FBISD
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TEACHING & LEARNING

Department of Teaching & Learning

AP Calculus BC Scope and Sequence 2025-2026

AP Learning Objective Distribution among Units

	CHA-1.A	CHA-2.A	CHA-2.B	CHA-2.C	CHA-2.D	CHA-3.A	CHA-3.B	CHA-3.C	CHA-3.D	CHA-3.E	CHA-3.F	CHA-3G	CHA-3H	CHA-4.A	CHA-4.B	CHA-4.C	CHA-4.D	CHA-4.E	CHA-5.A	CHA-5.B	CHA-5.C	CHA-5D	CHA-6.A	CHA-6.B	LIM-1.A	LIM-1.B	LIM-1.C	LIM-1.D	LIM-1.E	LIM-2.A	LIM-2.B	LIM-2.C	LIM-2.D	LIM-3.A	LIM-4.A	LIM-5.A	LIM-5.B	LIM-5.C	LIM-6.A	LIM-7.A	LIM-7.B	LIM-8.A	LIM-8.B	LIM-8.C	LIM-8.D	LIM-8.E	LIM-8.F	LIM-8.G
Unit 1	X																								X	X	X	X	X	X	X	X	X															
Unit 2		X	X	X	X																													X													
Unit 3																																																
Unit 4						X	X	X	X	X	X																								X													
Unit 5																																																
Unit 6														X																						X	X	X	X									
Unit 7																																																
Unit 8															X	X	X	X	X	X	X		X																									
Unit 9												X	X									X		X																								
Unit 10																																									X	X	X	X	X	X	X	X	X
Unit 11	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X										

	FUN-1.A	FUN-1.B	FUN-1.C	FUN-2.A	FUN-3.A	FUN-3.B	FUN-3.C	FUN-3.D	FUN-3.E	FUN-3.F	FUN-3.G	FUN-4.A	FUN-4.B	FUN-4.C	FUN-4.D	FUN-.4E	FUN-5.A	FUN-6.A	FUN-6.B	FUN-6.C	FUN-6.D	FUN-6.E	FUN-6.F	FUN-7.A	FUN-7.B	FUN-7.C	FUN-7.D	FUN-7.E	FUN-7.F	FUN-7.G	FUN-7.H	FUN-8.A	FUN-8.B
Unit 1	X																															
Unit 2				X	X	X																										
Unit 3							X	X	X	X																						
Unit 4																																
Unit 5		X	X									X	X	X	X	X																
Unit 6																	X	X	X	X	X	X	X									
Unit 7																								X	X	X	X	X	X	X	X	
Unit 8																																
Unit 9											X																				X	X
Unit 10																																
Unit 11	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X			

AP Calculus BC
Scope and Sequence 2025-2026
Grading Period 1

Unit 1: Limits and Continuity
Estimated Date Range: 8/12/25 – 8/29/25 (14 total school days)
Instructional & Re-engagement Days in Unit: 14 days

Assessments

STATE/NATIONAL ASSESSMENT(S)	DISTRICT ASSESSMENT(S)	COMMON FORMATIVE ASSESSMENTS (CFAs) *(administered within designated concept)*
N/A	N/A	N/A

Concepts within the Unit	AP Learning Objectives
Concept #1: Intro to Calculus and Finding Limits Graphically and Numerically (Topics 1.1, 1.2, 1.3, and 1.4) Suggested Days: 3	CHA-1.A Interpret the rate of change at an instant in terms of average rates of change over intervals containing that instant. LIM-1.A Express limits analytically using correct notation LIM-1.B Interpret limits expressed in analytic notation. LIM-1.C Estimate limits of functions
Concept #2: Evaluating Limits Algebraically (Topics 1.5, 1.6, 1.7, 1.8 and 1.9) Suggested Days: 4	LIM-1.D Determine the limits of functions using limit theorems. LIM-1.E Determine the limits of functions using equivalent expressions for the function or the squeeze theorem.
Concept #3: Continuity and one-sided Limits (Topics 1.10, 1.11, 1.12, 1.13, 1.14, 1.15, and 1.16) Suggested Days: 5	LIM-2.A Justify conclusions about continuity at a point using the definition. LIM-2.B Determine intervals over which a function is continuous. LIM-2.C Determine values of x or solve for parameters that make discontinuous functions continuous, if possible. LIM-2.D Interpret the behavior of functions using limits involving infinity. FUN-1.A Explain the behavior of a function on an interval using the Intermediate Value Theorem.

