THE OHIO STATE UNIVERSITY

Mathematics 1131
Calculus for Business
Autumn, Spring
5 credits

Catalog Description:
Survey of calculus of one and several variables; applications to business.

Prerequisite:
Math Placement Level L; C- or better in 1130, 1148, 1144, or 1150; credit for 130 or 148.

Exclusions:
Not open to students with credit for a math course numbered 1151 (151.xx) or higher, or for 132 or 1134.

Text:
Introductory Mathematical Analysis for Business, Economics, and the Life and Social Sciences, 13th Edition, by Haeussler, Paul, Wood, published by Pearson: ISBN-10: 1-256-96609-6, ISBN-13: 978-1-256-96609-8.

Topics List:

10.1 Limits
10.2 Limits (Continued)
10.3 Continuity
10.4 Continuity and Inequalities
11.1 The Derivative
11.2 Rules of Differentiation
11.3 Derivatives and Rates of Change
11.4 The Product and Quotient Rules
11.5 The Chain Rule

Midterm 1

12.1 Derivatives of Logarithmic Functions
5.3 Continuously Compounded Interested
12.2 Derivatives of Exponential Functions
12.4 Implicit Differentiation
12.5 Logarithmic Differentiation
12.7 Higher-Order Derivatives
14.1 Differentials
13.1 Relative Extrema
13.2 Extrema on Closed Intervals
13.3 Concavity
13.4 The Second-Derivative Test
13.5 Asymptotes

Midterm 2

13.6 Applied Maxima and Minima
14.2 The Indefinite Integral
14.3 Integration with Initial Conditions
14.4 More Integration Formulas
14.5 Techniques of Integration
14.6 The Definite Integral
14.7 The Fundamental Theorem of Calculus
14.9 The Area Between Curves
14.10 Consumers' and Producer's Surplus
15.5 Differential Equations
17.1 Partial Derivatives

Midterm 3

17.2 Applications of Partial Derivatives
17.4 Higher-Order Partial Derivatives
17.6 Maxima/Minima Functions of 2 Variables
17.7 Lagrange Multipliers