



Pompano Beach High School

2024-2025

Mathematics - Course Curriculum Guide

Abbreviation & Terminology Key

Advanced Placement (AP) – is a program in the United States created by the College Board, which offers college-level curricula and examinations to high school students. American colleges and universities often grant placement and course credit to students who obtain high scores on the examinations. These courses award 2 extra quality points towards the weighted GPA.

Career & Technical Education (CTE) – Programs that are responsible for developing and maintaining educational programs that prepare individuals for occupations important to Florida's economic development. Each program is aligned to Career Clusters.

Honors (H) – The courses contain academic rigor, which is more than simply assigning to students a greater quantity of work. Through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted, students are challenged to think and collaborate critically on the content they are learning. These courses award 1 extra quality point towards the weighted GPA.

Local Honors (LH) – Specific courses are designated as "Local Honors" because they contain rigor that supports the awarding of an extra quality point towards the weighted GPA, which is used for class rank. These courses are not considered "Honors" by state universities and Bright Futures.

Pre-Advanced Placement (Pre-AP) – These courses deliver grade-level appropriate instruction through focused course frameworks, instructional resources, and learning checkpoints. These courses are designed to support all students across varying levels of abilities through focus. This designation signals consistent, high standards in focused courses that help build, strengthen, and reinforce

students' content knowledge and critical thinking skills.

MATHEMATICS

Algebra II Honors

Credit: 1.0

Algebra 2 is a course designed to continue the study of the structure of algebra and to provide the foundation for applying these skills to other mathematical and scientific fields. Topics shall include structure and properties of the complex number system; arithmetic and geometric sequences and series; relations, functions, and graphs extended to polynomial, exponential, and logarithmic functions; varied solution strategies for linear equations, inequalities, and systems of equations and inequalities; varied solution strategies including the quadratic formula for quadratic equations; conic sections and their applications; and data analysis, including measures of central tendency and dispersion, and probability, permutations, and combinations.

Prerequisite: Algebra I Honors and Geometry Honors

Math for Data and Financial Literacy Honors

Credit: 1.0

Curricular content for all subjects must integrate critical-thinking, problem-solving, and workforce-literacy skills; communication, reading, and writing skills; mathematics skills; collaboration skills; contextual and applied-learning skills; technology-literacy skills; information and media-literacy skills; and civic-engagement skills.



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Precalculus Honors

Credit: 1.0

The purpose of this course is to emphasize the study of functions and other skills necessary for the study of calculus. Topics shall include, but not limited to, polynomial, rational, exponential, inverse, logarithmic, and circular functions; sequences; series; theory of limits; vectors; conic sections; polar coordinates; symbolic logic; mathematical induction; and matrix algebra.

AP Precalculus

Credit: 1.0

Taking AP Precalculus prepares you for other college-level mathematics and science courses. During the course, you'll explore everyday situations using mathematical tools and lenses. You'll 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 science, social science, and data science.

Calculus Honors

Credit: 1.0

Students are expected to use their mathematical knowledge and practices to solve problems. This course strengthens students' understanding of functions in preparation for the process of differentiation and integration. Calculus concepts explored include limits and continuity, derivatives, definite integrals, exponential and logarithmic functions, trigonometric functions, and techniques of integration.

AP Calculus AB

Credit: 1.0

Explore the concepts, methods, and applications of differential and integral calculus. You'll work to

understand the theoretical basis and solve problems by applying your knowledge and skills.

Probability and Statistics Honors

Credit: 1.0

Probability and Statistics is a full year course designed to explore the concepts of probability, elementary statistics, and hypothesis testing. Topics shall include, but not be limited to random experiments, probability concepts, permutations, combinations, sample space, binomial distribution, concepts of descriptive statistics, measure of central tendency, measures of variability, normal distribution, the t-distributions, the chi-squared distributions, the F-distributions, and applications of various nonparametric statistical tests.

AP Statistics (Elective)

Credit: 1.0

AP Statistics is a course designed to give students college level mathematics under the guidance of the Advanced Placement Program. Topics shall include exploratory data (observing patterns and departing from data, planning a study, deciding what and how to measure), producing models using probability and simulation, and statistical inference. Students must take the Advanced Placement Examination offered by the College Board. Special Note: This course meets an academic unit for some Bright Futures Scholarship Program. Prerequisite: Algebra 2 Honors and Teacher consultation