Syllabus: MVRT Advanced Math I

Section I: Basic Calculus

A. Essential Math
    a. e
    b. Logarithms
    c. Function notation
B. Limits
    a. Continuity
    b. Limit Evaluation
        i. Substitution & Factoring
        ii. Highest Power
C. Derivatives
    a. Tangent Lines
    b. L'hopital's
    c. Specific Derivatives
        i. Polynomials
        ii. Log-series
        iii. Trigonometric
    d. Derivatives in Computer Science
        i. Functional
        ii. Iterative

Section II: Higher Calculus

A. Summations
    a. Riemann Sums
    b. Infinite Series
        i. Geometric
        ii. Substitution Completion
B. Integrals (aka fancy calculus 'S')
    a. Indefinite Integrals
        i. Solution Strategy
        ii. U-Substitutions
    b. Approximations

        i. Euler's
    c. Discrete Integrals in Computer Science
        i. Iterative and functional approaches
        ii. Complementary filter
C. Differential Equations
    a. Separation of Variables
    b. Movement Description Deriv/Integral Series
    c. Application of Mathematical Approximations

Left out: Trig substitutions, By parts