Subject Area and Course Number: Mathematics 121
Course Title: Basic Techniques of Applied Calculus I   **Units:** 3.0
Class Meets: Monday, Wednesday 5:30 P.M. - 6:55 P.M., room MS211   **CRN:** 95042
Instructor: Russell La Puma   **Office:** MS222E
Voice mail: (619) 388-2767 x5503   **Office Hours:** MW 4:00 P.M - 5:00 P.M.
Web: http://homework.sdmesa.edu/rlapuma   **E-mail:** lapumath@gmail.com
WebAssign Class Key: sdmesa 5123 4241

Prerequisite: Math 116 with a grade of "C" or better, or equivalent.

Course Description: This course examines the study of calculus using numerical, graphical, and
analytical methods to analyze calculus problems encountered in real-world applications
in business, natural/life sciences, and social sciences. Topics include limits, derivatives,
and integrals of algebraic, exponential, and logarithmic functions, curve sketching,
optimization, and areas under and between curves and partial derivatives and
optimization of multivariable functions. This is the first course in a sequence of
mathematics courses for students intending to major in business, economics, or natural
and social sciences.

Transfer Applicability: Associate Degree Credit & transfer to CSU CSU General Education
IGETC UC Transfer Course List.
Limitation: MATH 121 and 150 combined: maximum credit, one course.

Student Learning Objectives:
Upon successful completion of the course the student will be able to:

1. Interpret and evaluate limits of algebraic, exponential, and logarithmic functions .
2. Determine the continuity of functions at specific points and in an entire set.
3. Calculate derivatives of algebraic, exponential, and logarithmic functions, applying
various rules of derivatives.
4. Analyze and sketch polynomial and rational functions using the first and second
derivative.
5. Apply derivatives to solve optimization problems with or without constraints.
6. Apply derivatives of exponential and logarithmic functions to solve business and life
science applications.
7. Apply derivatives and integrals to problems relating to business, economics, natural
science, and social science.
8. Calculate antiderivatives of functions involving algebraic, exponential, or logarithmic
functions.
9. Calculate antiderivatives using the substitution technique.
10. Compute definite integrals by applying the Fundamental Theorem of Calculus, and
apply definite integrals to find the area under a curve and between two curves.
11. Calculate derivatives of multivariable functions and apply them to maximization and
minimization problems.

Student Learning Outcomes: The student completes the graph given a description of the graph
using points, asymptotes, and derivatives.
Students can solve an integration problem using substitution.
Students can use the chain rule to take the derivative in a pronlem involving logarithms.

Evaluation: There will be three tests and a final examination. To avoid the need for make-up tests, the score of any missed test will be dropped and the final given extra weight. There will be no make-up tests. There will be short quizzes weekly (except on test days), with the lowest two quiz scores dropped. Homework will be done either on line using MyMathLab, or from the textbook. The final grade will be determined as 90-100% A, 80-89% B, 70-79% C, 60-69% D, with the following weights in effect:

Homework	10%	
Quizzes	10%	
Tests, best two @	24%	each
Test, worst	8%	
Final	24%	

Text and Supplies: *Applied Calculus*, 7th edition, Berresford & Rockett, ISBN 1-305-77921-5; or, WebAssign access, 978-1-85758-9, Brooks/Cole.
A graphing calculator (e.g. a TI-84) is highly recommended. You will be allowed to use a calculator on any test unless otherwise directed

Attendance Requirements: A student accumulating unexcused absences of more than 6% of the total hours that the class meets (equal to two class meetings) may be dropped by the instructor. If there are unexcused absences of more than 12% (four class meetings), the student *will* be dropped. The withdrawal deadline is **April 14**. Any student still enrolled in the course after that date cannot receive a "W." It is the student's responsibility to add, drop, or withdraw from classes before the deadlines stated in the class schedule. Please discuss your plans to withdraw from the class with your instructors. They may have other options for you that allow you to continue in class.

Tardiness: Class begins at the set hour. It is understood that tardiness is unavoidable on rare occasions, but chronic tardiness disrupts the learning environment. Likewise, it is usually inappropriate to leave before the end of class without consulting the instructor. If the instructor is more than twenty minutes late, students may leave after signing an attendance sheet.

Classroom Behavior and Student Code of Conduct: Students are expected to respect and obey standards of student conduct while in class and on campus. The student Code of Conduct, disciplinary procedure, and student due process (Policy 3100, 3100.1, and 3100.2) can be found in the current college catalog. Under most circumstances, food, beverages, and cell phones are unnecessary and unwelcome in the classroom. Turn off your mobile phone.

Collaboration and Cheating: You are encouraged to work with tutors or other students on homework and class topics, provided you share learning, not just answers. (Consider attending the MT2C Math & Science Tutoring, LRC 4th floor.) Collaboration on exams or quizzes, however, is regarded as cheating and will result in a zero for that exam.

Accommodation of Disability: Students with disabilities who may need academic accommodations should discuss options with their professors during the first two weeks of class.

Math 121 – La Puma – Spring 2017

week	Mon		Wed	
1	Jan 30	introduction	Feb 1	1.2
2	Feb 6	1.3	Feb 8	1.4
3	Feb 13	2.1	Feb 15	2.1 2.2
4	Feb 20	*Washington Day*	Feb 22	2.2 2.3
5	Feb 27	2.4	Mar 1	2.5
6	Mar 6	2.6	Mar 8	**Test 1**
7	Mar 13	2.7 3.1	Mar 15	3.2
8	Mar 20	3.3	Mar 22	3.4
break	Mar 27	*break*	Mar 29	*break*
9	Apr 3	3.6 (3.5)	Apr 5	3.6 3.7
10	Apr 10	4.1 4.2	Apr 12	**Test 2** *Withdrawal deadline 4/14*
11	Apr 17	4.2 4.3	Apr 19	4.4
12	Apr 24	5.1	Apr 26	5.2
13	May 1	5.3	May 3	**Test 3**
14	May 8	5.4	May 10	5.6
15	May 15	5.6	May 17	catch up (5.5)
16	May 22	review	May 24	**Final**

Schedule subject to change with prior notice.