



## OVERVIEW

To ensure all Peoria Unified graduates are college and career ready, the Arizona Mathematics Standards establish clear, consistent guidelines for what every student should know and be able to do.

General areas of math that students should be proficient in by the end of their high school career include:

- Numbers and Quantity
- Basic Algebra
- Functions
- Modeling
- Geometry
- Statistics and Probability

## STATE AND DISTRICT SUPPORT LINKS

- [Arizona Department of Education](#)
- [Arizona State Academic Standards](#)
- [Peoria Unified School District](#)
  - [Family Resources](#)
  - [Curriculum & Instruction](#)
  - [School Year Calendar](#)
  - [ParentVue](#)
  - [Course Description Guide](#)

## High School Mathematics

Peoria Unified's goal is to develop mathematically proficient students. This is achieved through a focus on reasoning and innovative problem solving that prepares all students to be successful in their post-secondary careers.

Our curriculum is aligned to the Arizona State Standards and the district's course guide. The standards focus on developing the critical-thinking, problem-solving and analytical skills students will need to be college and career ready.

As determined by the Arizona State Board of Education (R7-2-302) and the Peoria Unified Governing Board, mathematics must include four high school classes, including Algebra I, Geometry, Algebra II and a culminating one credit advanced math class for which Algebra II is a prerequisite.



## Core Course Offerings

### ALGEBRA I

The fundamental purpose of Algebra I is to formalize and extend the mathematics that students learned in elementary school. In this course, students will:

- Deepen and extend understanding of solving equations and systems;
- Compare the difference in behaviors between linear and non-linear relationships;
- Engage in methods of analyzing, solving and using quadratic functions;
- Apply linear models to data that exhibit a linear trend.

Competency in Algebra I is a state university admission requirement.

### GEOMETRY

In this course, students will:

- Establish criteria for congruence and similarity of geometric figures;
- Develop understanding of informal explanations of circumference, area, and volume formulas;
- Prove geometric theorems;
- Solve problems involving right triangles.

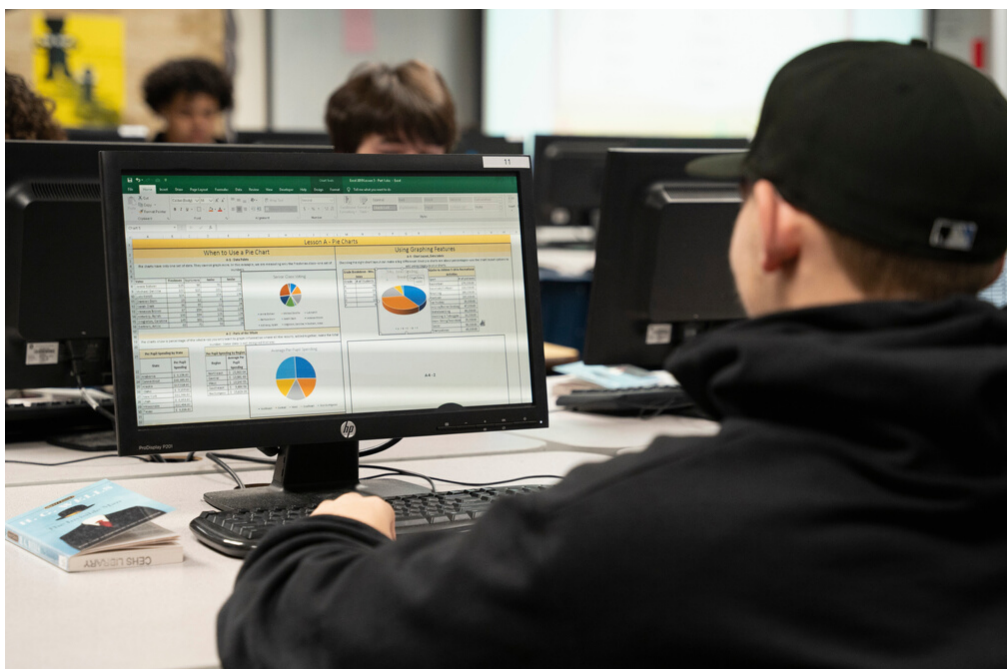
**PREREQUISITE:** Algebra I

### ALGEBRA II

In this course students will:

- Extend the real number system to the complex number system;
- Solve and interpret solutions to a variety of equations, inequalities, and systems of equations;
- Demonstrate competency graphing and interpreting functions;
- Extend simple and compound probability calculations to conditional probability.

**PREREQUISITE:** Geometry



## Additional Core Course Offerings

		HONORS CREDIT OFFERED	DUAL ENROLLMENT OFFERED	ONLINE COURSE OFFERED
<b>FINANCIAL ALGEBRA</b>	Investments, credit, automobile expenses, insurance, income tax, household budgeting, and more.			✓
<b>COLLEGE ALGEBRA</b>	Increase understanding of mathematical concepts and their applications through topics including set theory, probability, statistics, finance, and geometry.	✓	✓	
<b>COLLEGE MATH</b>	Systems of equations and inequalities, conic sections, polynomials, rational, exponential, and logarithmic functions, and matrices.		✓	✓

## Elective Course Offerings

		HONORS CREDIT OFFERED	DUAL ENROLLMENT OFFERED	ONLINE COURSE OFFERED
<b>PRE-CALCULUS</b>	Verifying trigonometric identities and using them to solve trigonometric equations. Topics also include partial fractions, vectors, linear velocity, angular velocity and both arithmetic and geometric sequences and series.	✓	✓	✓
<b>BRIEF-CALCULUS</b>	Introduction to limits, differentiation, and integration with emphasis on business applications.	✓	✓	✓
<b>AP STATISTICS</b>	Conclusions from data; using technology, investigation, problem solving, and writing to build conceptual understanding; design, administer, and tabulate results from surveys and experiments.	✓		
<b>AP CALCULUS I</b>	Study of continuity, limits, differentiation, and integration as applied to algebraic, trigonometric, and transcendental functions.	✓	✓	
<b>AP CALCULUS II</b>	Study of advanced integration techniques, convergence and divergence of infinite series, parametric equations, polar coordinates, vector analysis and spatial geometry.	✓	✓	

## RESOURCES

ALEKS  
 HMH 2015  
 Cengage Learning  
 Pearson/Addison Wesley  
 Houghton Mifflin  
 Brooks/Cole Publishing Co

Source: Arizona Department of Education | Academic Standards by Subject