

West Los Angeles College

SLO Addendum

Course Name and Number MATH 236

Course Title CALCULUS FOR BUSINESS AND SOCIAL SCIENCE

Course Objectives (as stated in the Course Outline of Record)

1. find limits of functions
2. find derivatives of functions using the product rule, quotient rule, and chain rule.
3. Apply the derivative to marginal functions in economics
4. Find the second and higher order derivatives
5. Differentiate implicitly
6. Solve related rate problems
7. Find differentials
8. Apply the derivative to curve sketching
9. Find maximum and minimum values of a function
10. Differentiate exponential and logarithmic functions
11. Work problems on compound interest
12. Use the definite integral to find areas
13. Evaluate improper integrals
14. Apply the definite integral to business and economics
15. Find partial derivatives
16. Find max and min of functions of several variables
17. Use LaGrange multipliers
18. Evaluate double integrals

<p align="center"><u>Course SLO</u></p> <p>One sentence that describes a major piece of knowledge, skill, or ability that students can demonstrate by the end of the course</p> <p><i>Finish the sentence, "At end of the course, the successful student will be able to... "</i></p>	<p align="center"><u>Assessment Method</u></p> <p>Major assignment, project or test used to demonstrate or apply outcome</p> <p><i>Remember to have a mix of qualitative and quantitative assessment methods.</i></p>	<p align="center"><u>Criterion Level</u></p> <p>Reflects satisfactory performance on the SLO</p> <ul style="list-style-type: none"> • <i>At least X percent of students achieve this course SLO.</i> • <i>All students achieve at least the Y level on this SLO.</i> • <i>At least X percent of students achieve the Y level on this course SLO.</i>
<p>1. Student will solve economics and business or related applications by using the concept of derivatives or anti-derivatives.</p>	<p>Students will solve this problem on a near-end of the semester quiz or on the final exam. A grading rubric will be used to access the results for each component of the question. See sample question at end of addendum.</p>	<p>The question will be worth 25-35 points. At least 50% of the students will earn at least 70% on this problem, based on the grading rubric.</p>
<p>2.</p>		
<p>3.</p>		
<p>4.</p>		

Mapping to Program SLO and Institutional SLOs

Please indicate with an "X" in the appropriate boxes below, the Course SLO mapping to the corresponding Program and Institutional SLO(s).

Course SLO	Program SLO												Institutional SLO									
	1	2	3	4	5	6	7	8	9	10	11	12	A	B	C	D	E	F	G	H	I	
#1	X		X	X	X								X		X			X				
#2																						
#3																						
#4																						

Course SLO Acknowledgements

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 Academic Senate President
 Adrienne Foster

 Date

 VP of Academic Affairs (initial) and College President

 Date

EXAMPLE PROBLEM:

3. (35 points) The Research Department of your company presents the price-demand equation $x = f(p)$ such that $x = 5000 - 500p$ where x is the number of items that can be sold weekly at \$ p per item .

The Financial Department provides the cost function $C(x) = 800 + 3x$. Find:

- a. The Elasticity of demand, $E(p)$. Recall $E(p) = \frac{-p f'(p)}{f(p)}$
- b. The function $p(x)$ defined by the price-demand equation
- c. The revenue function $R(x)$
- d. The profit function $P(x)$
- e. The marginal cost function $C'(x)$ and its interpretation
- f. The average cost function $\bar{C}(x)$ and the marginal average cost function $\bar{C}'(x)$
- g. The number of items that would maximize profits, the maximum profit the company can anticipate, and the price it should charge per item to reach this goal.
- h. At this price, is the demand inelastic or elastic?