San Diego Community College District
Mesa College
Course Syllabus, Spring 2019

Subject Area and Course Number: Mathematics 122
Course Title: Basic Techniques of Applied Calculus II **Units:** 3.0
Class Meets: Monday, Wednesday 7:05 - 8:30 PM, room MS213 **CRN:** 00930
Instructor: Russell La Puma **Office:** MS222E
Voice mail: (619) 388-2767 x5503 **Office Hours:** MW 1:30 - 2:30 P.M.
Web: http://homework.sdmesa.edu/rlapuma **E-mail:** lapumath@gmail.com
WebAssign Class Key: `sdmesa 4251 5655`

Prerequisite: Math 121 with a grade of "C" or better, or equivalent.

Course Description: This second course in a math sequence covers methods of integration, multivariable functions and optimization problems, differential equations, Taylor series development and application, derivatives and integrals of trigonometric functions, and their usage in solving problems encountered in real-world applications in business, life and social sciences and economics. It is intended for students majoring in business, natural science, social science and economics.

Transfer Applicability: Associate Degree Credit & transfer to CSU. CSU General Education. IGETC. UC Transfer Course List.
Limitation: MATH 122 and 151 combined: maximum credit, one course.

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

1. Calculate antiderivatives using integration by parts, integral tables, partial fractions, and numerical integration.
2. Evaluate and apply the concept of improper integrals.
3. Define, evaluate, apply, and graph trigonometric functions.
4. Apply calculus techniques to optimizing functions of several variables.
5. Differentiate and integrate trigonometric functions.
6. Evaluate multivariable functions and calculate their partial derivatives.
7. Evaluate and graphically interpret double integrals over rectangular and general regions.
8. Set up, solve, interpret, and graphically analyze differential equations including applications in business, natural/life science, and social science.
9. Evaluate series convergence and apply Taylor's Series to evaluate transcendental functions.

Course Learning Outcomes: The student is able demonstrate methods of finding exact and/or approximate values of definite integrals.
The student is able to solve a separable differential equation and verify the solution using the original equation.

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 and remaining tests given extra weight. There will be no make-up tests or quizzes. There will be short quizzes tentatively scheduled for every second class meeting, with the lowest two quiz scores dropped. Homework will be done either on line using WebAssign, 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 978-1-305-75342-6.
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), or missed tests, the student *will* be dropped. The withdrawal deadline is **April 12**. Any student still enrolled in the course after that date cannot receive a grade of "W." It is the student's responsibility to add, drop, or withdraw from classes before the deadlines stated in the class schedule.

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 phones, are unnecessary and unwelcome in the classroom.

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 122 – La Puma – Spring 2019

week	Mon		Wed	
1	Jan 28	introduction	Jan 30	5.6 (review)
2	Feb 4	6.1	Feb 6	6.1
3	Feb 11	6.2	Feb 13	6.3
4	Feb 18	*Washington's birthday*	Feb 20	6.4
5	Feb 25	7.1-7.3 (review)	Feb 27	**Test 1**
6	Mar 4	7.3 7.4	Mar 6	7.5
7	Mar 11	7.6	Mar 13	7.7
8	Mar 18	8.1 8.2	Mar 20	8.3
break	Mar 25	*break*	Mar 27	*break*
9	Apr 1	8.4	Apr 3	8.5 review
10	Apr 8	**Test 2**	Apr 10	9.1 *withdrawal deadline 4/12*
11	Apr 15	9.2	Apr 17	9.3
12	Apr 22	9.4	Apr 24	10.1
13	Apr 29	10.2	May 1	10.3
14	May 6	review	May 8	**Test 3**
15	May 13	10.4	May 15	catch up
16	May 20	review	May 22	**Final**

Schedule subject to change with prior notice.