Instructor: Alberto Candel

Office: SN 430

Phone: 818-677-6512 (office) 818-677-2721 (math office)

Email: alberto.candel@csun.edu

Class meets: Tuesdays and Thursdays, 5:30–6:45pm, EH2132

Office Hours: Wednesdays 16:00–17:00, Thursdays 15:00-16:00, and by appointment.

Course Web Page: http://www.csun.edu/~ac53971/courses/math103/

Prerequisites for this class: Passing score on or exemption from the Entry Level Mathematics Examination (ELM), or credit in Math 093 and a passing score on the Mathematics Placement Test (MPT). Concepts and applications of algebra and calculus to business. Topics include functions, systems of equations, matrices, the derivative and business-related topics in calculus. (Available for General Education, Basic Skills; Mathematics).

Math 103L: Unless exempt, you must be enrolled in Math103L. The Math103L sections for this class are


Math 103 Tutoring Center Starts February 1st, 2010, in LIVE OAK 1327. Hours are The hours are:

- M-Th 10:00 - 5:30
- F 10:00 - 3:00
- Sat 11:00 - 2:00

Measurable Course Objectives: Upon successful completion of the course students will be able to:

- Compute with Linear, quadratic, rational functions. Including solving equations involving such functions.
- Prepare a well-scaled graph of a one-variable function.
- Use functions as models for business application problems.
- Compute with simple interest, compound interest, and continuously compounded interest models. This must include evaluating exponential functions and solving equations with exponential expressions via logarithms
- Find the derivative of a function and evaluate marginal revenue/cost/profit for a revenue/cost/profit function
- Explain verbally and in writing why maximum profit is realized when marginal revenue equals marginal costs.
- Use derivatives to find local maximum and local minimum points
- Solve a system of linear equations using algebraic methods, and use them in business applications.
- Understand basic matrix operations and use them in business applications.
Textbook: *College Mathematics for Business, Economics, Life Sciences and Social Sciences* by Barnett, Ziegler, and Byleen. We will cover the following sections of the textbook:

- 1.1-1.2. Linear Equations & Graphs and Lines.
- 2.1. Functions.
- 2.2. Elementary functions: Graphs and Transformations.
- 2.3. Quadratic Functions
- 3.1, 3.2. Simple, compound leading to continuously compound interest
- 2.4, 2.5. Exponential and Logarithmic functions
- 10.1–5. Limits, continuity, derivative; sum, constant and power rules,
- 10.7. Marginal cost, marginal revenue and marginal profit, applications
- 12.5. Absolute max/min
- 12.6. Marginal analysis
- 11.3. Product and quotient rule
- 11.4. Power rule
- 11.7. Elasticity
- 4.1–4.4. Solving systems of equations and matrices

A set of *Lecture Notes for Math 103* prepared by the Department of Mathematics is available at the Matador Bookstore. You are strongly recommended to buy a copy of the Lecture Notes, as lectures will be based on them.

Homework: We will use WeBWorK. (Go to our course web page for directions.) Late homework is not accepted under any circumstances, but your lowest homework score will be dropped when computing your final grade.

Exams: There will be two in-class midterms exams and a cumulative final exam on the following dates:

- First Midterm: Tuesday, February 16th
- Second Midterm: Tuesday, March 16th
- Third Midterm, Tuesday, April 20th
- Final Exam: Saturday, May 8th, 11:30–13:30. The Final Exam is common to all sections of Math 103.

Exam Policy:

- For passing this class (C or better), you need to score at least 50% on the Final Exam.
- There will be no make-up exams, except in cases of extreme emergencies or exceptional circumstances. You must notify me before the exam if you are going to miss it, and you must provide documentation supporting your request for a make-up. If the documentation is satisfactory, I may give the make-up. A make-up exam will consist of a written part and an oral part.
- Calculators are not allowed on Midterm Exams or on the Final Exam
Grades: Your total score (out of 100 points) will be determined as follows

- 10% Homework
- 20% Each of the 3 midterms
- 30% Final Exam

and your final grade will be determined as follows:

- A if total score is 90 points or more,
- B if total score is between 80 and 89 points,
- C if total score is between 70 and 79 points,
- D if total score is between 55 and 69 points,
- F if total score is below 55 points.

Note: I will use +/- when assigning your final grade.

General Education Student Learning Outcomes (GE-SLOs):

(a) Represent, understand, and explain mathematical information symbolically, graphically, numerically, and verbally;
(b) Develop mathematical models of real-world situations and explain the assumptions and limitations of those models;
(c) Use models to make predictions, draw conclusions, check whether results are reasonable, and find optimal results, using technology when necessary and appropriate;
(d) Demonstrate an understanding of the nature of mathematical reasoning including the ability to prove simple results or make statistical inferences

Assessment of GE-SLOs: SLOs 1–3 will be assessed through traditional testing and the common final exam and WeBWorK assignments. SLO 4 will be assessed by students performance on at least one exam.

Class philosophy: Learning math involves skill acquisition. It is analogous to the physical training involved in music and sports. Now matter how much you understand about playing a musical instrument or performing certain athletic feat, you will never be able to do either one without practice; it is simply impossible. Similarly, the only way to be successful in math is to devote consistent time to the practice of homework problems.

Spring 2010 Furlough Plan: Pending approval by the Dean, my furlough days for this semester are: January 27th, February 10th and 24th, March 10th and 24th, April 14th and 28th; May 5th and 19th.