Unit 2: Differentiation: Definition and Basic Derivative Rules Estimated Date Range: 9/2/25 – 9/19/25 (14 total school days) Instructional & Re-engagement Days in Unit: 14 days		
Assessments		
STATE/NATIONAL ASSESSMENT(S) N/A	**DISTRICT ASSESSMENT(S)** N/A	**COMMON FORMATIVE ASSESSMENTS (CFAs)** *(administered within designated concept)* N/A

Concepts within the Unit	AP Learning Objective
Concept #1: Defining the Derivative (Topics 2.1, 2.2, 2.3 and 2.4) Suggested Days: 2	CHA-2.A Determine average rates of change using difference quotients. CHA-2.B Represent the derivative of a function as the limit of a difference quotient. CHA-2.C Determine the equation of a line tangent to a curve at a given point. CHA-2.D Estimate derivatives. FUN-2.A Explain the relationship between differentiability and continuity.
Concept #2: Derivative Rules: Power Rule, Constant, Sum, Difference, Constant Multiple, and Transcendental Functions (Topics 2.5, 2.6 and 2.7) Suggested Days: 4	FUN-3.A Calculate derivatives of familiar functions. LIM-3.A Interpret a limit as a definition of a derivative.
Concept #3: Derivative Rules: Product and Quotient Rules (Topics 2.8, 2.9 and 2.10) Suggested Days: 4	FUN-3.B Calculate derivatives of products and quotients of differentiable functions.

Unit 3: Differentiation: Composite, Implicit and Inverse Functions Estimated Date Range: 9/22/25 – 10/10/25 (14 total school days) Instructional & Re-engagement Days in Unit: 14 days		
Assessments		
STATE/NATIONAL ASSESSMENT(S) N/A	**DISTRICT ASSESSMENT(S)** N/A	**COMMON FORMATIVE ASSESSMENTS (CFAs)** *(administered within designated concept)* N/A

Concepts within the Unit	AP Learning Objective
Concept #1: The Chain Rule and Implicit Differentiation (Topics 3.1 and 3.2) Suggested Days: 4	FUN-3.C Calculate derivatives of compositions of differentiable functions. FUN-3.D Calculate derivatives of implicitly defined functions.
Concept #2: Differentiating Inverse Functions (Topics 3.3, and 3.4) Suggested Days: 3	FUN-3.E Calculate derivatives of inverse and inverse trigonometric functions.
Concept #3: Higher Order Derivatives (Topics 3.5 and 3.6) Suggested Days: 3	FUN-3.F Determine higher order derivatives of a function.

Grading Period 2

Unit 4: Contextual Applications of Differentiation Estimated Date Range: 10/21/25 – 10/31/25 (9 total school days) Instructional & Re-engagement Days in Unit: 9 days		
Assessments		
STATE/NATIONAL ASSESSMENT(S) N/A	**DISTRICT ASSESSMENT(S)** N/A	**COMMON FORMATIVE ASSESSMENTS (CFAs)** *(administered within designated concept)* N/A

Concepts within the Unit	AP Learning Objective
Concept #1: Derivatives in Applied Contexts (Topics 4.1, 4.2 and 4.3) Suggested Days: 2	CHA-3.A Interpret the meaning of a derivative in context. CHA-3.B Calculate rates of change in applied contexts. CHA-3.C Interpret rates of change in applied contexts.

Concept #2: Related Rates (Topics 4.4 and 4.5) Suggested Days: 3	CHA-3.D Calculate related rates in applied contexts. CHA-3.E Interpret related rates in applied contexts.
Concept #3: Local Linear Approximations and L'Hospital's Rule (Topics 4.6 and 4.7) Suggested Days: 2	CHA-3.F Approximate a value on a curve using the equation of a tangent line. LIM-4.A Determine limits of functions that result in indeterminate forms.

