

**Course:** Math 238, Calculus for Business and Social Science, Section: 3257  
Time: M W: 07:00 pm– 09:30 pm  
Room: Bung 8

**Textbook:** College Mathematics, 11<sup>th</sup> Edition, by Barnett, Ziegler, and Byleen  
Publisher: Pearson Prentice Hall.

**Web Site:** <http://lamcm238nda.pbworks.com>

**Prerequisite:** Math 125 or appropriate skill level demonstrated through the MATH assessment process.

**Instructor:** Dr. Nikolas Antoniou  
Office Hours: M W: 04:30 pm – 05:20 pm, Math Center  
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**Important Dates:**

- 08/31 Class begins
- 09/07 No Class – Labor Day
- 09/11 Last Day to Add a Class
- 09/25 Last Day to Drop without a “W” – In Person
- 11/11 No class - Veterans Day
- 11/20 Last Day to Drop with a “W” – In Person
- 12/09 Last Day of Class
- 12/14 FINAL exam: 08:00 pm – 10:00 pm

**Student Learning Outcomes:**

1. Graph polynomial, exponential and logarithmic functions; solve equations containing logarithms and exponents; solve interest rate related problems.
2. Define the limit and the derivative; evaluate derivatives using the product, quotient and chain rules; apply derivatives to marginal analysis in business.
3. Apply the First and Second Derivative 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 antiderivatives; 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; Maxima and Minima.

**Course Outline:** The course will cover the following topics:

1. Chapter 1. Linear Equations and Graphs: 1.1 - 1.2
2. Chapter 2. Functions and Graphs: 2.1 - 2.5
3. Chapter 10. Limits and the Derivative: 10.1 - 10.7
4. Chapter 11: Additional Derivative Problems: 11.1 - 11.6
5. Chapter 12: Graphing and Optimization: 12.1 - 12.6
6. Chapter 13: Integration: 13.1 - 13.5
7. Chapter 14: Additional Integration Topics: 14.1 - 14.4
8. Chapter 15: Multivariable Calculus: 15.1 -15.3

**Class Structure:** Most of the class time will be used for lecturing, reviewing homework assignments and examinations, and answering questions. Some time may also be used for students to work in groups. Students should expect to be called upon to solve problems on the board. Class environment will be informal, open, and relaxed; students are strongly encouraged to participate fully in class and to ask questions.

**Web Site:** <http://lamcm238nda.pbworks.com>. (Username and Password will be given in the class.) This web site contains all course material, notes, announcements, solutions to quizzes/tests, and your progress reports. It is highly recommended that you visit this site often and particularly before you start studying.

**Calculators:** The use of a scientific calculator will be allowed both in class and during the tests. However, you may not use a graphing calculator.

**Homework:** Students are responsible to complete the assigned homework as each section is completed. Homework will be collected on the dates of the tests and it will include the material covered by the test. Review of the assigned homework will take place at the beginning of every session. Students are encouraged to do all the assigned homework. It will help them develop the skills and knowledge necessary for the exams.

**Tutoring:** Free tutoring is available in the Math Lab, located in the Learning Resource Center and at the Math Center located in the basement of the Campus Center Building.

**Read the textbook:** The textbook provides a very good level of mathematical rigor. Read the text carefully and pay particular attention to the examples and illustrations. They are well-structured and they demonstrate the underlining concepts and theories with sufficient details to help you solve the exercises at the end of each section.

You will gain a lot more from the lectures if you have read the applicable sections of the book ahead of time. Moreover, the lectures are designed as a supplement to and not as an alternative to the textbook. Students are expected to master all topics in the textbook that are part of the syllabus regardless of whether they are mentioned in the lecture, unless otherwise indicated.

### **Classroom Rules:**

**Attendance:** Attendance is mandatory for all class meetings. You could be dropped after 3 absences. In addition, you are expected to be in class promptly and stay for the whole duration of the class session. Arriving to class late and leaving early is very disruptive to your peers; **two** tardiness or **two** early leaves will count as **one** absence! It is your responsibility to drop the class if you decide to quit attending. Your failure to drop a class may result in a grade of "F".

**Cheating:** Any student caught cheating will receive an automatic "F" for the test.

**Electronic Devices:** The operation of electronic devices such as cell phones, iPods, MP3 players, PDAs, and the like is not allowed in the class. Students are expected to have such devices turned off while inside the classroom.

**Food:** No food of any kind is allowed inside the classroom.

**Testing:**

1. There will be six (6) tests of 100 points each, lasting approximately 60 minutes. The lowest grade of these 6 tests will be dropped.
2. There will be a **comprehensive, 2- hour, Common Departmental Final** examination of 100 points, covering all the material of the semester.
3. There will be **no make-ups** for any of the exams, including the final. Students are expected to take all exams. Missing exams will receive a grade of zero.

**Grading:****Percentage Distribution**

Tests (5 x 13%)	65%
Homework	8%
Final Exam	27%

**Assigned Grade**

90 - 100%	A
80 - 89%	B
70 - 79%	C
60 - 69%	D
Below 60%	F

**No Incomplete grades will be given.**