

AP CALCULUS AB SYLLABUS

Sections Align to: *Calculus for AP, 2nd Edition* by R. Larson & P. Battaglia

MARKING PERIOD 1

Unit 1: Limits and Their Properties

- 1.2 - Finding Limits Graphically and Numerically
- 1.3 - Evaluating Limits Analytically
- 1.4 - Continuity and One-Sided Limits
- 1.5 - Infinite Limits
- 1.6 - Limits at Infinity

Unit 2: Differentiation

- 2.1 - The Derivative and the Tangent Line Problem
- 2.2 - Basic Differentiation Rules and Rates of Change
- 2.3 - Product and Quotient Rules, Trigonometric, and Higher-Order Derivatives
- 2.4 - The Chain Rule and Exponential Functions
- 2.5 - Implicit Differentiation and Logarithmic Differentiation
- 2.6 - Derivatives of Inverse Functions
- 2.7 - Related Rates

MARKING PERIOD 2

Unit 3: Applications of Differentiation

- 3.1 - Extrema on an Interval
- 3.2 - Rolle's Theorem and the Mean Value Theorem
- 3.3 - Increasing and Decreasing Functions and the First Derivative Test
- 3.4 - Concavity and the Second Derivative Test
- 3.5 - A Summary of Curve Sketching
- 3.6 - Optimization Problems
- 3.7 - Linear Approximation and Differentials

Unit 4: Integration

- 4.1 - Antiderivatives and Indefinite Integration
- 4.2 - Area Under a Curve
- 4.3 - Riemann Sums and Definite Integrals
- 4.4 - The Fundamental Theorems of Calculus

MARKING PERIOD 3

Unit 4: Integration Continued

- 4.6 - Integration by Substitution
- 4.7 - The Natural Logarithmic Function: Integration
- 4.8 - Inverse Trigonometric Functions: Integration

Unit 5: Differential Equations

- 5.1 - Slope Fields
- 5.2 - Growth and Decay
- 5.3 - Separation of Variables

Unit 6: Applications of Integration

- 6.1 - Area of Region Between Two Curves
- 6.2 - Volume: The Disk and Washer Method

MARKING PERIOD 4

Unit 7: Integration Techniques, L'Hôpital's Rules, Partial Fractions

- 7.7 - Indeterminate Forms and L'Hôpital's Rule

REVIEW FOR AP TEST

- 7.4 - Integration by Parts
- 7.5 - Partial Fractions
- Projects [as time allows]

ASSESSMENT INFORMATION

AP Calculus AB Marking Periods 1 - 4	
Category	Percentage
Major	60%
Minor	30%
Homework, Participation & Practice	10%