



## AMPED Algebra I

<b>Course Name: AMPED Algebra I</b>	
Department: Math	Grade Level(s): 9-12
Duration/Credits: 1 Year/ 1.0 Credit	Prerequisites: Current teacher approval
BOE Approval Date: 12-20-18	Course Code: H2801
<b>Course Description:</b>	
<p>This course is one part of the combined AMPED (Algebra in Manufacturing, Production, Entrepreneurship and Design) Business Processes course. The course engages the student in extending the mathematics they learned in their earlier grades in an authentic business setting. The student will explore and apply functions, compare their key characteristics, and translate between graphical, numerical, and symbolic representations of them. They will create and solve equations and inequalities, systems of equations involving linear and quadratic expressions, extend the laws of exponents to rational exponents and compare/contrast linear and exponential functions. The student will use regression techniques to describe linear relationships between quantities and use technology as an instructional tool throughout the course as they explore and make sense of problems in a real-world context. The contextual learning experience combines all Algebra I standards and Business Entrepreneurship standards through relevant and interactive, career-centered projects. The student will be enrolled in two courses and receive both an Algebra I and a Practical Art credit.</p>	
<b>Course Rationale:</b>	
<p>21st century business success requires problem solving, critical thinking, creativity, and effective collaboration. Seeing first hand how the business environment interacts with algebraic concepts enables the student to develop the skills that are desired in today's workplace. This project based learning course will help students master algebra concepts through on the job application.</p>	
<b>Course Objectives:</b>	
<ol style="list-style-type: none"><li>1. The student will be able to create, represent graphically, describe in written form, and analyze equations or inequalities that describe linear, quadratic, and exponential relationships created in a business setting. (A+ Writing)</li></ol>	

2. The student will summarize, represent, and interpret data from authentic sources related to career centered projects. (A+Research)
3. The student will read about systems in context and then compare, interpret and solve systems of equations and inequalities. ( A+ Reading)
4. The student will understand the concept of a function using function notation and the effects of transformations (limited to linear, quadratic, and exponential) and verbally communicate the effects. (A+ Speaking)
5. The student will solve equations and inequalities while understanding the proper use of units within a given context. (A+ Writing)
6. The student will perform operations of polynomials.
7. The student will extend and use properties of rational exponents.
8. The student will investigate, identify, interpret, and use structure by researching probability and statistical data. (A+ Research)