Unit 5: Analytical Applications of Differentiation
Estimated Date Range: 11/3/25 – 11/17/25 (11 total school days)
Instructional & Re-engagement Days in Unit: 11 days

Assessments

STATE/NATIONAL ASSESSMENT(S)	DISTRICT ASSESSMENT(S)	COMMON FORMATIVE ASSESSMENTS (CFAs) *(administered within designated concept)*
N/A	N/A	N/A

Concepts within the Unit	AP Learning Objective
Concept #1: Mean Value Theorem and Extreme Value Theorem (Topics 5.1 and 5.2) Suggested Days: 3	FUN-1.B Justify conclusions about functions by applying the Mean Value Theorem over an interval. FUN-1.C Justify conclusions about functions by applying the Extreme Value Theorem.
Concept #2: Analyzing Functions and Curve Fitting (Topics 5.3, 5.4, 5.5, 5.6, 5.7, 5.8 and 5.9) Suggested Days: 3	FUN-4.A Justify conclusions about the behavior of a function based on the behavior of its derivatives.
Concept #3: Optimization Problems and Behaviors of Implicit Relations (Topics 5.10, 5.11, and 5.12) Suggested Days: 3	FUN-4.B Calculate minimum and maximum values in applied contexts or analysis of functions. FUN-4.C Interpret minimum and maximum values calculated in applied contexts. FUN-4.D Determine critical points of implicit relations FUN-4.E Justify conclusions about the behavior of an implicitly defined function based on evidence from its Derivatives

Unit 6: Integration and Accumulation of Change Estimated Date Range: 11/18/25 – 12/19/25 (19 total school days) Instructional & Re-engagement Days in Unit: 15 days			
Assessments			
STATE/NATIONAL ASSESSMENT(S) N/A	**DISTRICT ASSESSMENT(S)** N/A	**COMMON FORMATIVE ASSESSMENTS (CFAs)** *(administered within designated concept)* N/A	**Semester Exams** (4 days) Testing Window (12/16 – 12/19)

Concepts within the Unit	**AP Learning Objective**
Concept #1: Exploring Accumulations and Riemann sums (Topics 6.1, 6.2, and 6.3) Suggested Days: 2	CHA-4.A Interpret the meaning of areas associated with the graph of a rate of change in context. LIM-5.A Approximate a definite integral using geometric and numerical methods. LIM-5.B Interpret the limiting case of the Riemann sum as a definite integral. LIM-5.C Represent the limiting case of the Riemann sum as a definite integral.
Concept #2: Accumulation Functions (Topics 6.4 and 6.5) Suggested Days: 2	FUN-5.A Represent accumulation functions using definite integrals.
Concept #3: Properties od Definite Integrals (Topics 6.6 and 6.7) Suggested Days: 3	FUN-6.A Calculate a definite integral using areas and properties of definite integrals. FUN-6.B Evaluate definite integrals analytically using the Fundamental Theorem of Calculus.
Concept #4: Finding Antiderivatives and Techniques for Integration (Topics 6.8, 6.9, 6.10, 6.11, 6.12 and 6.14) Suggested Days: 4	FUN-6.C Determine antiderivatives of functions and indefinite integrals, using knowledge of derivatives. FUN-6.D For integrands requiring substitution or rearrangements into equivalent forms: (a) Determine indefinite integrals. (b) Evaluate definite integrals. FUN-6.E For integrands requiring integration by parts: (a) Determine indefinite integrals. (b) Evaluate definite integrals. FUN-6.F For integrands requiring integration by linear partial fractions: (a) Determine indefinite integrals. (b) Evaluate definite integrals.
Concept #5: Evaluating Improper Integrals (Topic 6.13) Suggested Days: 2	LIM-6.A Evaluate an improper integral or determine that the integral diverges.

