

Calallen ISD 2025-2026
Syllabus

Campus: Calallen High School

Course and/or Grade Level: Pre-Calculus and PAC Pre-Calculus

Course Description: This course provides a foundation for calculus. Topics covered are trigonometric functions, polar graphs and vectors, complex numbers, real numbers and coordinates, linear and quadratic functions, exponential and logarithmic functions, polynomial and rational functions, systems of equations and inequalities, conic sections, sequences and series and limits.

Semester 1: August 13 – December 19, 2025

1st Quarter Topics	2nd Quarter Topics
Sect. 1-1: Functions Sect. 1-2: Analyzing Graphs of Functions/ Relations Sect. 1-3: Continuity, End Behavior, & Limits Sect. 1-4: Extrema & Ave. Rates of Change Sect. 1-5: Parent Functions & Transformations Sect. 1-6: Function Operations & Composition Functions Sect. 1-7: Inverse Relations & Functions Sect. 2-1: Power & Radical Functions Sect. 2-2: Polynomial Functions Sect. 2-3: The Remainder & Factor theorems Sect 2-4: Zeros of Polynomial Functions Sect. 2-5: Rational Functions Sect. 2-6: Nonlinear Inequalities	Sect. 2-3: The Remainder and Factor Theorems Sect. 2-4: Zeros of Polynomial Functions Sect. 2-5: Rational Functions Sect. 2-6: Non-linear Inequalities Sect. 3-1: Exponential Functions Sect. 3-2: Logarithmic Functions Sect. 3-3: Properties of Logarithms Sect. 3-4: Exponential and Logarithmic Equations Sect. 4-1: Right Triangle Trigonometry Sect. 4-2: Degrees and Radians Sect. 4-3: Trigonometric Functions on the Unit Circle

Semester 2: January 5 – May 29, 2026

3rd Quarter Topics	4th Quarter Topics
Sect. 5-1: Trigonometric Identities Sect. 5-2: Verifying Trigonometric Identities Sect. 5-3: Solving Trigonometric Equations Sect. 5-4: Sum and Difference Identities Sect. 5-5: Multiple-Angle and Product-to-Sum Identities Sect. 7-1: Parabolas Sect. 7-2: Ellipses and Circles Sect. 7-3: Hyperbolas Sect. 8-1: Introduction to Vectors (drawings) Sect. 8-2: Vectors in the Coordinate Plane Sect. 8-3: Dot Product	Sect. 9-1 Polar Coordinates & Distance Sect. 9-2: Graphs of Polar Equations Sect. 9-3: Polar & Rectangular Forms of Equations Sect. 10-1 Sequences, Series, and Sigma Notation Sect. 10-2: Arithmetic Sequences and Series Sect. 10-3: Geometric Sequences and Series Sect. 10-5: The Binomial Theorem Sect. 6.4: Partial Fractions Sect. 7.5: Parametric Equations Sect. 12-1: Estimating Limits Graphically Sect. 12.2: Evaluating Limits Algebraically

**Minor adjustment to the schedule may be made based on campus schedules and student needs.*