College Trigonometry Curriculum Map
2024-2025

TOPIC & TEXTBOOK CHAPTERS	Duration	Month(s)
Unit 1: Six Basic Trigonometric Functions Chapter 6a: Angles, DMS Notation, Arc Length, Linear Velocity, Angular Velocity, Six Trigonometric Functions (Sine, Cosine, Tangent, Secant, Cosecant, and Cotangent), The Unit Circle	3 wks	Aug/Sep
Unit 2: Graphing Trigonometric Functions Chapter 6b: Trigonometric Function Properties (Symmetry, Even/Odd, Domain/Range), Trigonometric Function Graphs (Sine, Cosine, Tangent, Cosecant, Secant and Cotangent), Phase Shift, Sinusoidal Curve Fitting	6 wks	Sep
Unit 3: Analytic Trigonometry I Chapter 7 Part 1: Inverse Trigonometric Functions, Trigonometric Identities, Sum/Difference Formulas	3 wks	Oct
Unit 4: Analytic Trigonometry II Chapter 7 Part 2: Double-Angle & Half-Angle Formulas, Product-to-Sum & Sum-to-Product Formulas, Trigonometric Equations	3 wks	Oct/Nov
Unit 5: Applications of Trigonometric Functions Chapter 8: Applications of Right Triangle Trigonometry, Law of Sines, Law of Cosines, Area of a Triangle, Simple Harmonic Motion, Damped Motion, Combing Waves	5 wks	Nov/Dec
Unit 6: Polar Coordinates & Complex Numbers Chapter 9a: Polar Coordinates, Polar Equations & Graphs, The Complex Plane, De Moivre's Theorem, Complex Roots	3 wks	Jan
Unit 7: Polar Coordinates & Vectors Chapter 9b Vectors, The Dot Product, Decomposing Vectors, Angle Between Vectors, Computing Work, Vectors in Space, The Cross Product	3 wks	Feb
Unit 8: Analytic Geometry Chapter 10: Conics, Parabolas, Ellipses, Hyperbolas, Rotation of Axes, General Form of a Conic, Polar Equations of Conics, Plane Curves & Parametric Eqns, Systems of Nonlinear Equations	5 wks	Feb/Mar
Unit 9: Sequences, Induction, and Binomial Theorem Chapters 12 & 13: Sequences, Geometric & Arithmetic Sequences & Series, Mathematical Induction, Binomial Theorem, Counting, Permutations, Combinations, Probability	4 wks	Mar/Apr
Unit 10: College Algebra Review & Calculus Preview Chapters 2, 4, 5, & 14: Piece-Wise Defined Functions, Rational Functions, Exponential/Logarithmic Equations/Functions, Finding Limits Using Tables and Graphs, Algebra Techniques for Finding Limits, One-Sided Limits; Continuous Functions, The Tangent Problem; The Derivative, The Area Problem; The Integral	5 wks	Apr/May