Grading Period 3

Unit 7: Differential Equations

Estimated Date Range: 1/8/25 – 1/29/25 (15 total school days)
Instructional & Re-engagement Days in Unit: 15 days

Assessments

STATE/NATIONAL ASSESSMENT(S)	DISTRICT ASSESSMENT(S)	COMMON FORMATIVE ASSESSMENTS (CFAs) *(administered within designated concept)*
N/A	N/A	N/A

Concepts within the Unit	AP Learning Objective
Concept #1: Modeling with Differential Equations, Slope Fields, and Rulers Method (Topics 7.1, 7.2, 7.3, 7.4, and 7.5) Suggested Days: 4	FUN-7.A Interpret verbal statements of problems as differential equations involving a derivative expression. FUN-7.B Verify solutions to differential equations. FUN-7.C Estimate solutions to differential equations.
Concept #2: Solving Differential Equations (Topics 7.6, 7.7, and 7.8) Suggested Days: 5	FUN-7.D Determine general solutions to differential equations. FUN-7.E Determine particular solutions to differential equations. FUN-7.F Interpret the meaning of a differential equation and its variables in context. FUN-7.G Determine general and particular solutions for problems involving differential equations in context.
Concept #3: Logistic Models with Differential Equations (Topic 7.9) Suggested Days: 4	FUN-7.H Interpret the meaning of the logistic growth model in context.

Unit 8: Applications of Integration
Estimated Date Range: 1/30/25 – 2/27/25 (19 total school days)
Instructional & Re-engagement Days in Unit: 19 days

Assessments

STATE/NATIONAL ASSESSMENT(S)	**DISTRICT ASSESSMENT(S)**	**COMMON FORMATIVE ASSESSMENTS (CFAs)**
K-12 TELPAS WINDOW (2/17 – 3/27)	**N/A**	*(administered within designated concept)* **N/A**

Concepts within the Unit	**AP Learning Objective**
Concept #1: Average Value and Applications involving Rectilinear Motions and Rate of Change (Topics 8.1, 8.2 and 8.3) Suggested Days: 4	CHA-4.B Determine the average value of a function using definite integrals CHA-4.C Determine values for positions and rates of change using definite integrals in problems involving rectilinear motion. CHA-4.D Interpret the meaning of a definite integral in accumulation problems. CHA-4.E Determine net change using definite integrals in applied contexts.
Concept #2: Area (Topics 8.4, 8.5 and 8.6) Suggested Days: 3	CHA-5.A Calculate areas in the plane using the definite integral.
Concept #3: Volume (Topics 8.7, 8.8, 8.9, 8.10, 8.11, and 8.12) Suggested Days: 7	CHA-5.B Calculate volumes of solids with known cross sections using definite integrals CHA-5.C Calculate volumes of solids of revolution using definite integrals.
Concept #4: Arc Length and Distance Traveled (Topic 8.13) Suggested Days: 2	CHA-6.A Determine the length of a curve in the plane defined by a function, using a definite integral.

Unit 9: Parametric Equations, Polar Coordinates, and Vector-Valued Functions (Continued in Grading Period 4)
Estimated Date Range: 3/2/25 – 3/31/25 (16 total school days)
Instructional & Re-engagement Days in Unit: 15 days (8 days in GP3 and 7 days in GP4)

Assessments

STATE/NATIONAL ASSESSMENT(S)	**DISTRICT ASSESSMENT(S)**	**COMMON FORMATIVE ASSESSMENTS (CFAs)**
K-12 TELPAS WINDOW (2/17 – 3/27) SAT (3/4)	N/A	*(administered within designated concept)* N/A

Concepts within the Unit	**AP Learning Objective**
Concept #1 - Parametric Equations (Topics 9.1, 9.2, and 9.3) Suggested Days: 4	CHA-3.G Calculate derivatives of parametric functions. CHA-6.B Determine the length of a curve in the plane defined by parametric functions, using a definite integral.
Concept #2: Vector Valued Functions (Topics 9.4, 9.5, and 9.6) Suggested Days: 5	CHA-3.H Calculate derivatives of vector-valued functions. FUN-8.A Determine a particular solution given a rate vector and initial conditions. FUN-8.B Determine values for positions and rates of change in problems involving planar motion.
Concept #3: Polar Coordinates (Topics, 9.7, 9.8, and 9.9) Suggested Days: 5	FUN-3.G Calculate derivatives of functions written in polar coordinates. CHA-5.D Calculate areas of regions defined by polar curves using definite integrals.

