El Camino College
COURSE OUTLINE OF RECORD – Official

Subject:	MATH
Course Number:	506
Descriptive Title:	Math Essentials for STEM: Solving Equations and Inequalities
Division:	Mathematical Sciences
Department:	Mathematics
Course Disciplines:	Mathematics
Catalog Description:	This noncredit course covers solving equations and inequalities involving polynomials, rational, radicals, exponentials, and logarithms.
Prerequisite:	
Co-requisite:	
Recommended Preparation:	
Enrollment Limitation:	
Hours Lecture (per week):	.22
Hours Laboratory (per week):	0
Outside Study Hours:	.44
Total Course Hours:	4
Course Units:	0
Grading Method:	Pass/No Pass/SP
Credit Status:	Noncredit
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:	Upon completion of this course, students will be able to:

	1. solve each type of equation and recognize extraneous solutions.
	2. solve each type of inequality.
	3. solve equations and inequalities numerically.
Course Objectives:	1. Develop the ability to solve an equation that includes polynomials, rationals, radicals, exponentials, and logarithms.
	2. Test for extraneous solutions and develop the ability to determine when they may occur.
	3. Use the ability to solve equations to solve inequalities.
	4. Use numerical methods to solve equations and inequalities.
Major Topics:	I. Solving equations and inequalities
	A. Linear
	B. Quadratic
	C. Polynomial
	D. Rational
	E. Radical
Total Lecture Hours:	4
Total Laboratory Hours:	0
Total Hours:	4
Primary Method of Evaluation:	2) Problem solving demonstrations (computational or non-computational)
Typical Assignment Using Primary Method of Evaluation:	Solve 3/5 + 7/(x+2) = 2
Critical Thinking Assignment 1:	Solve and test for extraneous solutions: sqrt(x+7) + 2 = sqrt(3-x)
Critical Thinking Assignment 2:	Solve: x^4 > -5x^3-1
Other Evaluation Methods:	Homework Problems, Objective Exam, Quizzes
If Other:	
Instructional Methods:	Demonstration, 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 Texts:	Teacher-generated materials
Alternative Texts:	

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).	
Requisite Skill:	
Requisite Skill and Matching skill(s): Bold the requisite skill(s). if applicable	
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Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	Matthew Kline
Date:	04/29/2024
Original Board Approval Date:	04/28/2025
Effective Term:	FA 2026