



MATHEMATICS

Pre-Algebra

This course is designed to give students a firm foundation in mathematical concepts needed to prepare for the rigor of Algebra I class and Algebra 1 Regents exam.

Math 9A – Grade 9

1 unit

Prerequisite: None

1 year

Algebra I (Regents)

This course is the foundation for high school mathematics courses and is the bridge from the concrete to the abstract study of mathematics. Topics include simplifying expressions, evaluating and solving equations and inequalities, and graphing linear and quadratic functions and relations. Real world applications are presented within the course content and a function's approach is emphasized. **Regents for final exam

Math 9A – Grade 9

1 unit

Prerequisite: Math 8 or pre-algebra

1 year

Geometry (Regents)

This course provides students with experiences that deepen the understanding of two and three-dimensional objects and their properties. Topics of study include: perimeter, area, and volume properties, constructions, right-triangle applications, angle relationships, properties of various polynomials, linear and quadratic functions, and special quadrilaterals. Deductive and inductive reasoning as well as investigative strategies in drawing conclusions are stressed where an understanding of proof and logic is developed. **Regents for final exam

Grade: 10

1 unit

Prerequisite: Algebra I

1 year

Algebra 2 (Regents)

This is a one year course that covers content assessed on the NYS Algebra 2 Regents Exam. Topics covered in this year of study include: rational expressions, real and complex numbers, quadratic functions, trigonometric functions, exponential functions, and logarithmic functions as per the NYS Common Core Learning Standards. Students will take the Regents examination in June as their final exam. It is recommended that the student take Algebra 2 concurrently with Chemistry and have earned a minimum grade of 75 on their Algebra I and Geometry Regents Exams in order to ensure the foundational skills needed to be successful in the class.

**Regents for final exam

Grade: 11 - 12

1 unit

Prerequisite: Algebra I and Geometry (CC Regents Exam) 1 year

Personal Finance

This course in applied mathematics focuses on problem solving and mathematical reasoning in work-related problems as well as everyday personal finances. Money management topics that will be covered are: Checking accounts, check reconciliation, calculating net pay, taxes, budgeting and buying, saving money, borrowing money, calculating compound and simple

interests, investing money, buying a home, buying a car, insurance, purchasing/selling, pricing goods, stocks, bonds, etc.

The goal of the course is to prepare the student to be a successful adult money manager.

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| Grades: 11 - 12 | 1 unit |
| Prerequisite: Algebra I | 1 year |

Probability and Statistics

This course will cover descriptive statistics, elements of probability theory, and basic ideas of statistical inference. Topics include frequency distributions, probability and counting rules, measures of central tendency and dispersion, discrete probability distributions, commonly occurring distributions, (binomial, normal, etc.), estimation, and testing of hypotheses. **Final exam

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| Grade: 11 - 12 | 1 unit |
| Prerequisite: Algebra I | 1 year |

Graphing Calculator I

Graphing Calculator I is designed to familiarize students with using the TI-83/84 graphing calculator. This course allows students to develop alternate strategies for solving Algebra I questions. Some topics in this course go beyond the scope of Algebra I curriculum. **Final exam

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| Grade: 9 | 1/2 unit |
| Prerequisite: Concurrent enrollment in Algebra I | |

Graphing Calculator II

Graphing Calculator II is designed to continue to enhance and develop the students' use of functions on the TI-83/84 graphing calculator. This course allows students to develop alternate strategies for solving Geometry questions. Several topics in this course go beyond the scope of Geometry curriculum. **Final Exam

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| Grade: 10 | 1/2 unit |
| Prerequisite: Graphing Calculator I; Concurrent enrollment in Geometry | |

College Algebra

College Algebra focuses on the concept of a function. This concept will be integrated into applications and explored to deepen student understanding. The various functions covered in this course include: linear functions, exponential functions, logarithmic functions, and quadratic functions. **Local Final Exam

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| Grade: 12 | 1 unit |
| Prerequisite: Passing Algebra 2/Trigonometry course and the Algebra 2/Trigonometry Regents | 1 year |

AP Statistics - *Online*

The AP Statistics course is equivalent to a one-semester, introductory, non-calculus-based college course in statistics. The course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes in the AP Statistics course: exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Students use technology, investigations, problem solving, and writing as they build conceptual understanding.

Grade: 11 and 12

1 unit

Prerequisite: Students must have taken second-year Algebra (Algebra 2/Trigonometry) before enrolling in AP Statistics.
