MATHEMATICS DEPARTMENT COURSE DESCRIPTIONS

(ALL COLLEGE PREP COURSES ARE DENOTED WITH A “P”)

Algebra Support
Algebra IA/IB P
Algebra I P
Plane and Solid Geometry P
Transition to Algebra 2
AP Statistics P
CAHSEE Math
Algebra 2 P
Pre-Calculus P
AP Calculus AB P
AP Calculus BC P
Trigonometry P

Course Sequencing for Mathematics

<table>
<thead>
<tr>
<th>Current Course</th>
<th>Grade Requirement</th>
<th>Next Course</th>
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</thead>
<tbody>
<tr>
<td>Algebra 1A</td>
<td>C or higher</td>
<td>Algebra 1B</td>
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<tr>
<td>Algebra 1B</td>
<td>C or higher</td>
<td>Geometry</td>
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<tr>
<td>Geometry</td>
<td>C</td>
<td>Transitions to Algebra 2</td>
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<td></td>
<td>C+ or higher</td>
<td>Algebra 2</td>
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<tr>
<td>Algebra 2</td>
<td>C</td>
<td>Trigonometry</td>
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<td></td>
<td>C or higher</td>
<td>AP Statistics</td>
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ALGEBRA I
Algebra I is a California Standards-based college entrance requirement for most colleges. It is a fundamental course designed to teach the students the use of algebraic concepts, solving formulas, and relationships. Fundamental processes, factoring, graphs, equations, radicals, and exponents are included in this course.

ALGEBRA IA/IB
Algebra IA/IB is the same California Standards-based course as Algebra I except that students are introduced to concepts at a slower pace (36 weeks). Students must enroll in both, IA and IB.

PLANE AND SOLID GEOMETRY
Prerequisites: “C+” or better in Algebra I or Algebra 1B
Plane and Solid Geometry is a California Standards-based course designed primarily for those students with interest in and aptitude for mathematics. Reading comprehension is essential. Proof, mathematical thought processes, and inductive and deductive reasoning are studied.

TRANSITION TO ALG 2
Prerequisite: C or better in Geometry
Transition to Algebra 2 is a class taken after geometry. This class is for students who earn a C or better in geometry and need to brush up on Algebra 1 skills to get ready for Algebra 2, but do not need to repeat geometry. Skills taught are factoring, linear functions, slope, rational exponents, quadratics, radicals, exponents, rational expressions, parabolas, and basic graphing techniques.
ALGEBRA 2

Prerequisite: “C+” or better Geometry
Algebra II is a California Standards-based course intended for those majoring in math or preparing for advanced study in college math and engineering or science. It includes a review of the fundamentals of first year Algebra I and proceeds with more advanced computations. Ratio, proportions and variations, word problems, negative exponents, roots and radicals, sequences and series, logarithms, and conic sections are studied.

TRIGONOMETRY

Prerequisite: “C” or better in Algebra II
This California Standards-based course is designed to prepare students for calculus as well as higher math and science in college. Students can take this before or after pre-calculus. Trigonometric functions and identities will be covered.

PRE-CALCULUS

Prerequisite: “C” or better in Algebra 2
Pre-Calculus is a course based on the California Standards for Calculus and is designed to prepare the student for calculus as well as for higher math and science in college. Topics covered will include functions and relations, exponents, logarithms, mathematical induction, inequalities, trigonometric functions, polar coordinates, and complex numbers.

AP STATISTICS

Prerequisite: C or better in Alg 2
AP Statistics is an introduction to the major concepts and tools necessary for collecting, analyzing, and drawing conclusions from data. Major themes include exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Students enrolling in this class are required to take the AP Exam at their own expense.

AP CALCULUS AB

Prerequisite: “C” or better in Pre-Calculus
The topics included in Calculus AB are differential calculus, analytic geometry, functions and limits, logarithmic and trigonometric functions, integral calculus including definite and indefinite integrals, techniques or integration, applications in mathematics and physics. Students enrolling in this class are required to take the AP exam at their own expense.

AP CALCULUS BC

Prerequisite: Successful completion of AP Calculus AB
Calculus BC expands the topics covered in Calculus AB and also covers sequences and series and elementary differential equations. Students enrolling in this class are required to take the AP exam at their own expense.