MATH 089: COREQUISITE SUPPORT FOR PATH TO CALCULUS

Citrus College Course Outline of Record

Heading	Value
Effective Term:	Fall 2025
Credits:	2
Total Contact Hours:	36
Lecture Hours :	36
Lab Hours:	0
Hours Arranged:	0
Outside of Class Hours:	72
Total Student Learning Hours:	108
Prerequisite:	Direct placement based on multiple measures.
Corequisite:	MATH 189.
Transferable to CSU:	No
Transferable to UC:	No
Grading Method:	Pass/No Pass

Catalog Course Description

A review of the core prerequisite skills, competencies, and concepts needed in Path To Calculus. Intended for majors in science, technology, engineering, and mathematics (STEM) who are concurrently enrolled in MATH 189, Path To Calculus, at Citrus College. Topics include: a review of computational skills developed in intermediate algebra, factoring, operations on rational and radical expressions, absolute value equations and inequalities, exponential and logarithmic expressions and equations, functions including composition and inverses, and an in-depth focus on quadratic functions. 36 lecture hours.

Course Objectives

- Simplify or reorganize expressions by:\\na. Performing operations on rational expressions\\nb. Performing operations on radical expressions\\nc. Applying properties of rational exponents\\nd. Applying properties of logarithms
- Solve each of the following:\\na. Absolute value equations\\nb. Quadratic equations\\n 1. By extracting roots\\n 2. By completing the square\\n 3. Using the quadratic formula\\nc. Rational equations\ \nd. Radical equations\\ne. Exponential equations\\nf. Logarithmic equations\\ng. Systems of two equations

Major Course Content

A just-in-time approach to:

1. Graphing of linear, absolute value, quadratic functions
2. Writing equations from the graphs of linear and quadratic functions
3. Using graphic, numeric and analytic methods to solve linear, quadratic, and rational equations
4. Fundamental operations with exponents
5. Solving application problems
6. Linear systems of equations
7. Exponential and logarithmic functions, their graphs, their inverse relationship and applications

Suggested Reading Other Than Required Textbook

Students will be provided with reading assignments on topics such as affective domain and growth mindset to help students overcome self-sabotaging behaviors, such as missing class, not doing homework, and non-participation in class-room activities.

Examples of Required Writing Assignments

Students will be expected to write short self-reflection papers to help them develop meta-cognitive strategies to develop skills that will allow them to take charge of their learning of algebraic concepts, and to develop a plan of action to improve study skills to prepare for assessments in the course.

Examples of Outside Assignments

Students will be able to use exponential and logarithmic functions to predict population growth/decay using data points and finding the growth/decay factor.

Instruction Type(s)

Lecture, Online Education Lecture