

**Steve Sawin's MA 122 (A&D) Applied Calculus II
Content Syllabus**

Text: *Calculus with Applications* 8th Edition by Lial, Greenwell and Ritchey

Chapter 6: Applications of the Derivative [brief review] (~2 classes)

6.4 6.2 Applications of Extrema

Chapter 7: Integration (~12 classes)

7.1 Antiderivatives
7.2 Substitution
7.3 Area and the Definite Integral
7.4 The Fundamental Theorem of Calculus
7.5 The Area Between Curves
7.6 Numerical Integration

Chapter 8: Further Techniques and Applications of Integration (~8 classes)

8.1 Integration by Parts
8.2 Volume and Average Value
8.3 Continuous Money Flow (perhaps)
8.4 Improper Integrals

Chapter 13: The Trigonometric Functions (~6 classes)

13.1 Definitions of the Trigonometric Functions
13.2 Derivatives of Trigonometric Functions
13.3 Integrals of Trigonometric Functions

Chapter 10: Differential Equations (~6 classes)

10.1 Solutions of Elementary and Separable Differential Equations
10.2 Linear First-Order Differential Equations
10.3 Euler's Method (probably not)
10.4 Applications of Differential Equations (perhaps)

Chapter 11: (Perhaps) Probability and Calculus (~6 classes)

11.1 Continuous Probability Models (perhaps)
11.2 Expected Value and Variance of Continuous Random Variables (perhaps)
11.3 Special Probability Density Functions (probably not)