COURSE TITLE **Algebra 2**	
DISTRICT COURSE NUMBER **(#0213)**	4-DIGIT STATE COURSE CODE (COMPLETED BY SILT) **2404**

Rationale:	Students successfully completing this course will have an extensive background in algebra preparing them for college level or career technical coursework.
Course Description that will be in the Course Directory:	This course is designed for students bound for college or career technical training. Students will expand and develop algebra and trigonometric concepts to an advanced level of mathematics. Students will engage in an in-depth study of California's Common Core Standards for Mathematics. Topics include systems of equations and inequalities, quadratic functions, polynomial functions, exponential and logarithmic functions, rational and radical functions, conic sections, probability and statistics, and trigonometry.
How Does this Course align with or meet State and District content standards?	

NCLB Core Subjects:	*Select up to two that apply:*

☐ Arts ☐ Civics and Government ☐ Not Core Subject
☐ Economics ☐ History
☐ English ☒ Mathematics
☐ Foreign Language ☐ Reading / Language Arts
☐ Geography ☐ Science

CDE CALPADS Course Descriptors: (See Page 2 for Definitions)	CTE TECH PREP COURSE INDICATORS	CTE COURSE CONTENT CODE	INSTRUCTIONAL LEVEL CODE
	☐ Tech Prep (32) (Higher Ed)	☐ CTE Introductory (01)	☐ Remedial (35)
	☐ Tech Prep & ROP(33) (Higher Ed)	☐ CTE Concentrator (02)	☐ Honors UC-Certified (39)
	☐ ROP (30)	☐ CTE Completer (03)	☐ Honors Non UC-Certified (34)
	☐ N/A	☐ Voc Subject _____	☐ College (40)
		☐ N/A	☐ N/A

Length of Course:	☒ Year ☐ Semester
Grade Level(s):	☒ 9 ☒ 10 ☒ 11 ☒ 12
Credit:	☒ Number of credits: **10** ☒ Meets graduation requirements (subject **math**) ☐ Request for UC "a–g" requirements CSU/UC requirement _____	☒ College Prep
Prerequisites:	Grade C or better in Geometry
Department(s):	Mathematics
District Sites:	EDHS, ORHS, PHS, UMHS, IHS, VA @ SHS
Board of Trustees COS Adoption Date:	5/13/2014
Textbooks / Instructional Materials:	**Algebra 2**, Hall, Kennedy, Bellman, Bragg, Handlin, Murphy, & Wiggins, Pearson Publishing, 2015-CA Common Core, 978-0-13-331511-0 Sites: EDHS, ORHS, PHS, IHS, CDS, VA

	Algebra 2, Carter, Cuevas, Day, Malloy, Holliday, Casey, Zike & McTighe, Glencoe McGraw-Hill Publishing, 2014-Common Core, 978-0-07-664101-7 Sites: UMHS, MVHS
Funding Source:	General Fund Common Core Implementation Funds
Board of Trustees Textbook Adoption Date:	5/13/2014

Definitions

CALPADS	California Longitudinal Pupil Achievement Data System
CTE Technical Prep	A course within a CTE technical career pathway or program that has been articulated with a postsecondary education or through an apprenticeship program of at least 2 years following secondary instruction.
Instructional Level Code	Represents a nonstandard instructional level at which the content of a specific course is either above or below a 'standard' course instructional level. These levels may be identified by the actual level of instruction or identified by equating the course content and level of instruction with a state or nationally recognized advanced course of study, such as IB or AP.
Instructional Level Honors, UC Certified	Includes all AP courses.
Instructional Level Honors, non UC Certified	Requires Board approval.
Instructional Level College	Includes ACE courses. Equivalent to college course and content, but not an AP course. Not related to section, but to course.

EL DORADO UNION HIGH SCHOOL DISTRICT

EDUCATIONAL SERVICES

Course Title: Algebra 2 (#0213)

TABLE OF CONTENTS

EDUCATIONAL SERVICES

Department: **Mathematics**

Course Title: **Algebra 2** Course Number: **(#0213)**

Unit Title: **Equations, Inequalities, and Graphs**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

[A-CED.1]   Create equations and inequalities in one variable including ones with absolute value and use them to solve problems in and out of context, including equations arising from linear functions.

