Tentative Outline

Chapter 1: Functions and Models (review)
1.4: Exponential Functions
1.5: Inverse Functions and Logarithms

Chapter 2: Limits and Derivatives
2.1: The Tangent and Velocity Problems
2.2: The Limit of a Function
2.3: Calculating Limits Using the Limit Laws
2.4: The Precise Definition of a Limit
2.5: Continuity
2.6: Limits at Infinity; Horizontal Asymptotes
2.7: Derivatives and Rates of Change
2.8: The Derivative as a Function

Chapter 3: Differentiation Rules
3.1: Derivatives of Polynomials and Exponential Functions
3.2: The Product and Quotient Rules
3.3: Derivatives of Trigonometric Functions
3.4: The Chain Rule
3.5: Implicit Differentiation
3.6: Derivatives of Logarithmic and Inverse Trigonometric Functions
(3.8: Exponential Growth and Decay — optional)
3.9: Related Rates
3.10: Linear Approximations and Differentials
3.11: Hyperbolic Functions

Chapter 4: Applications of Differentiation
4.1: Maximum and Minimum Values
4.2: The Mean Value Theorem
4.3: What Derivatives Tell Us about the Shape of a Graph
4.4: Indeterminate Forms and l'Hospital's Rule
4.5: Summary of Curve Sketching
4.7: Optimization Problems
4.8: Newton's Method
4.9: Antiderivatives

Chapter 5: Integrals
5.1: The Area and Distance Problems
5.2: The Definite Integral
5.3: The Fundamental Theorem of Calculus
5.4: Indefinite Integrals and the Net Change Theorem
5.5: The Substitution Rule