2022-2023 SYLLABUS CALCULUS 2 HONORS
UPDATED JUNE 2022

Chapter 4/Review Topics:

- 4-09 U-Substitution
- 4-10 Introduction to Differential Equations
- 4-11 Integration Theorems (FTC1, FTC2, MVT, AVT)
- 4-12 Numerical Integration
- 4-13 U-Substitution with Change of Variable Formula

Chapter 5:

- 5-01 Logarithms
- 5-02 Calculus with Logarithms and Exponentials
- 5-03 Evaluating and Solving Logarithmic and Exponential Equations
- 5-04 Applications of Logarithms and Exponentials
- 5-05 Some Intellectual Achievements of Calculus
- 5-06 Present and Future Value
- 5-07 Further Transcendental Functions (Inverse Trig, Exponentials and Logs)

Chapter 6:

- 6-02: Setting up Integrals: Volume, Density, Average Value
- 6-03: Volumes of Revolution
- 6-04 The Method of Cylindrical Shells
- 6-05 Work and Energy

Chapter 7:

- 7-01 Integration by Parts
- 7-02 Trigonometric Integrals
- 7-03 Trigonometric Substitution
- 7-05 The Method of Partial Fractions
- 7-06 Strategies for Integration
- 7-07 Improper Integrals
- 7-09 Numerical Integration

Chapter 8:

- 8-01 Arc Length and Surface Area
- 8-04 Taylor Polynomials

Chapter 10:

- 10-01 Sequences
- 10-02 Summing and Infinite Series
- 10-03 Convergence of Series with Positive Terms
- 10-04 Absolute and Conditional Convergence
- 10-05 The Ratio and Root Tests and Strategies for Choosing Tests
- 10-06 Power Series
- 10-07 Taylor Series

**All Sections correspond to Calculus 3rd Edition by Jon Rogawski and Colin Adams