

College Algebra Curriculum Map

TOPIC & TEXTBOOK CHAPTERS	Duration	Month(s)
<p>Unit 1: Algebra and Geometry Review <u>Appendix A.1-A.10</u>: Set notation, inequalities, absolute value, exponent rules, right triangle properties, geometry word problems, polynomials, polynomial long division, synthetic division, rational expressions, solving equations, factoring, completing the square, quadratic formula, complex numbers, word problems, interval notation, nth roots, rational exponents</p>	5 wks	Aug/Sep
<p>Units 2 and 3: Functions and Their Graphs <u>Chapters 1 & 2</u>: Distance formula, midpoint formula, symmetry, intercepts of functions, lines, point-slope equation, slope-intercept equation, general form of a line, parallel lines, circles, function, domain, graphing functions, average rate of change, secant line equation, piecewise-defined functions, absolute value function, transformations, modeling using functions</p>	5 wks	Oct
<p>Units 4 and 5: Linear, Quadratic, Polynomial and Rational Functions <u>Chapters 3 & 4</u>: Increasing/decreasing linear functions, linear regression, modeling using quadratic functions, maximization, quadratic regression, inequalities involving quadratics, polynomials, power functions, cubic regression, vertical and horizontal asymptotes, polynomial and rational inequalities, zeros of functions, Fundamental Theorem of Algebra,</p>	6 wks	Nov/Dec
<p>Unit 6: Trigonometric Functions <u>Chapter 6</u>: Angles, Trigonometric Functions, Unit Circle, Trigonometric Function Properties,</p>	2 wks	Jan
<p>Unit 7: Exponential and Logarithmic Functions <u>Chapter 5</u>: Composite Functions, One-to-One Functions, Inverse Functions, Exponential Functions, Logarithmic Functions, Properties of Logarithms, Logarithmic & Exponential Equations, Financial Models, Exponential Growth/Decay Models, Logistic Growth/Decay Models</p>	5 wks	Feb/Mar
<p>Unit 8: Analytic Geometry <u>Chapter 10 (10.1-10.4)</u>: Conics, parabola, ellipse, hyperbola</p>	2 wks	Mar
<p>Unit 9: Systems of Equations and Inequalities <u>Chapter 11</u>: Systems of linear equations, solving multivariable systems, matrices, row operations, augmented matrices, determinants, matrix algebra, inverse of a matrix, systems of inequalities, linear programming</p>	4 wks	April
<p>Unit 10: Probability and Data Analysis (If time allows) Mean, median, mode, range, IQR, boxplots, stem-and-leaf plots, dotplots, bar graphs, pie charts, normal distributions, standard deviation,</p>	2 wks	May
<p>Unit 11: Review for Final Exam (If time allows) Review for Final Exam, take final exam</p>	1 wk	May