AP Calculus Topics
Mrs. Welsh

Pre-Calculus Topics
Slopes and Linear Functions
Functions/Relations & their Graphs
Solving Equations and Inequalities
Inverses
Trigonometric Functions
Exponential and Log Functions
Hyperbolic Functions

Limits
One and Two Sided Limits
Continuity
Sandwich Theorem
Limits at Infinity
Trig Limits

Derivatives
Secant and Tangent Lines
Average and Instantaneous rates of Change
Numerical Derivatives
Limit Definition of a Derivative
Derivative Rules
Velocity and Acceleration
Chain Rule
Implicit Differentiation
Linear Approximations

Applications of Derivatives
Mean Value Theorem
Maxima and minima Values
Graphing using Derivatives
Newton's Method
Related Rates
Slope Fields

Integration
Areas using Reimann Sums
Fundamental Theorem of Calculus
Definite and Indefinite Integrals
Integration with U Substitution

Applications of Integrals
Areas between Curves
Volumes of Solids
Arc Length and Surface Area

Transcendental Functions
Limits, Derivatives and Integrals of Log, Exponential and Inverse Trig Functions
L'Hopital's Rule
Hyperbolic Functions

Techniques of Integration
Integration by Parts
Trig Powers
Partial Fractions
Trig Substitution