

Math 105 syllabus, Fall, 1997

- Chapter 0 Functions (2.5 lectures)
- 0.1 Functions and their graphs
 - 0.2 Some Important Functions
 - 0.3 The Algebra of Functions
 - 0.4 Zeros of Functions - The Quadratic Formula and Factoring
 - 0.5 Exponents and Power Functions
 - 0.6 Functions and Graphs in Applications
- Chapter 1 The Derivative (8.5 lectures)
- 1.1 The Slope of a Straight Line
 - 1.2 The Slope of a Curve at a Point
 - 1.3 The Derivative
 - 1.4 Limits and the Derivative
 - 1.5 Differentiability and Continuity
 - 1.6 Some Rules for Differentiation
 - 1.7 More About Derivatives
 - 1.8 The Derivative as a Rate of Change
- Chapter 2 Applications of the Derivative (8 lectures)
- 2.1 Describing Graphs of Functions
 - 2.2 The First and Second Derivative Rules
 - 2.3 Curve Sketching (Introduction)
 - 2.4 Curve Sketching (Conclusion)
 - 2.5 Optimization Problems
 - 2.6 Further Optimization Problems
- Chapter 3 Techniques of Differentiation (4 lectures)
- 3.1 The Product and Quotient Rules
 - 3.2 The Chain Rule and the General Power Rule
 - 3.3 Implicit Differentiation and Related Rates
- Chapter 4 The Exponential and Natural Logarithm Functions (7 lectures)
- 4.1 Exponential Functions
 - 4.2 The Exponential Function e^x
 - 4.3 Differentiation of Exponential Functions
 - 4.4 The Natural Logarithm Function
 - 4.5 The Derivative of $\ln x$
 - 4.6 Properties of the Natural Logarithm Function
- Chapter 5 Applications of the Exponential and Natural Logarithm Functions (3 lectures)
- 5.1 Exponential Growth and Decay
 - 5.2 Compound Interest

Chapter 6

The Definite Integral (3 lectures)

6.1 Antidifferentiation

6.2 Areas and Riemann Sums (just touched on this section)

6.3 Definite Integrals and the Fundamental Theorem

There were three exams (not on class days) for 100 points each, and a final exam worth 150 points. There was a review before each exam and a review day at the end of the semester.