

**Hunter College of The City University of New York**

**MATH 155 CALCULUS with ANALYTIC GEOMETRY II 4 hrs, 4 cr.**

**Textbook: Single Variable Calculus, 6th Edition (custom), James Stewart, Brooks/Cole, bundled with Enhanced WebAssign**

**Chapter 7:**

- 7.1 Inverse Functions
- 7.2 Exponential Functions and Their Derivatives
- 7.3 Logarithmic Functions
- 7.4 Derivatives of Logarithmic Functions
- 7.5 Exponential Growth and Decay
- 7.6 Inverse Trigonometric Functions
- 7.8 Indeterminate Forms and L'Hospital's Rule

**Chapter 8:**

- 8.1 Integration by Parts
- 8.2 Trigonometric Integrals
- 8.3 Trigonometric Substitution
- 8.4 Integration of Rational Functions by Partial Fractions
- 8.5 Strategy for Integration
- 8.7 Approximate Integration
- 8.8 Improper Integrals

**Chapter 9:**

- 9.1 Arc Length
- 9.2 Area of a Surface of Revolution

**Chapter 11:**

- 11.3 Polar Coordinates
- 11.4 Areas and Lengths in Polar Coordinates

**Chapter 12:**

- 12.1 Sequences
- 12.2 Series
- 12.3 The Integral Test and Estimates of Sums
- 12.4 The Comparison Tests
- 12.5 Alternating Series
- 12.6 Absolute Convergence and the Ratio Test and Root Tests
- 12.7 Strategy for Testing Series
- 12.8 Power Series
- 12.9 Representations of Functions as Power Series
- 12.10 Taylor and Maclaurin Series
- 12.11 Applications of Taylor Polynomials