Algebra II

Curriculum Map

	Chapters and Time	Standards and Essential Skills	Formative/Summative Assessments
1st Quarter	Chapters 1 & 2 Review of Algebra I Concepts – 5 weeks Chapter 3 Linear Systems– 4 weeks	A2.A.1.8 Represent real-world or mathematical problems using systems of linear equations with a maximum of three variables and solve using various methods that may include substitution, elimination, and graphing (may include graphing calculators or other appropriate technology). A2.A.1.9 Solve systems of equations containing one linear equation and one quadratic equation using tools that may include graphing calculators or other appropriate technology.	Formative Assessments Daily Assignments Quizzes FAL Summative Assessments Test
2nd Quarter	Chapter 4 Matrices – 2 weeks Chapter 5 Quadratic Equations and Functions – 6 weeks	A2.N.1.3 Use matrices to organize and represent data. Identify the order (dimension) of a matrix, add and subtract matrices of appropriate dimensions, and multiply a matrix by a scalar to create a new matrix to solve problems. A2.N.1.1 Find the value of i^n for any whole number n.	Formative Assessments Daily Assignments Quizzes FAL Summative Assessments Test

		A2.N.1.2 Simplify, add, subtract, multiply, and divide complex numbers. A2.A.1.1 Represent real-world or mathematical problems using quadratic equations and solve using various methods (including graphing calculator or other appropriate technology), factoring, completing the4 square, and the quadratic formula. Find non-real roots when they exist. A2.A.2.1 Factor polynomial expressions including but not limited to trinomial, difference of squares, sum ad difference of cubes, and factoring by grouping using a variety of tools and strategies. A2.A2.3 Recognize that a quadratic function has different equivalent representations. Identify and use the representation that is most appropriate to solve real-world and mathematical problems. A2.F.1.3 Graph a quadratic function. Identify the intercepts, maximum or minimum value, axis of symmetry, and vertex using various methods and tools that may	

		include a graphing calculator or appropriate technology.	
3rd Quarter	Chapter 6 Polynomials and Polynomial Functions – 4 weeks Chapter 7 Radical Functions and Rational Exponents – 5 weeks	A2.A1.4 Solve polynomial equations with real roots using various methods and tools that may include factoring, polynomial division, synthetic division, graphing calculators or other appropriate technology. A2.A.2.2 Add, subtract, multiply, divide, and simplify polynomial and rational expressions. A2.N.1.4 Understand and apply the relationship of rational. exponents to integer exponents and radicals to solve problems. A2.A.1.5 Solve square root equations with one variable and check for extraneous solutions. A2.A.2.4 Rewrite expressions involving radicals and rational exponents using the properties of exponents. A2. F.1.7 Graph a radical function (square root and cube root only) and identify the x- and y-intercepts using various methods and tools that may include a graphing calculator or other appropriate technology.	Formative Assessments Daily Assignments Quizzes FAL Summative Assessments Test

		A2.F.2.1 Add, subtract, multiply, and divide functions using function notation and recognize domain restrictions. A2.F.2.2 Combine functions by composition and recognize the inverse function, if and only if $f(g(x)) = g(f(x)) = x$. A2.F.2.3 Find and graph the inverse of a function, if it exists, in real-world and mathematical situation, Know that the domain of a function f is the range of the inverse function, and the range of the function f is the domain of the inverse function.	
4th Quarter	Chapter 8 Exponential and Logarithmic Functions – 3 weeks Chapter 9 Rational Functions – 3 weeks Chapter 11 Sequences and Series – 2 weeks Chapter 12 Probability and Statistics – 1 week	A2.A.1.2 Represent real-world or mathematical problems using exponential equations, such as compound interest, depreciation, and population growth, and solve these equations graphically (including graphing calculator or other appropriate technology) and algebraically. A2.A.1.3 Solve one-variable rational equations and check for extraneous solutions. A2.A.1.6 Solve common and natural logarithmic equations using the4 properties of logarithms.	Formative Assessments Daily Assignments Quizzes FAL Summative Assessments Test

		A2.F.1.2 recognize the graphs of exponential, radial, quadratic, and logarithmic functions,. Predict the effects of transformations algebraically and graphically, using various methods and tools that may include graphing calculators and or other appropriate technology. A2.F.1.4 Graph exponential and logarithmic functions,. Identify asymptotes and x- and y-intercepts using various methods and tools that may include graphing calculators or other appropriate technology. Recognize exponential decay and growth graphically and algebraically. A2.F1.6 Graph a rational function and identify the x- and y-intercepts, vertical and horizontal asymptotes. Using various methods and tools that may include a graphing calculator of other appropriate technology. A2.A.1.7 Solve real-world or mathematical problems that can be modeled using arithmetic or finite geometric sequences or series given the nth terms and sum formulas. Graphing	

		calculators or other appropriate technology may be used. A2.D.1.1 Use the mean and standard deviation of a data set to fit it to a normal distribution (bell-shaped curve). A2.D.1.2 Collect data and use scatter plots to analyze patterns and describe linear, exponential or quadratic relationships between two variables. Using graphing calculators or other appropriate technology, determine regression equation and correlation coefficients; use regression equations to make predictions and correlation coefficients to assess the reliability of those predictions. A2.D.1.3 Based upon a real-world contest, recognize whether a discrete or continuous graphical representation is appropriate and then create the graph. A2.D.2.1 Evaluate reports based on data published in the media by identifying the source of the data, the design of the study, and the way the data are analyzed and displayed. Given spreadsheet, tables, or graphs, recognize and analyze distortions in the data displays. Show	

		how graphs and data can be distorted to support different points of view. A2.D.2.2 Identify and explain misleading uses of data. Recognize when arguments based on data confuse correlation and causation.	