

## MAC2233 – Business Calculus

### Lecture & Exam Schedule

Prepared by Professor Toribio J Matamoros

Textbook – *CALCULUS AND ITS APPLICATIONS, 11<sup>th</sup> Edition*, by Bittinger, Ellenbogen, & Surgent

### COURSE TOPICS

#### CHAPTER 1 – DIFFERENTIATION

- Section 1.1 – Limits: A Numerical and Graphical Approach
- Section 1.2 – Algebraic Limits and Continuity
- Section 1.3 – Average Rates of Change
- Section 1.4 – Differentiation Using Limits of Difference Quotients
- Section 1.5 – The Power and Sum-Difference Rules
- Section 1.6 – The Product and Quotient Rules
- Section 1.7 – The Chain Rule
- Section 1.8 – Higher-Order Derivatives

#### CHAPTER 2 – APPLICATIONS OF DIFFERENTIATION

- Section 2.1 – Using First Derivatives to Classify Maximum and Minimum Values and Sketch Graphs
- Section 2.2 – Using Second Derivatives to Classify Maximum and Minimum Values and Sketch Graphs
- Section 2.3 – Graph Sketching: Asymptotes and Rational Functions
- Section 2.4 – Using Derivatives to Find Absolute Maximum and Minimum Values
- Section 2.5 – Maximum-Minimum Problems: Business, Economics, and General Applications
- Section 2.6 – Marginals and Differentials
- Section 2.8 – Implicit Differentiation and Related Rates

#### CHAPTER 3 – EXPONENTIAL AND LOGARITHMIC FUNCTIONS

- Section 3.1 – Exponential Functions
- Section 3.2 – Logarithmic Functions
- Section 3.3 – Applications: Uninhibited and Limited Growth Models
- Section 3.4 – Applications: Decay
- Section 3.5 – The Derivatives of  $a^x$  and  $\log_a x$

CHAPTER 4 – INTEGRATION

- Section 4.1 – Antidifferentiation
- Section 4.2 – Antiderivatives as Areas
- Section 4.3 – Area and Definite Integrals
- Section 4.4 – Properties of Definite Integrals
- Section 4.5 – Integration Techniques: Substitution

CHAPTER 6 – FUNCTIONS OF SEVERAL VARIABLES

- Section 6.1 – Functions of Several Variables
- Section 6.2 – Partial Derivatives

**LECTURE & EXAM SCHEDULE**

Monday	Wednesday
08/28 Course Introduction	08/30 Section 1.1
09/04 <b>NO CLASS</b>	09/06 Section 1.2
09/11 Section 1.3 & Section 1.4	09/13 Section 1.5 & Section 1.6
09/18 Section 1.7 & Section 1.8	09/20 Chapter 1 Review
09/25 <b>EXAM 1</b>	09/27 Section 2.1 & Section 2.2
10/02 Section 2.3	10/04 Section 2.4

Monday	Wednesday
10/16 Section 2.5	10/18 Section 2.6
10/23 Section 2.8	10/25 Chapter 2 Review
10/30 <b>EXAM 2</b>	11/01 Section 3.1 & Section 3.2
11/06 Section 3.3	11/08 Section 3.4
11/13 Section 3.5	11/15 Chapter 3 Review
11/20 <b>EXAM 3</b>	11/22 Section 4.1 & Section 4.2
11/27 Section 4.3 & Section 4.4	11/29 Section 4.5
12/04 Section 6.1 & Section 6.2	12/06 Chapters 4 – 6 Review
12/11 <b>EXAM 4</b>	12/13 <b>EXAM MAKE-UP DAY</b>