

1st QTR	AP CALCULUS--BC	2007-08
	** NOTE: Use AP problems all year.	
Number of Blocks	Concept	Text Reference
	Chapter 1	
	Limits--Graphically, Numerically, & Analytically	1.2 & 1.3
	Continuity, One-sided limits, Infinite limits, limits at infinity	1.4, 1.5, 3.5
	Chapter 2	
	Derivative, Tangent line problems, Differentiation Rules, Rate of change	2.1-2.3
	Chain rule, Implicit Differentiation	2.4 & 2.5
	Related rates	2.6
	Chapter 3	
	Extrema, Rolle's Theorem, Mean Value Theorem, First derivative test	3.1-3.3
	Second derivative test	3.4 & 3.6
	Optimization, Newton's Method, Differentials	3.7-3.9
	Test Chapter 1-3 (Business Applications)	Appendix G:
	Chapter 4	
	Antiderivatives, Indefinite integrals, Area	4.1 & 4.2
	More area, Riemann sums, Definite integrals	4.2 & 4.3
	Fundamental Theorem of Calculus	4.4
	Integration by substitution	4.5
	Numerical integration	4.6
	Test Chapter 4 (Natural logarithms & derivatives)	5.1
	Chapter 5	
	Ln x & Integration, Inverse	5.2 & 5.3
	Exponential functions, Derivative & Integration	5.4
	Other bases & Applications	5.5
	Inverse trigonometric functions & Derivatives	5.6
	Inverse trigonometric functions & Integrations	5.7
	Test Chapter 5	

2nd QTR	AP CALCULUS--BC	2007-08
	** NOTE: Use AP problems all year.	
Number of Blocks	Concept	Text Reference
	Chapter 6	
	Slope fields & Euler's method	6.1
	Differential equations: Growth & Decay	6.2
	Separation of variables & Logistic equation	6.3
	Test Chapter 6	
	Chapter 7	
	Area between two curves	7.1
	Disc method & Volume with cross sections	7.2
	Shell method (optional)	7.3
	Arc length & Surfaces of revolution	7.4
	Work	7.5
	Moments, Centers of mass, Centroids (optional)	7.6
	Test Chapter 7	
	Chapter 8	
	Basic integration	8.1
	Integration by parts	8.2
	Trigonometric integrals	8.3
	Trigonometric substitution (optional)	8.4
	Partial fractions	8.5
	Indeterminate forms, L'Hopital's Rule	8.7
	Improper integrals	8.8
	Review	
	Test Chapter 8	

3rd QTR	AP CALCULUS--BC	2007-2008
	** NOTE: Use AP problems all year.	
Number of Blocks	Concept	Text Reference
	Chapter 9	
	Sequences	9.1
	Series and convergence	9.2
	The integral test & p-series	9.3
	Comparison of series	9.4
	Quiz 9.1-9.4	
	Alternating series	9.5
	Ratio & Root tests	9.6
	Review/Quiz 9.1-9.6	
	Taylor polynomials & Approximations	9.7
	Power series	9.8
	Representation of functions by power series	9.9
	Taylor & Maclaurin series	9.10
	Review/ Quiz 9.7-9.10	
	Review using AP problems	
	Test Chapter 9	
	Chapter 10	
	Conics & Calculus, Plane curves & Parametric equations	10.1 & 10.2
	Parametric equations & Calculus	10.3
	Polar coordinates & Polar graphs	10.4
	Area & Arc Length in polar coordinates	10.5
	Test Chapter 10	
	Chapter 12	
	Vector-valued functions	12.1
	Differentiation & integration of vector-valued functions	12.2
	Velocity & acceleration	12.3

4th QTR	AP CALCULUS--BC	2007-08
	** NOTE: Use AP problems all year.	
Number of Blocks	Concept	Text Reference
	Review for AP Exam	
	Practice old AP problems	
	Hyperbolic functions (after exam--if possible)	5.8
	Centers of mass & Fluid Pressure (after exam -if possible)	7.6 & 7.7
	Topics after the AP exam if time permits	
	Partial derivatives, Multiple integrals, trig, substitution	
	Topic: Themes for advanced placement calculus textbook	
	Modeling Functions	
	Limits & Continuity	
	Derivatives as a Function	
	Geometry of Derivatives	
	Total Change	
	Integral as Accumulator Function	
	Rectilinear Motion	
	Differential Equations (LOGISTICS)	
	Euler's Method	
	Taylor polynomials & Approximations	
	Polar Coordinates & Applications	
	Parametric & Vector Functions	

Suggestions
1. Students are given practice questions from AP tests--including multiple choice and free response throughout the
2. Try to allocate three weeks for AP review--including some timed AP review materials.
3. Prepare students for AP Calculus Exam by using assessments that: <ul style="list-style-type: none"> • contain both multiple choice and free response questions • are timed so that students learn how to work within time constraints • contain two parts: calculator & non-calculator sections * <p>* Note: Using colored paper for one section & white paper for the other section helps to ensure that students are using a calculator for the appropriate part.</p>
4. Require students to write verbal justifications for answers and show all work.
5. Develop rubrics for grading problems. This helps to show students how important it is to show work and the
6. Two major emphases: Integral as accumulator & derivative as rate of change.
7. Position, velocity, acceleration and "total distance" vs. displacement $\int v(t) dt$
8. Students need practice with multiple choice questions with graphing calculator. (Very Concept Oriented Ones)
9. Emphasize multiple relationships of functions, analytical, numerical, graphical and verbal.
10. Emphasize characteristics of $f(x)$ given $f'(x)$ and $f''(x)$ graphs.