

AP Calculus AB

Course	Dates	Schedule	Instructor
AP Calculus AB	9/12/2026 - 5/8/2027	Saturday 1:30 PM – 3:00 PM	Mr. Grajeda
Break	12/26/2026		
Practice Test	4/17/2027 4/24 5/1	Saturday 1:30 PM – 3:00 PM 1:30 PM – 3:00 PM 1:30 PM – 4:45 PM	

Course Description

The class will include homework, quizzes, practice tests and reviews.

Weekly Pacing Guide

Week	Topics	Notes/Emphasis
1	Functions, graphs, transformations, function notation, domain and range	Precalculus review
2	Limits graphically and numerically; continuity	Estimating limits and one-sided limits
3	Limits algebraically; infinite limits; limits at infinity	Vertical and horizontal asymptotes
4	Formal definition of continuity; Intermediate Value Theorem	Unit 1 test
5	Derivative as a limit; tangent lines; instantaneous rate of change	AP Unit 2
6	Basic derivative rules: power, constant, sum, and difference rules	First derivative computations
7	Product, quotient, and chain rules	Higher-order derivatives
8	Implicit differentiation; inverse functions; derivatives of inverse trigonometric functions	Unit 2 test
9	Motion along a line: position, velocity, and acceleration	Related rates introduction
10	Related rates	Linearization and differentials
11	Mean Value Theorem and Rolle's Theorem	Increasing and decreasing behavior
12	First Derivative Test and optimization	Unit 3 test

Week	Topics	Notes/Emphasis
13	Concavity; second derivatives; Second Derivative Test	Curve sketching
14	L'Hopital's Rule; absolute extrema; optimization review	AP Unit 5
15	Modeling with derivatives and applied optimization	Unit 5 test
16	Antiderivatives, indefinite integrals, and accumulation functions	AP Unit 6
17	Fundamental Theorem of Calculus Part II and the net change theorem	Left, right, and midpoint sums
18	Basic u-substitution	Area and accumulation
19	Area between curves	Unit 6 test
20	Riemann sums, definite integrals, and Fundamental Theorem of Calculus Part I	Applications of integration
21	Volumes by cross sections	Disk and washer methods
22	Volumes by cylindrical shells; average value of a function	Unit 8 test
23	Differential equations and slope fields	Separation of variables
24	Exponential growth and decay models	Logistic models, conceptually; Unit 7 test
25	AP Free Response practice (1 hr 30 minutes)	Mixed-response sessions
26	AP Multiple Choice review (1 hr 45 minutes)	Timed practice sets
27	Full-length AP practice examination (3 hrs 15 minutes)	Error analysis and targeted review
28	Final AP Review	AP Exam review

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Teacher Profile

Mr. Grajeda

Mathematics



Mr. Grajeda is a certified mathematics teacher with 20+ years of teaching experience. He brings a deep expertise and genuine passion to students. He is a strong believer in practice, using carefully designed problem sets that reinforce conceptual understanding and build student confidence. He employs a three-step problem-solving approach: identifying given information, paraphrasing the question, and writing out a solution via theorem, formula or diagram. Mr. Grajeda holds advanced degrees in mathematics and applied statistics and specializes in Algebra I & II, Geometry, Precalculus, Calculus I–III, and AP Calculus AB and BC.