

University Preparatory Course

Grade 9 - 10

Unit #1 - Functions: Characteristics and Properties

Properties and characteristics of functions and their inverses, graphing functions using transformations, investigating the characteristics of piecewise functions

Unit #2 - Polynomials

Factoring, Polynomial Long Division, Remainder Theorem, Factor Theorem, Solving Polynomial Equations, Graphing Polynomial Functions, Degree of Functions, Leading Coefficient, Odd & Even Functions, Polynomial Inequalities

Unit #3 - Rational Functions

Graphing Rational Functions, Rate of Change, Asymptotes, Solving Rational Equations, Solving Rational Inequalities

Unit #4 - Trigonometric Functions

Radians, Graphing Trig Functions, Equation of a Trig Function, Trigonometric Equations & Identities, Exact Values of Trig Ratios, Solving Trig Equations, Trig Identities

Unit #5 - Exponential & Logarithmic Functions

Solving Exponential Equations, Graphing Exponential Functions, Simplifying Logarithmic Functions, Change of Base, Solving Logarithmic Equations, Graphing Logarithmic Functions

Unit #6 - Combinations of Functions

Graphing Sum & Difference Functions, Graphing Product & Quotient Functions, Composite Functions, Inverse Functions, Inequalities

Unit #7 - Summative

Note: The order of the units of study may change due to student needs and resources available during the course. Homework is assigned on a regular basis. Homework completion and regular attendance are key to being successful on this course.

Good Luck!