MISSION COLLEGE
CLASS SYLLABUS
Fall 2008

MATH 238: SECTION 3314  BUNG. 8
CALCULUS FOR BUSINESS, ECONOMICS, LIFE SCIENCES, AND SOCIAL SCIENCES
PREREQUISITE MATH125 WITH A GRADE OF “C “OR BETTER
TIME: 7:00- 9:30 PM

INSTRUCTOR: MS. ALICE CONSTANTINO
CAMPUS 364 4255
CELL# 818 687 3552

EMAIL : AliceConstantino@socal.rr.com

OFFICE HOURS: 6:00-6:50 T-TH to be announced

TEXTBOOK: COLLEGE MATHEMATICS FOR BUSINESS, ECONOMICS, LIFE SCIENCES, AND
SOCIAL SCIENCES 11TH EDITION
BY: RAYMOND A. BARNETT, MICHAEL R. ZIELGGLER, KARL E. BYLEEN

GENERAL OBJECTIVE:
THIS COURSE AIMS TO GIVE STUDENTS SUBSTANTIAL EXPERIENCE IN MODELING AND
SOLVING REAL-WORLD PROBLEMS AND LAY FIRM FOUNDATION IN INVESTIGATING
MATHEMATICAL IDEAS AND PROCESSES GRAPHICALLY AND NUMERICALLY AS WELL AS
ALGEBRAICALLY.

METHODOLOGY:
LECTURE; BOARD DEMONSTRATION; QUESTION AND ANSWER; GROUP SESSION; PRACTICE
REINFORCEMENT AND HOMEWORK FOLLOW-UP.
ADDITIONAL SUPPORT: SOFTWARE BASED TUTORIAL AND TUTORING AVAILABLE AT THE
MATH LAB CENTER.

LEARNING OUTCOMES
AT THE END OF THE COURSE STUDENTS WILL BE ABLE TO:
1. Graph polynomial, exponential and logarithmic functions; solve equations
   containing logarithms and exponents; solve interest rate and related problems.
2. Define the limit and derivative; evaluate derivatives using the product, quotient and
   chain rules; apply derivatives to marginal analysis in business.
3. Apply the First and Second derivatives tests to determine extrema and graphs of
   functions; solve business optimization problems.
4. Evaluate the derivatives of exponential and logarithmic functions; find derivatives
   using implicit differentiation; solve related rates-type problems.
5. Define and find anti-derivatives; evaluate integrals; approximate integrals using
   numerical techniques.
6. Calculate areas between curves; evaluate integrals using integration by parts;
   evaluate integrals using integration tables; solve integration problems relating to
   business.
7. Define functions of several variables; calculate partial derivatives; evaluate multiple
   integrals.
<table>
<thead>
<tr>
<th>TOPICS TO BE COVERED</th>
<th>SECTIONS FROM TEXT</th>
<th>APPROX. TIME</th>
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</thead>
<tbody>
<tr>
<td>PART ONE- BEGINNING LIBRARY OF</td>
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<tr>
<td>CHAPTER 1: LINEAR EQUATIONS AND GRAPHS</td>
<td>1-1, 1-2, 1-3, 1-4</td>
<td>1 ½ weeks</td>
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<tr>
<td>Functions; Graphs and Transformations; Linear Functions and Straight Lines; Quadratics Functions</td>
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<td>CHAPTER 2: ADDITIONAL ELEMENTARY FUNCTIONS</td>
<td>2-1, 2-2, 2-3</td>
<td>1 week</td>
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<tr>
<td>Polynomial and Rational Functions; exponential Functions; Logarithmic Functions</td>
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<tr>
<td>CHAPTER 3: PART TWO- MATHEMATICS OF FINANCE</td>
<td>3-1, 3-2, 3-3, 3-4</td>
<td>1 week</td>
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<tr>
<td>Mathematics of Finance: Simple Interest; Compound Interest; Future Value of an Annuity; Probability Distribution and Expected Value; Sinking Funds; Present Value of an Annuity: Amortization</td>
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<td>CHAPTER 10: PART THREE: LIMITS AND DERIVATIVE</td>
<td>10-1, 10-2, 10-3, 10-4</td>
<td>2 weeks</td>
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<tr>
<td>Introduction to Limits; Continuity; Derivative Power Rule and Basic Differentiation Properties; Derivatives of Products and Quotients; General Power Rule (Chain Rule); Marginal Analysis in Business and Economics</td>
<td>10-5, 10-6, 10-7</td>
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<tr>
<td>CHAPTER 11: ADDITIONAL DERIVATIVES TOPICS</td>
<td>11-1, 11-2, 11-3, 11-4</td>
<td>2 weeks</td>
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<tr>
<td>The Constant e and Continuous Compound Interest; Exponential Functions and Their Derivatives; Logarithmic Functions and Their Derivatives</td>
<td>11-5, 11-6, 11-7</td>
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<tr>
<td>CHAPTER 12: GRAPHING AND OPTIMIZATION</td>
<td>12-1, 12-2, 12-3, 12-4</td>
<td>1 ½ weeks</td>
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<td>First Derivative and Graphs; Second Derivative and Graphs Graphing Rational Functions; Absolute Maxima and Minima; Optimization.</td>
<td>12-5, 12-6</td>
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<td>CHAPTER 13: INTEGRATION</td>
<td>13-1, 13-2, 13-3 13-4</td>
<td>1 ½ weeks</td>
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<tr>
<td>Anti derivatives and Indefinite Integrals; Integration by Substitution; Differential Equations</td>
<td>13-5</td>
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<tr>
<td>CHAPTER 14: ADDITIONAL INTEGRATION TOPICS WEEK</td>
<td>14-1, 14-2, 14-3, 14-4</td>
<td>1 ½ weeks</td>
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<tr>
<td>Areas between Curves; Applications in Business and Economics</td>
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**NOTE:** CHAPTER TEST IS SCHEDULED EVERY END OF THE CHAPTER LESSONS.  
**FINAL EXAMINATION:** DECEMBER 14-20, 2008 (AS PER COLLEGE CALENDAR SCHEDULE)
GRADING SYSTEM: (HUNDRED POINT SCALE)
1. AVERAGE QUIZZES/ CHAPTER TEST                     55% (deduct 1 lowest score)
2. AVERAGE HOMEWORK/ ATTENDANCE                10%
3. FINAL EXAMINATION                                                35% (December 14-20) as per calendar schedule

