

MATHEMATICS

0801 Algebra I Connections 1 year Grade 9 1 credit

Algebra I Connections aims to deepen and extend student understanding built in previous courses by focusing on developing fluency with solving linear equations and inequalities and systems; extending these skills to solving quadratic and exponential functions; exploring functions, including sequences, graphically, numerically, symbolically and verbally; and using regression techniques to analyze the fit of models to distributions of data. A math lab is required with this course. Required material: graphing calculator.

0814 Algebra I 1 year Grade 9 1 credit

Algebra I aims to deepen and extend student understanding built in previous courses by focusing on developing fluency with solving linear equations and inequalities and systems; extending these skills to solving quadratic and exponential functions; exploring functions, including sequences, graphically, numerically, symbolically and verbally; and using regression techniques to analyze the fit of models to distributions of data. Required material: graphing calculator. Prerequisite: Pre Algebra or Teacher recommendation.

0802 Geometry Connections 1 year Grades 10 1 credit

Geometry Connections aims to formalize and extend the geometry that students have learned in previous courses. It does this by focusing on establishing triangle congruence criteria using rigid motions and formal constructions, building a formal understanding of similarity based on dilations and proportional reasoning, developing the concepts of formal proof, exploring the properties of two-and three -dimensional objects, working within the rectangular coordinate system to verify geometric relationships, proving basic theorems about circles, and using the language of set theory to compute and interpret probabilities for compound events. A math lab is required with this course. Required material: graphing calculator

0834 Geometry 1 year Grades 9, 10 1 credit

Geometry aims to formalize and extend the geometry that students have learned in previous courses. It does this by focusing on establishing triangle congruence criteria using rigid motions and formal constructions, building a formal understanding of similarity based on dilations and proportional reasoning, developing the concepts of formal proof, exploring the properties of two-and three -dimensional objects, working within the rectangular coordinate system to verify geometric relationships, proving basic theorems about circles, and using the language of set theory to compute and interpret probabilities for compound events. Required material: graphing calculator. Prerequisite: Algebra 1 or Teacher recommendation.

0835 Honors Geometry 1 year Grade 9 1 credit

Honors Geometry aims to formalize and extend the geometry that students have learned in previous courses. It does this by focusing on establishing triangle congruence criteria using rigid motions and formal constructions, building a formal understanding of similarity based on dilations and proportional reasoning, developing the concepts of formal proof, exploring the properties of two-and three -dimensional objects, working within the rectangular coordinate system to verify geometric relationships, proving basic theorems about circles, and using the language of set theory to compute and interpret probabilities for compound events. This is a more rigorous course that requires significant work outside of class. (**Teacher recommendation required.**) Required material: graphing calculator Prerequisite; 8th Grade Algebra (A average)

MATHEMATICS (continued)

0807 Algebra II Connections 1 year Grade 11, 12 1 credit

Algebra II Connections aims to apply and extend what students have learned in previous courses by focusing on finding connections between multiple representations of functions, transformations of different function families, finding zeros of polynomials and connecting them to graphs and equations of polynomials, modeling periodic phenomena with trigonometry, and understanding the role of randomness and the normal distribution in making statistical conclusions. Required material: graphing calculator. Prerequisite: Geometry Connections

0824 Algebra II 1 year Grade 10, 11 1 credit

Algebra II aims to apply and extend what students have learned in previous courses by focusing on finding connections between multiple representations of functions, transformations of different function families, finding zeros of polynomials and connecting them to graphs and equations of polynomials, modeling periodic phenomena with trigonometry, and understanding the role of randomness and the normal distribution in making statistical conclusions. Required material: graphing calculator. Prerequisite: Geometry or Teacher Recommendation.

0825 Honors Algebra II 1 year Grade 10 1 credit

Honors Algebra II aims to apply and extend what students have learned in previous courses by focusing on finding connections between multiple representations of functions, transformations of different function families, finding zeros of polynomials and connecting them to graphs and equations of polynomials, modeling periodic phenomena with trigonometry, and understanding the role of randomness and the normal distribution in making statistical conclusions. This is a more rigorous course that requires significant work outside of class. (**Teacher recommendation required.**) Required material: graphing calculator. Prerequisite: Honors Geometry.

0844 Pre-Calculus 1 year Grades 11, 12 1 credit

Topics include linear relations and functions, systems of equations and inequalities, the nature of graphs, polynomial and rational functions, exponential and logarithmic functions, conic sections, sequences and series, combinations and permutations, limits, and polar coordinates, and trigonometric functions and identities. Required material: graphics calculator. Prerequisites: Algebra II and Geometry.

0808 Applied Mathematical Concepts 1 year Grade 12 1 credit

This course prepares students to investigate contemporary issues mathematically and to apply the mathematics learned in earlier courses to answer questions that are relevant to their civic and personal lives. The course reinforces student understanding of: percent, functions and their graphs, probability and statistics, multiple representations of data and data analysis. This course also introduces functions of two variables and graphs in three dimensions. The applications in all sections should provide an opportunity for deeper understanding and extension of the material from earlier courses. (Prerequisite: Algebra II, Algebra II Connections)

Grade 12	Applied Math/ Statistics (by rec.)	Pre-Calc/ Statistics	Calculus/ Statistics	Pre-Calc Calculus/ AP Calculus	AP Calculus Statistics
-----------------	---	---------------------------------	---------------------------------	---	-----------------------------------