[A-CED.2]   Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

[A-CED.4]   Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law $V = IR$ to highlight resistance.

[A-REI.1]   Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.

[A-REI.3]   Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.

[A-REI.3.1]   Solve equations and inequalities involving absolute value.

[F-BF.1.b]   Write a function that describes a relationship between two quantities.

   b. Combine standard function types using arithmetic operations. For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.

[F-IF.7.b]   Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.

   b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Students will create, solve and graph linear equations and inequalities. [A-CED]

Students will solve and graph equations and inequalities with absolute value. [A-REI], [F-IF]

Students will identify and apply properties of equality. [A-REI]

Students will create and use equations and inequalities to represent relationships between quantities. [A-CED], [F-BF]

Instructional Strategies: Indicate how the Instructional Strategies support the delivery of the curriculum and the course goals. Indicate how assignments support the Common Core State Standards.

Teachers will use direct instruction utilizing Smart Notebook software to teach and demonstrate each concept to students.

Students will work independently, in pairs, and in groups, to practice, apply and discuss each concept.

Warm-ups, quizzes, Smart Responder activities and teacher monitoring will assess progress and check for understanding.

TI emulator may be used to demonstrate graphical interpretations of concepts.

Teachers may use online resources to enhance student learning.

Assessments: Describe the Formative and Summative assessments that will be used to demonstrate learning and mastery of the standards.

Formative assessments will include warm-ups, homework, standard skills tests, individual quizzes and partner quizzes, and activities.

Summative assessments will include chapter or unit tests, a first semester final and a year-end final.

Interventions: Describe methods used to support students who fail to master unit Formative and Summative assessments.

Grouping of students will allow peer-tutoring within learning activities.

Re-teaching concept components will occur followed by monitoring of independent practice.

Utilizing online resources, such as tutoring videos and practice assessments.

Students may access additional remedial sessions available by teacher, math department or site. These may include teacher office hours, peer tutoring and on-line textbook resources.

EDUCATIONAL SERVICES

Department: **Mathematics**

Course Title: **Algebra 2**   Course Number: **(#0213)**

Unit Title: **Numbers and Functions**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

[A-CED.1.1] Judge the validity of an argument according to whether the properties of real numbers, exponents, and logarithms have been applied correctly at each step.

[F-BF.3]   Identify the effect on the graph of replacing $f(x)$ by $f(x)+k$, $kf(x)$, $f(kx)$, and $f(x+k)$ for specific values of *k* (both positive and negative); find the value of *k* given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.

[F-BF.3.1]   Solve problems involving functional concepts, such as composition, defining the inverse function and performing arithmetic operations on functions.

[F-BF.4.a]   Find inverse functions.

a.   Solve an equation of the form $f(x)=c$ for a simple function *f* that has an inverse and write an expression

for the inverse. For example, $f(x)=2x^3$ or $f(x)=\dfrac{x+1}{x-1}$ *for* $x \neq 1$.

[F-BF.4.b]   Find inverse functions.
          b. Verify by composition that one function is the inverse of another.

[F-IF.1]   Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range.

          If f is a function and *x* is an element of its domain, then $f(x)$ denotes the output of the f

corresponding to the input *x*. The graph of f is the graph of the equation $y=f(x)$.

[F-IF.2]   Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.

[F-IF.7.b]   Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.
          b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.

[N-RN.1]   Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. For example,

we define $5^{\frac{1}{3}}$ to be the cube root of 5 because we want $\left(5^{\frac{1}{3}}\right)^3$ to hold, so $\left(5^{\frac{1}{3}}\right)^3$ must equal 5.

[N-RN.2]   Rewrite expressions involving radicals and rational expressions using the properties of exponents.

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Students will learn and apply order of operations and the laws of exponents. [N-RN], [A-CED]

Students will identify domain and range of a function given an equation, a graph or a chart. [F-IF]

Students will determine the inverse of a relation algebraically and graphically. [F-BF]

Students will understand function notation and perform operations on functions including composition of functions. [F-IF], [F-BF]

Students will graph parent functions, their transformations and piecewise functions. [G-CO], [F-IF], [F-BF]

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EDUCATIONAL SERVICES

Department: **Mathematics**

Course Title: **Algebra 2**   Course Number: **(#0213)**

Unit Title: **Linear Systems**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

[A-CED.2]   Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

[A-CED.3]   Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.

