



## EduCalc Learning Algebra 2

### **Instructor**

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### **Course Description**

Students in this course build on algebraic and geometric concepts to learn advanced algebra skills. They learn to solve, graph, and interpret systems of equations, advanced polynomials, imaginary and complex numbers, quadratics, and basic trigonometric functions. They learn matrices, logs, and the Unit Circle.

### **Fully Online Course**

This is an online course through the learning management system, Canvas. Activities consist of reading text, watching instructional videos, and taking online quizzes and tests. This is a one-credit course upon completion of all 10 units.

### **Scope and Sequence**

<b>Unit</b>	<b>Title</b>	<b>Topics Include</b>
Unit 1	Polynomial Review	Polynomial review, rules of exponents, graphing equations.
Unit 2	Linear Equations & Inequalities	Graphing functions, domain, range, transformations, equation of a circle.
Unit 3	Roots	Fundamental Theorem of Algebra, roots, solutions, end behavior.
Unit 4	Remainders	Remainder Theorem, polynomial division, features of polynomial graphs.
Unit 5	Vectors and Matrices	Vectors, Matrix elements, determinant.
Unit 6	Complex Numbers	Imaginary numbers, complex numbers, conjugates.
Unit 7	Logs	Log form, expand/condense logs, Change of Base.
Unit 8	Radians, Unit Circle, Trig Functions	Radians, the Unit Circle, sin, cos, tan.
Unit 9	Word Problems	Exponential and 2-variable word problems, constraints.
Unit 10	Rational & Radical Equations	Rational and radical equations, systems of equations, combining functions.

### **Grading Policy**

Quizzes and tests are percentage based (number correct divided by total questions). Assignments are automatically set for two tries if a student wants to improve their grade.

### **Academic Integrity**

The reality is that most students feel they can only pass a math class by using MathApp, Chegg, or some other tool. Our courses are designed so that you CAN pass on your own! Our students are happily surprised to find that they understand what they are doing and they are earning an A in class without cheating.