

Course Descriptions

AP Calculus

The Advanced Placement Calculus AB course follows the Advanced Placement syllabus and students may take the AP test in May. Course study will include properties of functions, limits, differential calculus, and integral calculus. Use of symbolic differentiation and integration utilities is also included.

Pre-Calculus

The course topics include college algebra, advanced trigonometry, and analytic geometry of two and three dimensions. Students experience a thorough analysis of all elementary functions and curve-sketching. Selected discrete mathematics topics including normal probability distributions, non-linear regression, and hypothesis testing are explored. Practice with proofs such as mathematical induction is included. Experience with graphing calculators is incorporated.

College Algebra

This course includes study of functions including, but not limited to, absolute value, quadratic, polynomial, rational, logarithmic, and exponential, systems of equations, and matrices.

Geometry

The Geometry course includes an in-depth analysis of plane, solid, and coordinate geometry as they relate to both abstract mathematical concepts as well as real-world problem situations. Topics include logic and proof, parallel lines and polygons, perimeter and area analysis, volume and surface area analysis, similarity and congruence, trigonometry, and analytic geometry. Emphasis will be placed on developing critical thinking skills as they relate to logical reasoning and argument. Students will be required to use different technological tools and manipulatives to discover and explain much of the course content.

Algebra II

Fundamental skills of mathematics will be applied to such topics as functions, equations and inequalities, probability and statistics, logarithmic and exponential relationships, quadratic and polynomial equations, and matrices. Technology will be used to introduce and expand upon the areas of study listed above. Use of computers and graphing calculators will be incorporated into each chapter.

Algebra I

This class is a study of the language, concepts, and techniques of Algebra that will prepare students to approach and solve problems following a logical succession of steps. Skills taught in the course lay groundwork for upper level math and science courses and have practical uses.