

**Syllabus for Math 140: Calculus for Business**

**Instructor:** Dr. Mohamed Ait Nouh

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**Office hours:** My office is 268, located on the second floor of Sage Hall.

- **MW** 11:00 AM - 12:00 PM and 3:00-4:00 PM and 5:00-6:00PM
- **TuTh** 4:30 AM-5:30 PM

**Lectures:**

- **MW** 12:00 PM - 1:15 PM (section 1)                      **MW** 1:30 PM - 2:45 PM (section 2)
- **MW** 6:00 PM - 7:15 PM (section 3)                      **TuTh** 5:30 AM - 6:45 PM (section 4)

**Text:** Applied Calculus for Business, Economics, Life Sciences, and Social Sciences, by Barnett, Ziegler, and Byleen (Eight Edition). Custom Edition for California State University Channel Islands. This Custom Edition is affordable and every student is required to have a copy !

An introduction to differential and integral calculus in the context of business and economics applications. We will cover the first seven chapters of the textbook.

**Calculator:** A Texas instrument calculator is required and I am able to help you with TI-83, 85, 86, 92. I strongly recommend to have TI-83 or TI-84.

**Grades:**Total: 1000 points which is equivalent to 100%.

- (1) Homework: 150 points (15%)
- (2) Quizzes: 200 points (20%)
- (3) Tests: 400 points (40%)
- (4) Attendance and Class Participation: 50 points (5%)
- (5) Final: 200 points (20%)

**Note that the + and – will be assigned in the final grade.**

**Attendance:** Each unexcused absence is ten points off your attendance grade. Mathematics is a building process. Absences cause gaps in learning. The best way to get through the material is to keep up coming to every class. Henceforth I urge you to attend classes and come during my office hours if you have any question.

**Homework:** Homework is due on Wednesdays class sessions for MW sessions and Thursdays for TuTh sessions. The assigned homework problem is the basis of quizzes and tests.

**Quizzes:** There will be four group quizzes given throughout the semester, followed by an individual test on the same materials. Each group quizz is worth  $\frac{50}{1000}$  point.

**Tests:** Four tests will be given, worth 40%. Each test is worth  $\frac{100}{1000}$  points each. The tests are given individually, with closed books and calculators are encouraged.

**Final Exam:** The final is required and is worth  $\frac{200}{1000}$  points. It will be taken individually.

**Blackboard:** I will give a handout (hard copy) on the materials I covered in every lecture. You can find this handout on Blackboard. I will also post announcements, grades and lecture notes on Blackboard. Please check it at a regular basis.

**Make-up tests:** There is no make up for quizzes and no late homework !

**Students with disabilities:** If you have a physical, psychological, medical, or learning disability that may impact on your ability to carry out assigned course work, you are strongly urged to contact the staff in the Accomodation Services office. The AS office will review your concerns and determine, with you, what accommodations are necessary and appropriate. All information and documentation of disability is confidential. Arrangements should be made early in the semester (before the first exam) so that your needs can be accommodated.

### **1. Instructional Outline:**

- Week 1: Functions - Elementary functions - linear, quadratic
- Week 2: Elementary functions - rational, exponential, logarithmic
- Week 3: Regressions, Compounding interest, Supply-Demand functions
- Week 4: Limits and continuity
- Week 5: The derivative
- Week 6: The second derivative and graphing
- Week 7: Optimization, maxima and minima
- Week 8: Derivatives of logarithmic and exponential functions; Chain rule
- Week 9,10: Indefinite integrals and integration
- Week 11: Definite integrals: definition and the Fundamental Theorem of Calculus
- Week 12: Definite integrals cont'd: integration by parts
- Week 13: Final review