PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

___ Transfer course _X_ A.A. degree applicable course

COURSE NUMBER AND TITLE: Math 56 - Beginning/Intermediate Algebra

UNIT VALUE: 6

MINIMUM NUMBER OF SEMESTER HOURS: 128

BASIC SKILLS REQUIREMENTS: Appropriate language and computational skills.

ENTRANCE REQUIREMENTS:

PREREQUISITE: Eligibility determined through the math placement process ~~or documented recent experience in Algebra.~~

COREQUISITE: None

RECOMMENDED PREPARATION: None

SCOPE OF COURSE: A review of elementary algebra and in-depth coverage of intermediate algebra intended for the student who has previous experience with algebra. Meets requirement for the AA degree. Meets prerequisite requirement for mathematics courses numbered 100-120, and 135. Not open to students with credit in Math 60.

SPECIFIC COURSE OBJECTIVES: The successful student will be able to:

1. Formulate algebraic models to represent relations from tables, graphs and problem situations.
2. Investigate and compare multiple representations of a function.
3. Analyze linear, quadratic, exponential, and logarithmic functions from graphic, numeric, and analytic perspectives.
4. Analyze and solve linear and nonlinear systems of equations and inequalities from graphic, numeric, and analytic perspectives.
5. Solve application problems involving linear, quadratic, exponential, and rational relationships and interpret the solutions.
6. Identify and apply principles of algebraic manipulation necessary to rewrite expressions and equations in alternative forms.
7. Apply critical thinking and mathematical reasoning skills necessary in algebraic problem solving and related areas of endeavor.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE: At least the following topics will be covered:

1. Use of properties of real numbers, order of operations, and properties of exponents (including scientific notation) to reorganize and simplify expressions.
2. Application of the concept of variable to represent relationships from tables, graphs, problem situations, and geometric diagrams.
3. Comprehensive coverage of linear functions including the formulation, graphing, analyzing and solving of linear equations and linear equalities.
4. Comprehensive coverage of quadratic functions including the formulation, graphing, analyzing and solving of quadratic equations.
5. Rewriting expressions and equations (literal) in alternative forms using
    a. distributive property and factoring
    b. fundamental operations with rational exponents and radicals.
6. Applications involving rational expressions and solving equations with same.
7. Solving application problems involving radicals including those resulting from the Pythagorean Theorem and Distance Formula.
8. Use algebra to reinforce and solve problems involving geometric concepts such as area, volume, perimeter, and similar triangles.
9. Introduction to conic sections and their graphs.
10. Introduction to exponential functions, their applications, their graphs and inverse relationship with logarithmic functions.
11. Applying and solving systems of equations.
12. Additional topics may be included at instructor's discretion.

REQUIRED READING: Lehmann, Jay. Intermediate Algebra: A Journey by Discovery of Curve-Fitting. Upper Saddle River: Prentice Hall, 1998.
AND
Department-Generated Materials

SUGGESTED READING: None

REQUIRED WRITING: Algebraic problem-solving exercises on homework assignments, quizzes, and written tests are more appropriate. In addition, students may be required to write reports from one paragraph to several pages explaining concepts or explaining and interpreting solutions to non-routine or applied problems.

OUTSIDE ASSIGNMENTS:
Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short term classes.

Outside assignments include reading the textbook, reviewing lecture material, and completing the assigned problem sets, as deemed necessary by the instructor. Requires 32 hours of lab outside of class.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:
__X__ lecture
__X__ laboratory
_____ lecture-laboratory combination
_____ directed study

This course may be offered as a distance education course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.
Yes __ No _X_

If yes, check all that apply. (See guidelines for preparation for definitions.)

_____ telecourse
_____ mediated instruction
_____ computer assisted instruction

GRADING POLICY AND STANDARDS (include methods of determining whether the stated objectives have been met by students): A possible grading scale might be the following:

Class Participation	0 - 10%
Homework & lab assignments	0 - 20%
Exams	60 - 80%
Final Exam	20 - 40%

IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?
Yes _____ No _X_ Number of times course may be taken for credit: _1_

If yes, identify specific provision of Title 5 Division 2 section(s) 55761-55763 and 58161 which qualifies course as repeatable:

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