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| **PALOMAR COLLEGE** COURSE OUTLINE FOR CREDIT COURSE |
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| * Courses numbered 1 - 49 are remedial or college preparatory courses which do not apply toward an A. A. Degree and are not intended for transfer. * Courses numbered 50-99 apply toward an AA Degree, but are not intended for transfer. * Courses numbered 100 and higher apply toward an AA Degree and/or are intended for transfer to a four-year college or university. |
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| **Course Number and Title:** MATH 56 Beginning/Intermediate Algebra |
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| **Unit Value:** 6     **Lecture Hours Per Week:** 6     **Lab Hours Per Week:** 2     **Lecture/Lab Hours Per Week:** |
| **Grading Basis:** Grade/Pass/No Pass |
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| **Basic Skills Requirements:** Appropriate Language and/or Computational Skills. |
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| **Requisite(s)** To satisfy a prerequisite, the student must have earned a letter grade of A, B, C or P(Pass) in the prerequisite course, unless otherwise stated.  **Prerequisite:** Eligibility determined through the math placement process  **Corequisite:** None  **Prerequisite: Completion of, or concurrent enrollment in** None  **Recommended Preparation:** None  **Limitation on Enrollment:** None |
| **Catalog Description:**  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 A.A. degree. Meets prerequisite requirement for mathematics courses number 100-120, and 135. |
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| **Specific Course Objectives:** Upon successful completion of the course the 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 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. |
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| **Methods of Instruction:** Methods of Instruction may include, but are not limited to, the following:   1. Lecture 2. Lab |
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| **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.   1. Comprehensive coverage of quadratic functions including the formulation, graphing, analyzing and solving of quadratic equations. 2. Rewriting expressions and equations (literal) in alternative forms using    1. distributive property and factoring    2. fundamental operations with rational exponents and radicals. 3. Applications involving rational expressions and solving equations with same. 4. Solving application problems involving radicals including those resulting from the Pythagorean Theorem and Distance Formula. 5. Use algebra to reinforce and solve problems involving geometric concepts such as area, volume, perimeter, and similar triangles. 6. Introduction to conic sections and their graphs. 7. Introduction to exponential functions, their applications, their graphs and inverse relationship with logarithmic functions. 8. Applying and solving systems of equations. 9. Additional topics may be included at instructor's discretion. |
| **Textbooks/Resources:** May Include Textbooks, Manuals, Periodicals, Software, and Other Resources   1. Lehmann, Jay. Intermediate Algebra: A Journey Discovery of Curve-Fitting. Upper Saddle River: Prentice Hall, 1998. 2. Department-generated Materials |
| **Required Reading:** |
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| **Suggested Reading:** |
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| **Critical Thinking:** |
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| **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. |
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| **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. |
| **Methods of Assessment:** Methods of Assessment may include, but are not limited to, the following:   * Class Participation * Exams/Tests * Homework * Lab Activities |
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| **Open Entry/Open Exit:**  No, course is not offered as open entry/open exit. |
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| **Is Course Repeatable for Reason(s) Other Than Deficient Grade?** No |
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| **Contact Person:** Susan R. Snow |
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