

MAC2311 – Calculus & Analytic Geometry I

Lecture & Exam Schedule

Prepared by Professor Toribio J Matamoros

Textbook – *Calculus: Early Transcendentals, 14th Edition*, by Hass, Heil, and Weir

COURSE TOPICS

CHAPTER 2 – LIMITS AND CONTINUITY

- Section 2.1 – Rates of Change and Tangent Lines to Curves
- Section 2.2 – Limit of a Function and Limit Laws
- Section 2.4 – One-Sided Limits
- Section 2.5 – Continuity
- Section 2.6 – Limits Involving Infinity; Asymptotes of Graphs

CHAPTER 3 – DERIVATIVES

- Section 3.1 – Tangent Lines and the Derivative at a Point
- Section 3.2 – The Derivative as a Function
- Section 3.3 – Differentiation Rules
- Section 3.4 – The Derivative as a Rate of Change
- Section 3.5 – Derivatives of Trigonometric Functions
- Section 3.6 – The Chain Rule
- Section 3.7 – Implicit Differentiation
- Section 3.8 – Derivatives of Inverse Functions and Logarithms
- Section 3.9 – Inverse Trigonometric Functions
- Section 3.10 – Related Rates

CHAPTER 4 – APPLICATIONS OF DERIVATIVES

- Section 4.1 – Extreme Values of Functions on Closed Intervals
- Section 4.2 – The Mean Value Theorem
- Section 4.3 – Monotonic Functions and the First Derivative Test
- Section 4.4 – Concavity and Curve Sketching
- Section 4.5 – Indeterminate Forms and L'Hôpital's Rule
- Section 4.6 – Applied Optimization
- Section 4.8 – Antiderivatives

CHAPTER 5 – INTEGRALS

- Section 5.1 – Area and Estimating with Finite Sums
- Section 5.2 – Sigma Notation and Limits of Finite Sums
- Section 5.3 – The Definite Integral
- Section 5.4 – The Fundamental Theorem of Calculus
- Section 5.5 – Indefinite Integrals and the Substitution Method
- Section 5.6 – Definite Integral Substitutions and the Area Between Curves

LECTURE & EXAM SCHEDULE

Tuesday	Thursday
08/29 Course Introduction	08/31 Section 2.1
09/05 Section 2.2 & Section 2.4	09/07 Section 2.5
09/12 Section 2.6	09/14 Chapter 2 Review
09/19 EXAM 1	09/21 Section 3.1
09/26 Section 3.2	09/28 Section 3.3
10/03 Section 3.4	10/05 Section 3.5
10/10 Section 3.6 & Section 3.7	10/12 Section 3.8 & Section 3.9
10/17 Section 3.10	10/19 Chapter 3 Review

Tuesday	Thursday
10/24 EXAM 2	10/26 Section 4.1 & Section 4.2
10/31 Section 4.3	11/02 Section 4.4
11/07 Section 4.5	11/09 Section 4.6
11/14 Section 4.8	11/16 Chapter 4 Review
11/21 EXAM 3	11/23 NO CLASS
11/28 Section 5.1 & Section 5.2	11/30 Section 5.3 & Section 5.4
12/05 Section 5.5 & Section 5.6	12/07 Chapter 5 Review
12/12 EXAM 4	12/14 EXAM MAKE-UP DAY