MTH 1309 – Calculus for Business Students

Text: *Calculus: An Applied Approach*, 10th edition, Ron Larson, Cengage

The TI-84 Plus calculator is strongly recommended.

Detailed Course Description

The Cartesian Plane and the Distance Formula
Graphs of Equations
Lines in the Plane and Slope
Functions
Limits
Continuity

The Derivative and the Slope of a Graph
Differentiation
Rates of Change: Velocity and Marginals
The Product and Quotient Rules
The Chain Rule
Higher-Order Derivatives
Implicit Differentiation
Related Rates

Increasing and Decreasing Functions
Extrema and the First-Derivative Test
Concavity and the Second-Derivative Test
Optimization
Business and Economics Applications
Asymptotes

Exponential Functions
Natural Exponential Functions
Derivatives of Exponential Functions
Logarithmic Functions
Derivatives of Logarithmic Functions

Antiderivatives and Indefinite Integrals
Integration by Substitution and the General Power Rule
Exponential and Logarithmic Integrals
Area and the Fundamental Theorem of Calculus
The Area of a Region Bounded by Two Graphs

Functions of Several Variables
Partial Derivatives
Extrema of Functions of Two Variables
Lagrange Multipliers