[A-REI.6]   Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.

[A-REI.12]   Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Students will graph systems of inequalities on a coordinate plane. [A-CED], [A-REI]

Students will use linear programming to find solutions to real world applications involving constraints. [A-CED]

Students will solve systems of two or three equations using the methods of graphing, substitution and elimination. [A-CED], [A-REI]

Students will write and use systems of equations to solve word problems. [A-CED]

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EDUCATIONAL SERVICES

Department: **Mathematics**

Course Title: **Algebra 2**   Course Number: **(#0213)**

Unit Title: **Quadratic Functions and Equations**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

[A-CED.2]   Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

[A-CED.3]   Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.

[A-REI.4.a]   Solve quadratic equations in one variable.

        a. Use the method of completing the square to transform any quadratic equation in *x* into an equation of the form $(x - p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.

[A-REI.4.b]   Solve quadratic equations in one variable.

         b. Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the   initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers *a* and *b*.

[A-SSE.2.1]   Apply basic factoring techniques to second- and simple third-degree polynomials. These techniques include finding a common factor for all terms in a polynomial, recognizing the difference of two squares, and recognizing perfect squares of binomials.)

[A-SSE.3.a]   Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.

        a. Factor a quadratic expression to reveal the zeros of the function it defines.

[A-SSE.3.b]   Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.

        b. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.

[F-IF.7.a]   Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.

        a. Graph linear and quadratic functions and show intercepts, maxima, and minima.

[F-LE.6]   Apply quadratic equations to physical problems, such as the motion of an object under the force of gravity.

[N-CN.1]   Know there is a complex number *i* such that $i^2 = -1$, and every complex number has the form $a + bi$ with *a* and *b* real.

[N-CN.2]   Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.

[N-CN.3]   Find the conjugate of a complex number; use the conjugates to find moduli and quotients of complex numbers.

[N-CN.7]   Solve quadratic equations with real coefficients that have complex solutions.

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Students will perform operations of complex numbers including powers of i. [N-CN]

Students will create and solve quadratic equations by factoring, using the quadratic formula and completing the square. [A-CED], [A-REI], [N-CN], [A-SSE], [F-LE]

Students will solve and graph quadratic inequalities with one and two variables. [A-CED]

Students will graph quadratic functions identifying zeros, intercepts, vertex and the axis of symmetry. [F-IF]

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EDUCATIONAL SERVICES

Department: **Mathematics**

Course Title: **Algebra 2**   Course Number: **(#0213)**

Unit Title: **Polynomials and Polynomial Functions**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

[A-APR.1]   Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add,   subtract, and multiply polynomials, and divide polynomials by monomials. Solve problems in and out of context.

[A-APR.3]   Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.

[A-SSE.1.a]   Interpret expressions that represent a quantity in terms of its context.
> a. Interpret parts of an expression, such as terms, factors, and coefficients.

[A-SSE.2.1] Apply basic factoring techniques to second- and simple third-degree polynomials. These techniques include finding a common factor for all terms in a polynomial, recognizing the difference of two squares, and recognizing perfect squares of binomials.

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Students will identify and classify polynomials. [A-SSE]

Students will factor and perform operations with polynomials including multiplication and division. [A-APR]

Students will identify zeros of polynomials with degree three and higher. [A-APR]

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EDUCATIONAL SERVICES

Department: **Mathematics**

Course Title: **Algebra 2**   Course Number: **(#0213)**

Unit Title: **Exponential and Logarithmic Functions**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

[A-CED.1.1]   Judge the validity of an argument according to whether the properties of real numbers, exponents, and logarithms have been applied correctly at each step.

[A-SSE.1.b]   Interpret expressions that represent a quantity in terms of its context.

           b. Interpret complicated expressions by viewing one or more of their parts as a single entity. For example, interpret $P(1+r)^n$ as a product of P and a factor not dependent on P.