Grading Period 4

Unit 9: Parametric Equations, Polar Coordinates, and Vector-Valued Functions

Estimated Date Range: 3/2/25 – 3/31/25 (16 total school days)
Instructional & Re-engagement Days in Unit: 15 days (8 days in GP3 and 7 days in GP4)
Note: See Grading Period 3 for details.

Assessments

STATE/NATIONAL ASSESSMENT(S)	DISTRICT ASSESSMENT(S)	COMMON FORMATIVE ASSESSMENTS (CFAs) *(administered within designated concept)*
K-12 TELPAS WINDOW (2/17 – 3/27) SAT (3/4)	N/A	N/A

Unit 10: Infinite Sequences and Series

Estimated Date Range: 4/1/25 – 5/1/25 (22 total school days)
Instructional & Re-engagement Days in Unit: 22 days

Assessments

STATE/NATIONAL ASSESSMENT(S)	DISTRICT ASSESSMENT(S)	COMMON FORMATIVE ASSESSMENTS (CFAs) *(administered within designated concept)*
N/A	N/A	N/A

Concepts within the Unit	AP Learning Objective
Concept #1: Infinite Series (Topics 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7, 10.8, 10.9, and 10.10) Suggested Days: 10	LIM-7.A Determine whether a series converges or diverges. LIM-7.B Approximate the sum of a series.
Concept #2: Taylor Polynomials and Power Series (Topics 10.11, 10.12, 10.13, 10.14, and 10.15) Suggested Days: 10	LIM-8.A Represent a function at a point as a Taylor polynomial. LIM-8.B Approximate function values using a Taylor polynomial. LIM-8.C Determine the error bound associated with a Taylor polynomial approximation. LIM-8.D Determine the radius of convergence and interval of convergence for a power series. LIM-8.E Represent a function as a Taylor series or a Maclaurin series LIM-8.F Interpret Taylor series and Maclaurin series. LIM-8.G Represent a given function as a power series.

Unit 11: AP Review and Extension Topics Estimated Date Range: 5/4/25 – 5/28/25 (19 total school days) Instructional & Re-engagement Days in Unit: 14 days			
Assessments			
STATE/NATIONAL ASSESSMENT(S) AP Exams (5/4-5/15) 1 day	**DISTRICT ASSESSMENT(S)** N/A	**COMMON FORMATIVE ASSESSMENTS (CFAs)** *(administered within designated concept)* N/A	**Semester Exams** (4 days) Testing Window (5/22 – 5/28)

Concepts within the Unit	**AP Learning Objective**
Concept #1: Limits Suggested Days: Determined by individual student need	LIM-1.A Express limits analytically using correct notation LIM-1.B Interpret limits expressed in analytic notation. LIM-1.C Estimate limits of functions LIM-1.D Determine the limits of functions using limit theorems. LIM-1.E Determine the limits of functions using equivalent expressions for the function or the squeeze theorem. LIM-2.A Justify conclusions about continuity at a point using the definition. LIM-2.B Determine intervals over which a function is continuous. LIM-2.C Determine values of x or solve for parameters that make discontinuous functions continuous, if possible. LIM-2.D Interpret the behavior of functions using limits involving infinity. CHA-1.A Interpret the rate of change at an instant in terms of average rates of change over intervals containing that instant. FUN-1.A Explain the behavior of a function on an interval using the Intermediate Value Theorem.
Concept #2: Derivatives Suggested Days: Determined by individual student need	LIM-3.A Interpret a limit as a definition of a derivative. LIM-4.A Determine limits of functions that result in indeterminate forms. CHA-2.A Determine average rates of change using difference quotients. CHA-2.B Represent the derivative of a function as the limit of a difference quotient. CHA-2.C Determine the equation of a line tangent to a curve at a given point. CHA-2.D Estimate derivatives. CHA-3.A Interpret the meaning of a derivative in context. CHA-3.B Calculate rates of change in applied contexts. CHA-3.C Interpret rates of change in applied contexts. CHA-3.D Calculate related rates in applied contexts. CHA-3.E Interpret related rates in applied contexts. CHA-3.F Approximate a value on a curve using the equation of a tangent line.

