San Diego Community College District
Mesa College
Course Syllabus, Spring 2017

Subject Area and Course Number: Mathematics 96
Course Title: Intermediate Algebra and Geometry **Units:** 5.0
Class Meets: Monday, Wednesday 7:05 P.M. - 9:30 P.M., room MS211 **CRN:** 88417
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
MyMathLab course ID: `lapuma39809`

Prerequisite: Math 46 with a grade of "C" or better, or equivalent, or assessment Skill Level M40.

Advisory: ENGL 043 with a grade of "C" or better, or equivalent or Assessment Skill Level W4, and ENGL 048 with a grade of "C" or better, or equivalent or Assessment Skill Level R5.

Course Description: Intermediate Algebra and Geometry is the second of a two-semester integrated sequence in algebra and geometry. This course covers systems of equations and inequalities; radical and quadratic equations; quadratic functions and their graphs; complex numbers; nonlinear inequalities; exponential and logarithmic functions; conic sections; sequences and series; and solid geometry. The course will also include application problems involving the topics covered. This course is the prerequisite for numerous collegiate level/transfer level mathematics courses. (FT). Associate Degree Credit only and not Transferable.

Student Learning Objectives:

Upon successful completion of the course the student will be able to:
1. Solve systems of linear equations in three variables using a variety of methods, including matrices.
2. Create graphs of systems of linear inequalities in two variables and determine the solution set.
3. Simplify and perform the basic arithmetic operations on radical expressions in both radical and exponential form and solve radical equations.
4. Create graphs of nonlinear functions using various methods, including transformations.
5. Perform the basic arithmetic operations with complex numbers.
6. Solve quadratic equations including those having complex number solutions.
7. Identify and graph conic sections;
8. Solve absolute value inequalities and nonlinear inequalities in one variable.
9. Perform basic algebra with functions, determine whether a function is one-to-one and find the inverse of a one-to-one function.
10. Use the properties of and relationship between exponential and logarithmic functions to solve a variety of application problems;
11. Determine the pattern of simple sequences, including arithmetic and geometric sequences, and use appropriate notation in expressing the closed form of the sequence.
12. Apply arithmetic and geometric sequences and their sums in solving related problems.
13. Identify three dimensional geometric figures and apply the appropriate surface area and volume formulas.

Student Learning Outcomes: Students will be able to demonstrate knowledge of the interrelatedness of the equation of a quadratic function with its graph, including the vertex and x and y intercepts.
The student will be able to demonstrate knowledge of the application of an exponential function including the growth/decay constant, "population" at a specified time, the time

required to achieve a specified population, and the doubling time.
Students will use correct mathematical terminology to identify geometric solids and their properties.

Evaluation: There will be four 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 week, with the lowest two quiz scores dropped. Homework will be done on-line using MyMathLab. 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 three @	18%	each
Test, worst	6%	
Final	20%	

Text and Supplies: *Elementary and Intermediate Algebra: Concepts and Applications*, Bittinger/Ellenbogen/Johnson, 6th ed,, ISBN: 0-321-84874-8. Purchase of a MyMathLab Student Access Kit, either bundled with the textbook or separate, is required.
A scientific calculator capable of evaluating log and trig functions is required for the course. A graphing calculator (e.g. a TI-84) may be useful, especially if one plans to proceed to more advanced mathematics or statistics courses.

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 96 – La Puma – Spring 2017

week	Mon		Wed	
1	Jan 30	introduction	Feb 1	8.1 8.2
2	Feb 6	8.4	Feb 8	8.4 8.6
3	Feb 13	8.3, 8.5 8.7	Feb 15	8.7 9.1, 9.2
4	Feb 20	*Washington Day*	Feb 22	9.3 9.4
5	Feb 27	10.1 review	Mar 1	**Test 1** 10.2
6	Mar 6	10.3 10.4	Mar 8	10.5 10.6
7	Mar 13	10.7 geometry: trigonometry	Mar 15	trigonometry 10.8
8	Mar 20	11.1 review	Mar 22	**Test 2** 11.2
break	Mar 27	*break*	Mar 29	*break*
9	Apr 3	11.3 11.4	Apr 5	11.5 11.6
10	Apr 10	11.7 11.8	Apr 12	11.9, 12.1 *Withdrawal deadline 4/14*
11	Apr 17	12.2 review	Apr 19	**Test 3** 12.3
12	Apr 24	12.4 12.5	Apr 26	12.6 12.7
13	May 1	13.1 13.2	May 3	13.3 13.4
14	May 8	14.1 review	May 10	**Test 4** 14.2
15	May 15	14.3 geometry: volume	May 17	geometry: surface area 14.4
16	May 22	review	May 24	**Final**

Schedule subject to change with prior notice.