

## Expectations and Outcomes

Grade Level/Course: 10-12

Content Area: Math

Unit Title	Guarantees
Unit 1: Foundations for Functions	<ul style="list-style-type: none"> <li>• Be able to apply transformations to points and sets of points</li> <li>• Be able to identify and apply basic functions of parent's functions</li> <li>• Be able to recognize and transform transformations to linear functions.</li> </ul>
Unit 2: Quadratic Functions	<ul style="list-style-type: none"> <li>• Define, identify, and graph quadratic functions.</li> <li>• Be able to understand the definition of a zero and different ways to find them.</li> <li>• Define and use imaginary and complex numbers, be able to solve operations</li> <li>• Solve quadratic inequalities by using tables and graphs.</li> </ul>
Unit 3: Polynomial Functions	<ul style="list-style-type: none"> <li>• Use long division and synthetic division to divide polynomials</li> <li>• Factoring cubic equations</li> <li>• Use the Fundamental Theorem of Algebra and its corollary to write a polynomial equation of least degree with given roots.</li> </ul>
Unit 4: Exponential and Logarithmic Functions	<ul style="list-style-type: none"> <li>• Write and evaluate exponential expressions to model growth and decay situations.</li> <li>• Write equivalent forms for exponential and logarithmic functions and evaluate logarithmic functions</li> <li>• Use properties to simplify logarithmic expressions.</li> </ul>
Unit 5: Rational and Radical Functions	<ul style="list-style-type: none"> <li>• Solve problems involving direct, inverse, joint, and combined variation.</li> <li>• Simplify, multiply, and/or divide rational expressions</li> <li>• Add and subtract rational expressions.</li> <li>• Graph rational functions and transform rational functions by changing parameters</li> <li>• Solve radical equations.</li> </ul>
Unit 6: Properties and Attributes of Functions	<ul style="list-style-type: none"> <li>• Translate between the various representations of functions and solve using these functions.</li> <li>• Write and graph piecewise functions</li> <li>• Add, subtract, multiply, and divide operations with functions.</li> <li>• Apply functions to problem situation</li> </ul>

<b>Unit Title</b>	<b>Guarantees</b>
Unit 7: Probability	<ul style="list-style-type: none"><li>• Solve problems involving the Fundamental Counting Principle, permutations, and combinations</li><li>• Find the theoretical and experimental probability of an event</li><li>• Determine whether events are independent or dependent</li><li>• Find the probability of mutually exclusive events and the probability of inclusive events.</li></ul>
Unit 10: Trigonometry and Angles	<ul style="list-style-type: none"><li>• Draw angles in standard position and determine the values of the trigonometric functions for an angle in standard position</li><li>• Convert angle measures between degrees and radians and find the values of trigonometric functions on the unit circle.</li><li>• Use trigonometric equations and inverse trigonometric functions to solve problems</li><li>• Use Heron's Formula to find the area of a triangle</li></ul>