement Criteria	More in-depth study of statistical information, summaries, and methods of designing and conducting statistical studies; voting processes, modeling of data, and basic financial

					decisions; use of network models for making informed decisions.
Mathematics of Finance (Georgia Virtual Course)	27.3870000	Y	12	Placement Criteria	Mathematics course that prepares students for life skills in the personal financial arena. This course is ideal for students who are bound for a two-year college or for a career field after graduation.
AP Calculus AB	27.0720010	Y	11 – 12	Placement Criteria	College Board AP Course Descriptions Real numbers and the Cartesian plane; review of functions, limits and their properties; derivatives, differentiation, and application; antiderivatives and indefinite integration; area and definite integrals; integration by substitution; the Trapezoidal rule; logarithmic, exponential and other transcendental functions; and applications and methods of Integration
AP Statistics	27.0740010	Y	11 – 12	Placement Criteria	College Board AP Course Descriptions Introduction to statistics, descriptive statistics, probability; probability distributions and normal probability distributions; estimates and sample size; hypothesis testing; inferences from two samples; correlation and regression; multinomial experiments; analysis of variance; statistical process control; nonparametric statistics; and design and sampling
IB Math Studies	27.0522040	Y	11-12	Placement Criteria	International Baccalaureate Curriculum and Course Descriptions IB level content culminating in portfolio submission and/or IB exams
IB Mathematics A&A HL Yr. 1	27.0533010	Y	11-12	Placement Criteria	International Baccalaureate Curriculum and Course Descriptions IB level content culminating in portfolio submission and/or IB exams
IB Mathematics A&A HL Yr. 2	27.0534010	Y	12 IB Mathematics SL	Placement Criteria	International Baccalaureate Curriculum and Course Descriptions IB level content culminating in portfolio submission and/or IB exams
IB Mathematics A&A SL Yr. 1	27.0531000	Y	11-12	Placement Criteria	International Baccalaureate Curriculum and Course Descriptions

					IB level content culminating in portfolio submission and/or IB exams
IB Mathematics A&A SL Yr. 2	27.0532000	Y	12 IB Mathematics SL	Placement Criteria	International Baccalaureate Curriculum and Course Descriptions IB level content culminating in portfolio submission and/or IB exams
IB Mathematics A&I SL Yr. 1	27.0535000	Y	11-12	Placement Criteria	International Baccalaureate Curriculum and Course Descriptions IB level content culminating in portfolio submission and/or IB exams