MATHEMATICS

REGENTS LEVEL

Algebra I   **1 credit / 9**
Algebra I is offered to students who have successfully completed Math 8. The fundamental purpose of this course is to formalize and extend the mathematics that students learned in the middle grades. The critical areas deepen and extend understanding of mathematical relationships. Students will take a local final examination in June.

Algebra II   **1 credit / 9-10**
Algebra II is offered to students who have successfully completed Algebra I. The fundamental purpose of this course is to formalize and extend the mathematics that students learned in Algebra I. The critical areas deepen and extend understanding of linear, exponential, and quadratic relationships. Students will take a local final examination as well as the NYS Common Core Examination in June. (Co-taught sections will take the NYSCC exam in January.)

Algebra II Honors   **1 credit / 9-10**
Algebra II Honors covers the same topics as Algebra II, but does so in greater depth and with an increased emphasis on independent critical thinking. Students will take a local final examination as well as the NYS Common Core Examination in June. Students coming from Algebra I need a departmental recommendation for this Honors course.

Geometry & Trigonometry   **1 credit / 9-11**
Geometry is offered to students who have successfully completed Algebra II. The fundamental purpose of the course is to formalize and extend students' geometric experiences with a rigorous treatment of trigonometry. Students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Students will take a local final examination in June.

Geometry & Trigonometry Honors   **1 credit / 9-11**

Geometry & Trigonometry Honors covers the same topics as Geometry & Trigonometry, but does so in greater depth and with an increased emphasis on independent critical thinking. Students will take a local final examination in June.

REGENTS-EXTENDED LEVEL

Algebra 1A   **1 credit / 9**
This course is for students currently enrolled in Math 8 in the middle school. This course is the first course of a two-year sequence covering Common Core Algebra topics in an extended format. Students will take a local final examination in June.

Algebra 1B   **1 credit / 9-10**
This course is the second course of a two-year sequence covering Common Core Algebra topics in an extended format. The Common Core Algebra Regents exam will be administered in January.

Geometry Topics   **1 credit / 10-11**

Geometry Topics is offered to students who have successfully completed Algebra 1B or Algebra II. The fundamental purpose of the course in Geometry is to formalize and extend students' geometric experiences from the middle grades. Students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Select Algebra II & Trigonometry topics will be included in the course. Students will take a local final examination in June.

JUNIOR/SENIOR LEVEL

Statistics   **1 credit / 11-12**

This course is designed to introduce students to the study of statistics. This course is offered to juniors and seniors who have passed the Common Core Algebra Regents Exam. Topics include data collection and analysis, measures of dispersion, regression models, probability distributions, and an introduction to inferential statistics.

Pre-Calculus   **1 credit / 11-12**

This course is intended to provide the mathematical background needed for calculus. It is offered to those students who have successfully completed Geometry/Trigonometry or Geometry Topics. Topics include functions and their graphs, polynomial and rational functions, exponential and logarithmic functions, trigonometry, sequence and series, limits, and an introduction to differential calculus.

Pre-Calculus Honors   **1 credit / 11-12**

This honors course is intended to provide the mathematical background needed for calculus. Topics include functions and their graphs, polynomial and rational functions, exponential and logarithmic functions, trigonometry, sequence and series, limits and continuity, and derivatives.

ADVANCED PLACEMENT LEVEL

Advanced Placement Calculus AB   **1 credit / 11-12**

This is a traditional course in differential and integral calculus. This course prepares students for the Advanced Placement Calculus AB Exam. Course enrollment requirements are listed in the Frequently Asked Questions section.

Advanced Placement Calculus BC   **1 credit / 11-12**

This is a traditional course in differential and integral calculus. This course prepares students for the Advanced Placement Calculus BC Exam. Course enrollment is limited to students successfully completing Pre-Calculus Honors and meeting the additional requirements listed in the Mathematics Honors Program section following the math course listings.

Calculus   **1 credit / 11-12**

This is a traditional course in differential and integral calculus. The course is designed to prepare students for further studies of calculus at the college level. It is less rigorous than the AP Calculus courses and does not require a student to take the AP exam at its conclusion. Successful completion of a Pre-Calculus course is required to enroll.

Advanced Placement Statistics   **1 credit / 11-12**

Advanced Placement Statistics is designed to provide an extensive study of the theory of statistics including; data collection and analysis, measures of dispersion, probability distributions, confidence intervals, hypothesis testing, and regression models. The graphing calculator will be used extensively in this course as both a computational and graphical analysis tool. Students enrolled in AP Statistics will be required to take the Advanced Placement Statistics Exam. Course enrollment requirements are listed in the Frequently Asked Questions section.