NOTE: CHAPTER TEST IS SCHEDULED EVERY END OF THE CHAPTER LECTURE.

HOMEWORK:
HOMEWORK IS GIVEN TO REINFORCE THE LESSONS FOR THE DAY AND TO DEVELOP THE NECESSARY SKILLS IN MATH. STUDENTS ARE EXPECTED TO DO ASSIGNED NUMBERS AND CORRECT THE PROBLEMS CONSULTING THE SOLUTIONS IN THE BOOK. SELECTED PROBLEMS WILL BE CHECKED IN CLASS BEFORE INTRODUCING THE LESSON OF THE DAY.

ATTENDANCE:
ATTENDANCE WILL BE STRICTLY MONITORED. PLEASE REFER TO THE COLLEGE POLICY REGARDING ABSENCES OR SEE ME FOR ASSISTANCE.

REMINDER:
THERE WILL BE NO MAKE-UP’S FOR MISSED TEST. MISSED TEST IS EQUIVALENT TO ZERO SCORE.

IMPORTANT REMINDER:
IF YOU PLAN NOT TO CONTINUE THE COURSE, IT IS YOUR RESPONSIBILITY TO APPLY FOR A WITHDRAWAL OF THE COURSE IN THE ADMISSION OFFICE. OTHERWISE A LETTER GRADE OF “F” IS REFLECTED IN YOUR RECORD IF YOUR NAME IS STILL IN THE FINAL CLASS LIST AT THE END OF THE SEMESTER. PLEASE REFER TO THE COLLEGE CALENDAR FOR DEADLINE SCHEDULE.

PAGERS AND CELL PHONE MUST BE IN SILENT MODE DURING CLASS HOURS. ANY FORM OF DISTRACTIONS SUCH AS SLEEPING, LOUD CONVERSATION, LEAVING OR RE-ENTERING THE CLASSROOM, FREQUENT LATE ARRIVAL ARE STRICTLY PROHIBITED.

PLEASE FEEL FREE TO CALL OR SEE ME FOR ANY ASSISTANCE. I WILL BE FLEXIBLE FOR STUDENTS WHO NEEDS TUTORING.

Last Day to drop without a “W” Friday, September 26, 2008
Last Day to Drop with a “W” Friday, November 21, 2008 in person
November 10 Veterans Day, November 27-30, Thanksgiving Holiday College closed.

Final Exams: Dec 14-20, 2008

Thank You;
Alice Constantino
818 687 3552 cell phone