

Math - Advanced Placement

Math - Advanced Placement Courses

AP Calculus AB

AP Calculus AB explores the topics of limits/ continuity, derivatives, and integrals. These ideas are examined using a multi-layered approach. The student will be expected to relate the connections among these approaches. Students will also be required to synthesize knowledge of the topics of the course to solve applications that model physical, social and/or economic situations. As mandated by the College Board, graphing calculators will be required. Students are expected to take the accompanying AP Exam, which may qualify them for advanced standing in college and/or college credit.

Credits 1

Grades

11, 12

Course Designation

Advanced Placement (AP),

Weighted (1.0W)

Schools

Battlefield High School

Colgan High School

Forest Park High School

Freedom High School

Gainesville High School

Hylton High School

Osborn Park High School

Patriot High School

Woodbridge High School

Requirements

Teacher recommendation

Prerequisites

[Pre-Calculus with Trigonometry for AB](#), [Pre-Calculus with Trigonometry for BC](#), or [AP Pre-Calculus](#)

AP Calculus BC

AP Calculus BC is intended for students who have a thorough knowledge of analytic geometry and elementary functions. Although all of the elements of the AP Calculus AB course are included, this course provides a more rigorous treatment of these introductory calculus topics. The course also includes the development of the additional topics required by the College Entrance Examination Board in its syllabus for AP Calculus BC. The use graphing technology will be fully integrated into instruction and students will be called upon to confirm and interpret results of problem situations that are solved using available technology. Students are expected to take the accompanying AP Exam, which may qualify them for advanced standing in college and/or college credit.

Credits 1

Grades

11, 12

Course Designation

Advanced Placement (AP),

Weighted (1.0W)

Schools

Battlefield High School

Colgan High School

Forest Park High School

Freedom High School

Gainesville High School

Hylton High School

Osborn Park High School

Patriot High School
Woodbridge High School
Requirements

Teacher recommendation

Prerequisites

[Pre-Calculus with Trigonometry for BC](#) or [AP Pre-Calculus](#)

AP Pre-Calculus

Taking AP Precalculus prepares students for other college-level mathematics and science courses. During the course, students will explore everyday situations using mathematical tools and lenses. Students will also develop an understanding of modeling and functions, and examine scenarios through multiple representations. The course framework outlines content and skills needed for careers in mathematics, physics, biology, health sciences, social sciences, and data science. The content for AP-Precalculus is broken into four units: Polynomial and Rational Functions, Exponential and Logarithmic Functions, Trigonometric and Polar Functions, and Functions Involving Parameters, Vectors, and Matrices. Students are expected to take the accompanying AP Exam, which may qualify them for advanced standing in college and/or college credit.

Credits 1

Grades

10, 11, 12

Course Designation

Advanced Placement (AP)

Schools

Battlefield High School
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Osborn Park High School
Patriot High School
Woodbridge High School

Prerequisites

[Algebra 2](#)

AP Statistics

The Advanced Placement Statistics course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: selecting methods for collecting or analyzing data, describing patterns, trends, associations, and relationships in data, using probability and simulation to describe probability distributions and define uncertainty in statistical inference, and using statistical reasoning to draw appropriate conclusions and justify claims. Students are expected to take the accompanying AP Exam, which may qualify them for advanced standing in college and/or college credit. Students who successfully complete the course and the AP Statistics examination may receive credit for a one semester introductory college statistics course.

Credits 1

Grades

11, 12

Course Designation

Advanced Placement (AP),

Weighted (1.0W)

Schools

Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School

Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Woodbridge High School

Prerequisites

[Algebra 2](#)