	CHA-3.G Calculate derivatives of parametric functions. FUN-2.A Explain the relationship between differentiability and continuity. FUN-3.A Calculate derivatives of familiar functions. FUN-3.B Calculate derivatives of products and quotients of differentiable functions. FUN-3.C Calculate derivatives of compositions of differentiable functions. FUN-3.D Calculate derivatives of implicitly defined functions. FUN-3.E Calculate derivatives of inverse and inverse trigonometric functions. FUN-3.F Determine higher order derivatives of a function. FUN-1.B Justify conclusions about functions by applying the Mean Value Theorem over an interval. FUN-1.C Justify conclusions about functions by applying the Extreme Value Theorem. FUN-4.A Justify conclusions about the behavior of a function based on the behavior of its derivatives. FUN-4.B Calculate minimum and maximum values in applied contexts or analysis of functions. FUN-4.C Interpret minimum and maximum values calculated in applied contexts. FUN-4.D Determine critical points of implicit relations FUN-4.E Justify conclusions about the behavior of an implicitly defined function based on evidence from its derivatives
Concept #3: Integrals and the Fundamental Theorem of Calculus Suggested Days: Determined by individual student need	LIM-5.A Approximate a definite integral using geometric and numerical methods. LIM-5.B Interpret the limiting case of the Riemann sum as a definite integral. LIM-5.C Represent the limiting case of the Riemann sum as a definite integral. LIM-6.A Evaluate an improper integral or determine that the integral diverges. CHA-3.H Calculate derivatives of vector-valued functions. CHA-4.A Interpret the meaning of areas associated with the graph of a rate of change in context. CHA-4.B Determine the average value of a function using definite integrals CHA-4.C Determine values for positions and rates of change using definite integrals in problems involving rectilinear motion. CHA-4.D Interpret the meaning of a definite integral in accumulation problems. CHA-4.E Determine net change using definite integrals in applied contexts. CHA-5.A Calculate areas in the plane using the definite integral. CHA-5.B Calculate volumes of solids with known cross sections using definite integrals CHA-5.C Calculate volumes of solids of revolution using definite integrals. CHA-5.D Calculate areas of regions defined by polar curves using definite integrals. CHA-6.A Determine the length of a curve in the plane defined by a function, using a definite integral. CHA-6.B Determine the length of a curve in the plane defined by parametric functions, using a definite integral. FUN-5.A Represent accumulation functions using definite integrals.

	FUN-6.A Calculate a definite integral using areas and properties of definite integrals. FUN-6.B Evaluate definite integrals analytically using the Fundamental Theorem of Calculus. FUN-6.C Determine antiderivatives of functions and indefinite integrals, using knowledge of derivatives. FUN-6.D For integrands requiring substitution or rearrangements into equivalent forms: (a) Determine indefinite integrals. (b) Evaluate definite integrals. FUN-6.E For integrands requiring integration by parts: (a) Determine indefinite integrals. (b) Evaluate definite integrals FUN-6.F For integrands requiring integration by linear partial fractions: (a) Determine indefinite integrals. (b) Evaluate definite integrals FUN-7.A Interpret verbal statements of problems as differential equations involving a derivative expression. FUN-7.B Verify solutions to differential equations. FUN-7.C Estimate solutions to differential equations. FUN-7.D Determine general solutions to differential equations. FUN-7.E Determine particular solutions to differential equations. FUN-7.F Interpret the meaning of a differential equation and its variables in context. FUN-7.G Determine general and particular solutions for problems involving differential equations in context. FUN-7.H Interpret the meaning of the logistic growth model in context FUN-8.A Determine a particular solution given a rate vector and initial conditions. FUN-8.B Determine values for positions and rates of change in problems involving planar motion.
Concept #4: Series Suggested Days: Determined by individual student need	LIM-7.A Determine whether a series converges or diverges. LIM-7.B Approximate the sum of a series. LIM-8.A Represent a function at a point as a Taylor polynomial. LIM-8.B Approximate function values using a Taylor polynomial. LIM-8.C Determine the error bound associated with a Taylor polynomial approximation. LIM-8.D Determine the radius of convergence and interval of convergence for a power series. LIM-8.E Represent a function as a Taylor series or a Maclaurin series LIM-8.F Interpret Taylor series and Maclaurin series. LIM-8.G Represent a given function as a power series.