[A-SSE.3.c]   Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.

           c. Use the properties of exponents to transform expressions for exponential functions. For example, the expression 1.15^t can be rewritten as $\left(1.15^{\frac{1}{12}}\right)^{12t} \approx 1.012^{12t}$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.

[A-SSE.3.d]   Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.

           d. Prove simple laws of logarithms.

[A-SSE.3.f]   Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.

           f. Understand and use the properties of logarithms to simplify logarithmic numeric expressions and to identify their approximate values.

[F-BF.5]   Understand the inverse relationship between exponents and logarithms and use this relationship to solve problems involving logarithms and exponents.

[F-IF.8.b]   Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.

           b. Use the properties of exponents to interpret expressions for exponential functions. For example, identify percent rate of change in functions such as $y=(1.02)^t$, $y=(.97)^t$, $y=(1.01)^{12t}$, $y=(1.2)^{\frac{t}{10}}$, and classify them as representing exponential growth and decay.
,
[F-LE.1.c]   Distinguish between situations that can be modeled with linear functions and with exponential functions.

           c. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Students will convert between equivalent logarithmic and exponential expressions. [F-IF]

Students will identify exponential growth and decay. [F-IF]

Students will write an equation to solve compound interest problems. [A-SSE], [F-IF]

Students will apply properties of logarithmic functions. [A-SSE], [A-CED]

Students will solve logarithmic and exponential equations. [F-BF]

Instructional Strategies: Indicate how the Instructional Strategies support the delivery of the curriculum and the course goals. Indicate how assignments support the Common Core State Standards.

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EDUCATIONAL SERVICES

Department: **Mathematics**

Course Title: **Algebra 2**   Course Number: **(#0213)**

Unit Title: **Rational and Radical Functions**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

[A-APR.7]   Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero   rational expression; add, subtract, multiply, and divide rational expressions.

[A-REI.2]   Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.

[N-RN.2]   Rewrite expressions involving radicals and rational exponents using the properties of exponents.

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Students will perform operations and simplify rational expressions. [A-APR]

Students will solve rational equations. [A-REI]

Students will perform operations and simplify radical expressions. [N-RN]

Students will solve radical equations. [A-REI]

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EDUCATIONAL SERVICES

Department: **Mathematics**

Course Title: **Algebra 2**   Course Number: **(#0213)**

Unit Title: **Trigonometry**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

[F-TF.6.2]   Compute, by hand, the values of the trigonometric functions and the inverse trigonometric functions at various standard points.

[G-SRT.6]   Understand that by similarity, side ratios in the right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.

[G-SRT.8]   Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.

[G-SRT.11]   Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Students will solve right triangles using trigonometry. [G-SRT]

Students will solve non-right triangles using Law of Sines and Law of Cosines. [G-SRT], [F-TF]

Students will write the ratios for all six trigonometric functions given a right triangle. [G-SRT]

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Department: **Mathematics**

Course Title: **Algebra 2**   Course Number: **(#0213)**

Unit Title: **Probability and Statistics**

Content Area Standards (Please identify the source): List content standards students will master in this unit.

[S-CP.2]   Understand that two events *A* and *B* are independent if the probability of *A* and *B* occurring together is the product of their probabilities, and use this characterization to determine if they are independent.

[S-CP.3]   Understand the conditional probability of *A* given *B* as $P(A\,and\,B)/P(B)$, and interpret independence of *A* and *B* as saying that the conditional probability of *A* given *B* is the same as the probability of *A*, and the conditional probability of *B* given *A* is the same as the probability of *B*.

[S-CP.4]   Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare.

[S-CP.5]   Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.

[S-CP.6]   Find the conditional probability of *A* given *B* as the fraction of *B*'s outcomes that also belong to *A*, and interpret the answer in terms of the model.

[S-CP.7]   Apply the Addition Rule, $P(A\,or\,B) = P(A) + P(B) - P(A\,and\,B)$, and interpret the answer in terms of the model.

[S-CP.8]   Apply the general Multiplication Rule in a uniform probability model, $P(A\,and\,B) = P(A)P(B|A) = P(B)P(A|B)$, and interpret the answer in terms of the model.

