

General Course Information

Course Name: College Prep Mathematics	
Department: Math	Grade Level(s): 11-12
Duration/Credits: 1.0/year	Prerequisites: Any Algebra II and Geometry
BOE Approval Date: 12/19/19	Course Code: H2382
Course Description:	
<p>This algebra course is designed as a bridge between Algebra II/Geometry and College Algebra. It is for the student who will continue to College Algebra or is college-bound. It includes new topics and applications of the Algebra II course. Topics include functions, inverses, matrices, trigonometry, quadratics, radicals and rational expressions, exponents, and logarithms. Calculators will be used when appropriate. This course is a developmental college credit course through St. Louis Community College. The student who earns a grade of "C" or higher in this course will be eligible to earn 3 hours of credit for MTH 140 at St. Louis Community College, allowing him/her to move directly into PreCalc Algebra (Formerly College Algebra). The student taking this course will not receive any additional increase to their GPA for this course.</p>	
Course Rationale:	
<p>The need to understand and be able to use mathematics in everyday life and in the workplace has never been greater and will continue to increase. The underpinnings of everyday life are increasingly mathematical and technological. Just as the level of mathematics needed for intelligent citizenship has increased, so too has the level of mathematical thinking and problem solving needed in the workplace. Those who understand and can do mathematics will have significantly enhanced the opportunities and options for shaping their futures. Mathematical competence opens doors to productive futures.</p>	
Course Objectives:	
<ol style="list-style-type: none">1. The student will use and apply the properties of logarithms and exponents in the context of researching real life situations. (A+ Research)2. The student will perform operations and develop fluency in simplifying radical and rational expressions.3. The student will model functions and perform operations on functions.4. The student will read and interpret situations involving geometric ideas and apply trigonometric ratios to solve for missing attributes of triangles. (A+ Reading)5. The student will defend their rationale and critique the reasoning of others. (A+ Listening and Speaking)6. The student will solve and model quadratic equations and higher order polynomial	

equations using various methods. 7. The student will use matrices to solve systems of equations and perform basic operations on matrices including scalar multiplication and Gauss-Jordan elimination method. 8. The student will justify their reasoning in both writing and verbal form. (A+ Writing)
Standards Alignment:
MLS Mathematics 2016