



El Camino College
COURSE OUTLINE OF RECORD – Official

Subject:	PASS
Course Number:	502
Descriptive Title:	Mathematics
Division:	Library and Learning Resources
Department:	Pathways to Academic Success
Course Disciplines:	Mathematics
Catalog Description:	This noncredit open entry/open exit course prepares students for the mathematics portion of the General Education Development (GED) exam and High School Equivalency Test (HiSET) in Mathematics. It provides instruction in quantitative and Algebraic problem solving as well as skill building in test-taking strategies to respond to questions on the GED and HiSET exams in mathematical reasoning. Upon completion and demonstration of competence in the course, students may continue GED and HiSET preparation or advance to develop skills for the workplace and to prepare for future educational opportunities.
Prerequisite:	
Co-requisite:	
Recommended Preparation:	
Enrollment Limitation:	
Hours Lecture (per week):	2
Hours Laboratory (per week):	0
Outside Study Hours:	4
Total Course Hours:	36
Course Units:	0
Grading Method:	Pass/No Pass/SP
Credit Status:	Non Credit
Transfer CSU:	No
Effective Date:	
Transfer UC:	No
Effective Date:	
General Education ECC:	
Term:	
Other:	
CSU GE:	
Term:	
Other:	
IGETC:	
Term:	

Other:	
Student Learning Outcomes:	<p>SLO #1 Solving Algebra</p> <p>Demonstrate ability to solve algebraic functions and patterns.</p> <p>SLO #2 Basic Mathematical Computation</p> <p>Demonstrate basic mathematical computation in foundation concept areas (fractions, decimals, ratios and proportions).</p> <p>SLO #3 Basic Calculations</p> <p>Perform basic calculations using percent, metric measurements and geometric problems.</p> <p>SLO #4 Graphics, Statistics, and Probability</p> <p>Demonstrate ability to solve basic math using graphics, statistics and probability.</p>
Course Objectives:	<ol style="list-style-type: none"> 1. Apply number concepts, including ordering rational numbers, absolute value, multiples, factors, and exponents. 2. Add, subtract, multiply, divide, and use exponents and roots of rational, fraction, and decimal numbers. 3. Calculate and use ratios and percentages. 4. Calculate dimensions, perimeter, circumference, and area of two-dimensional figures. 5. Calculate dimensions, surface area, and volume of three-dimensional figures. 6. Interpret and create data displays. 7. Calculate and use mean, median, mode, and weighted average. 8. Utilize counting techniques and determine probabilities. 9. Write, evaluate, and compute with expressions and polynomials. 10. Write and solve linear equations. 11. Write, solve, and graph linear inequalities. 12. Write and solve quadratic equations. 13. Connect and interpret graphs and functions. 14. Connect coordinates, lines, and equations.
Major Topics:	<p>I. Quantitative Problem Solving (15 hours, lecture)</p> <p>A. Number sense concepts</p> <ol style="list-style-type: none"> 1. Ordering rational numbers 2. Absolute value 3. Multiples 4. Factors 5. Exponents <p>B. Exponents and roots (all operations)</p>

	<p>1. Rational</p> <p>2. Fraction</p> <p>3. Decimal numbers</p> <p>C. Ratios, percents, and scale factors</p> <p>D. Dimensions, perimeter, circumference, and area of two-dimensional figures</p> <p>E. Dimensions, perimeter, circumference, and area of three-dimensional figures</p> <p>F. Interpretation and creation of data displays</p> <p>G. Calculating mean, median, mode, and weighted average</p> <p>H. Counting techniques and determining probabilities</p> <p>II. Algebraic Problem Solving (15 hours, lecture)</p> <p>A. Expressions and polynomials</p> <p>B. Linear equations</p> <p>C. Linear inequalities</p> <p>D. Quadratic equations</p> <p>E. Graphs and functions</p> <p>F. Coordinates, lines, and equations</p> <p>III. Solving Real World Math Problems (6 hours, lecture)</p> <p>A. Using TI-30XS on-screen calculator</p> <p>B. Using data, charts, and graphs</p>
Total Lecture Hours:	36
Total Laboratory Hours:	0
Total Hours:	36
Primary Method of Evaluation:	3) Skills demonstration
Typical Assignment Using Primary Method of Evaluation:	Complete pages 104-115 in your textbook to calculate scale factors from diagrams. Review your results with the instructor or tutor for further instruction.
Critical Thinking Assignment 1:	William is planning a team meeting. He has a budget of \$1,325 for renting a meeting room at a local hotel and providing lunch. He expects 26 people to attend the meeting. The cost of renting the meeting room is \$270. Write an inequality that shows how to find the amount, x , William can spend on lunch for each person.

Critical Thinking Assignment 2:	Consider this system of linear equations: $x+2y=3$ and $2x-y=-4$. Examine the constants in the first equation and describe any pattern. Repeat for the second equation. Solve the system and display your solution graphically. What is the significance of the solution? Create and solve a few more systems similar to the example above. Comment on your solutions. Make a conjecture regarding this type of system. Explain in writing how you might prove your conjecture.
Other Evaluation Methods:	Completion, Homework Problems, Multiple Choice, Objective Exam
If Other:	
Instructional Methods:	Discussion, Group Activities, Lecture, Multimedia presentations
If other:	
Work Outside of Class:	Answer questions, Problem solving activity, Skill practice, Study
If Other:	
Up-To-Date Representative Textbooks:	Bowling, Matthew. <i>GED Study Guide: 2023-2024</i> . Mometrix, 2022.
Alternative Textbooks:	
Required Supplementary Readings:	
Other Required Materials:	
Requisite	
Category	
Requisite course:	
Requisite and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s).	
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Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	Matthew Kline
Date:	4/25/2023
Original Board Approval Date:	12/18/2023 effective SP 2024