[S-CP.9]   Use permutations and combinations to compute probabilities of compound events and solve problems.

[S-ID.2]   Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.

[S-ID.4]   Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.

Students will apply the fundamental counting principle and calculate probability. [S-CP]

Students will correctly identify and calculate combinations and permutations. [S-CP]

Students will calculate conditional probability. [S-CP]

Students will calculate measures of central tendencies and dispersion. [S-ID]

Instructional Strategies: Indicate how the Instructional Strategies support the delivery of the curriculum and the course goals. Indicate how assignments support the Common Core State Standards.

Teachers will use direct instruction utilizing Smart Notebook software to teach and demonstrate each concept to students.

Students will work independently, in pairs, and in groups, to practice, apply and discuss each concept.

Warm-ups, quizzes, Smart Responder activities and teacher monitoring will assess progress and check for understanding.

TI emulator may be used to demonstrate graphical interpretations of concepts.

Teachers may use online resources to enhance student learning.

Assessments: Describe the Formative and Summative assessments that will be used to demonstrate learning and mastery of the standards.

Formative assessments will include warm-ups, homework, standard skills tests, individual quizzes and partner quizzes, and activities.

Summative assessments will include chapter or unit tests, a first semester final and a year-end final.

Interventions: Describe methods used to support students who fail to master unit Formative and Summative assessments.

Grouping of students will allow peer-tutoring within learning activities.

Re-teaching concept components will occur followed by monitoring of independent practice.

Utilizing online resources, such as tutoring videos and practice assessments.

Students may access additional remedial sessions available by teacher, math department or site. These may include teacher office hours, peer tutoring and on-line textbook resources.

EDUCATIONAL SERVICES

Department: **Mathematics**

Course Title: **Algebra 2**   Course Number: **(#0213)**

Unit Title: **Conic Sections**

Content Area Standards (Please identify the source): List content standards students will master in this unit.
[G-GPE.2]   Derive the equation of a parabola given a focus and directrix.
[G-GPE.3.2]   Given a quadratic equation of the form $ax^2 + by^2 + cx + dy + e = 0$, use the method for completing the square to put the equation into standard form and recognize whether the graph of the equation is a circle, ellipse, parabola, or hyperbola. Then graph the equation.
[G-GPE.3.3]   Be familiar with conic sections, both analytically and geometrically.

Unit Outline: A detailed descriptive summary of all topics covered in the unit. Explain what the students will learn, know and be able to do.
Students will identify, put into standard form and graph a parabola identifying the vertex, focus, directrix and axis of symmetry. [G-GPE]
Students will identify, put into standard form and graph a circle identifying the center and radius. [G-GPE]
Students will identify, put into standard form and graph an ellipse identifying the center, foci, vertices and co-vertices. [G-GPE]
Students will identify, put into standard form and graph a hyperbola identifying the center, foci, vertices, co-vertices and asymptotes. [G-GPE]

Instructional Strategies: Indicate how the Instructional Strategies support the delivery of the curriculum and the course goals. Indicate how assignments support the Common Core State Standards.
Teachers will use direct instruction utilizing Smart Notebook software to teach and demonstrate each concept to students.
Students will work independently, in pairs, and in groups, to practice, apply and discuss each concept.
Warm-ups, quizzes, Smart Responder activities and teacher monitoring will assess progress and check for understanding.
TI emulator may be used to demonstrate graphical interpretations of concepts.
Teachers may use online resources to enhance student learning.

Assessments: Describe the Formative and Summative assessments that will be used to demonstrate learning and mastery of the standards.
Formative assessments will include warm-ups, homework, standard skills tests, individual quizzes and partner quizzes, and activities.
Summative assessments will include chapter or unit tests, a first semester final and a year-end final.

Interventions: Describe methods used to support students who fail to master unit Formative and Summative assessments.

Grouping of students will allow peer-tutoring within learning activities.

Re-teaching concept components will occur followed by monitoring of independent practice.

Utilizing online resources, such as tutoring videos and practice assessments.

Students may access additional remedial sessions available by teacher, math department or site. These may include teacher office hours, peer tutoring and on-line textbook resources.