

Algebra III

Curriculum Map

	Units and Time	Standards and Essential Skills	Formative/Summative Assessments
1 st Quarter	Unit 1 Pre-Requisite Skills – 4 weeks Unit 2 – Polynomial Functions – 5 weeks	<ul style="list-style-type: none"> • Identify a number as Natural, Whole, Integer, Rational, Irrational and/or Real • Evaluate expressions using the order of operations • Evaluate expressions involving exponents • Evaluate expressions involving absolute values • Simplify using rules of exponents • Add, subtract, multiply and divide polynomials • Factor polynomial expressions using a variety of methods, including : Greatest Common Factor, Trinomials, Factor by Grouping, Sum/Difference of cubes and 	Formative Assessments Daily Assignments Quizzes FAL Summative Assessments Test

		<p>Difference of Squares</p> <ul style="list-style-type: none"> • Solve multi-step linear equations • Solve literal equations for a specified variable • Model contextual situations and solve problems using linear equations • Solve Polynomial equations • Use the remainder theorem to find a function value • Use the rational root theorem • Find the intercepts, maximum, minimum, and intervals of increasing and decreasing of polynomial functions • Graph polynomial functions and use graphing calculator when appropriate 	
2 nd Quarter	<p>Unit 3 Rational Functions – 4 weeks Unit 4 Exponential and Logarithmic Functions – 4 weeks</p>	<ul style="list-style-type: none"> • Simplify rational functions and state domain restrictions • Add, subtract, multiply and divide rational functions 	<p>Formative Assessments Daily Assignments Quizzes FAL Summative Assessments Test</p>

		<ul style="list-style-type: none">• Simplify complex fractions• Solve rational equations and identify extraneous solutions• Graph rational functions• Identify vertical asymptotes, horizontal asymptotes and holes• Evaluate and graph exponential and logarithmic functions• Solve exponential and logarithmic equations and check for extraneous solutions• Convert from exponential to logarithmic form and vice-versa• Apply the properties of logarithms to condense or expand logarithmic expressions• Use the Change of Base formula and technology to approximate logarithmic expressions	
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<p>3rd Quarter</p>	<p>Unit 5 Matrices – 4 weeks Unit 6 Sequences and Series – 5 weeks</p>	<ul style="list-style-type: none"> • Use matrices to represent and manipulate data • Multiply matrices by scalars to produce new matrices • Add, subtract, and multiply matrices of appropriate dimensions • Find the determinant of square matrices • Find the inverse of square matrices if it exists • Solve systems of equations using Cramer’s Rule • Solve systems using augmented matrices • Identify mathematical patterns • Use a formula for finding the nth term of a sequence • Identify and generate arithmetic and geometric sequences • Write and evaluate arithmetic series • Use summation notation 	<p>Formative Assessments Daily Assignments Quizzes FAL Summative Assessments Test</p>
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4 th Quarter	Unit 7 Conics – 4 weeks Unit 8 Trigonometry – 4 weeks	<ul style="list-style-type: none"> • Identify, graph, write and analyze equations of each type of conic section, using properties such as symmetry, intercepts, foci, asymptotes, and eccentricity, and using technology when appropriate. • Complete the square in order to generate an equivalent form of an equation for a conic section; use that equivalent form to identify key characteristics of the conic section • Evaluate trigonometric functions • Convert from degree to radian measure and vice versa 	Formative Assessments Daily Assignments Quizzes FAL Summative Assessments Test

		<ul style="list-style-type: none">• Use right triangle trigonometry to solve triangles.• Solve triangle using Law of Sines and Law of Cosines• Find the area of triangles• Graph trigonometric functions and their transformations	
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