AP Calculus AB
U-46 Curriculum Scope and Sequence

Reporting Strand	Instructional Focus	Standards	Semester
Limits	Estimate limits of functions graphically and numerically	LIM- 1.A, LIM- 1.C, LIM- 1.D	1
	Determine limits of functions algebraically	LIM- 1.A, LIM- 1.B, LIM- 1.D, LIM- 1.E	
	Apply concepts of continuity (including the intermediate value theorem)	LIM- 2.A, FUN- 1.A, LIM- 2.B, LIM- 2.C	
	Applying the definition of derivative	CHA- 1.A, CHA- 2.A, CHA- 2.B	
Derivatives	Calculating and estimating derivatives	CHA- 2.C, FUN- 2.A, FUN- 3.A, FUN- 3.B, FUN- 3.F, CHA- 3.F, LIM- 4.A	1
	Calculate derivatives using chain rule	FUN- 3.C, FUN- 3.D, FUN- 3.E, FUN- 3.F	
	Applying the Mean Value Theorem	FUN- 1.B	
Derivative Application	Solving problems involving rectilinear motion	CHA- 3.A, CHA- 3.B	1
	Solve problems involving related rates	CHA- 3.A, CHA- 3.C, CHA- 3.D, CHA- 3.E, FUN- 4.D, FUN- 4.E	
	Solve problems involving optimization	CHA- 3.A, CHA- 3.C, FUN- 4.B, FUN- 4.C, FUN- 4.D, FUN- 4.E	
	Use derivatives to analyze properties of a function	FUN- 1.C, FUN- 4.A, FUN- 4.B, FUN- 4.D, FUN- 4.E	
	Analyze various representations of functions using derivatives	FUN- 1.C, FUN- 4.A, FUN- 4.B	
Integrals	Recognize antiderivatives of basic functions	FUN- 6.C, FUN- 6.D	2
	Approximate a definite integral	LIM- 5.A, LIM- 5.B, LIM- 5.C	
	Calculate a definite integral using areas and properties	LIM- 5.A, FUN- 6.A	
	Use the Fundamental Theorem of Calculus to analyze functions	FUN- 5.A, FUN- 6.B	
Integral Application	Use and interpret the definite integral to solve problems in various contexts	CHA- 4.A, FUN- 5.A, CHA- 4.B, CHA- 4.D, CHA- 4.E	2
	Apply definite integrals to problems involving motion	CHA- 4.B, CHA- 4.C, CHA- 4.D, CHA- 4.E	
	Apply definite integrals to problems involving area and volume	CHA- 5.A, CHA- 5.B, CHA- 5.C, CHA- 6.A	
	Analyze differential equations and obtain general and specific solutions.	FUN- 7.A, FUN- 7.B, FUN- 7.C, FUN- 7.D, FUN- 7.E, FUN- 7.F, FUN- 7.G, FUN- 7.H	
AP Synthesis	Cumulative Assessment of Standards		1/2

AP Calculus BC
U-46 Curriculum Scope and Sequence

Reporting Strand	Instructional Focus	Standards	Semester
Limits	Estimate limits of functions graphically and numerically	LIM- 1.A, LIM- 1.C, LIM- 1.D	1
	Determine limits of functions algebraically	LIM- 1.A, LIM- 1.B, LIM- 1.D, LIM- 1.E	
	Apply concepts of continuity (including the intermediate value theorem)	LIM- 2.A, FUN- 1.A, LIM- 2.B, LIM- 2.C	
	Applying the definition of derivative	CHA- 1.A, CHA- 2.A, CHA- 2.B	
Derivatives	Calculating and estimating derivatives	CHA- 2.C, FUN- 2.A, FUN- 3.A, FUN- 3.B, FUN- 3.F, CHA- 3.F, LIM- 4.A	1
	Calculate derivatives using chain rule	FUN- 3.C, FUN- 3.D, FUN- 3.E, FUN- 3.F	
	Applying the Mean Value Theorem	FUN- 1.B	
Derivative Application	Solving problems involving rectilinear motion	CHA- 3.A, CHA- 3.B	1
	Solve problems involving related rates	CHA- 3.A, CHA- 3.C, CHA- 3.D, CHA- 3.E, FUN- 4.D, FUN- 4.E	
	Solve problems involving optimization	CHA- 3.A, CHA- 3.C, FUN- 4.B, FUN- 4.C, FUN- 4.D, FUN- 4.E	
	Use derivatives to analyze properties of a function	FUN- 1.C, FUN- 4.A, FUN- 4.B, FUN- 4.D, FUN- 4.E	
	Analyze various representations of functions using derivatives	FUN- 1.C, FUN- 4.A, FUN- 4.B	
Integrals	Recognize antiderivatives of basic functions	FUN- 6.C, FUN- 6.D	1/2
	Recognize antiderivatives of advanced functions		
	Approximate a definite integral	LIM- 5.A, LIM- 5.B, LIM- 5.C	
	Calculate a definite integral using areas and properties	LIM- 5.A, FUN- 6.A	
	Use the Fundamental Theorem of Calculus to analyze functions	FUN- 5.A, FUN- 6.B	
	Evaluate an improper integral or show that an improper integral diverges, using L'Hopital when appropriate.	LIM- 4.A, LIM-6.A	
Integral Application	Use and interpret the definite integral to solve problems in various contexts	CHA- 4.A, FUN- 5.A, CHA- 4.B, CHA- 4.D, CHA- 4.E	2
	Estimate solutions to differential equations using Euler's method and slope fields.	FUN- 7.C	
	Apply definite integrals to problems involving motion	CHA- 4.B, CHA- 4.C, CHA- 4.D, CHA- 4.E	
	Apply definite integrals to problems involving area and volume	CHA- 5.A, CHA- 5.B, CHA- 5.C, CHA- 6.A	
	Analyze differential equations and obtain general and specific solutions including logistic functions	FUN- 7.A, FUN- 7.B, FUN- 7.C, FUN- 7.D, FUN- 7.E, FUN- 7.F, FUN- 7.G, FUN- 7.H	
Series	Determine whether a series converges or diverges	LIM- 7.A	2
	Construct & use Taylor polynomials	LIM- 8.A, LIM- 8.B	
	Determine or estimate the sum of a series using error	LIM- 7.B, LIM- 8.C	
	Write a power series representing a given function and determine the radius and interval of convergence of a power series	LIM- 8.E, LIM- 8.F, LIM- 8.G	
Polar, Parametric, and Vectors	Calculate the derivatives of vectors, parametric, and polar functions	CHA- 3.G, CHA- 3.H, FUN- 3.G	2
	Use derivatives to analyze the particle motion using vectors and parametric functions	FUN- 8.B	

	Use the definite integrals to find the distance & position of a particle moving along a curve given by a parametric of a vector values functions	FUN- 8.A, FUN- 8.B	
	Find the area bounded by a polar curve and arc length of a curve defined parametrically	CHA- 5.D	
AP Synthesis	Cumulative Assessment of Standards		1/2