

## Course of Study: Finite Math 1

### Course Description:

The course will address content through concrete models and real-world situations with less emphasis on symbol-manipulation and formal mathematical structure.

**Course Credit:** This course counts as 1 credit of mathematics.

### Purpose of Course:

The fundamental purpose of this course is to formalize and extend the mathematics that students learned in Algebra 1. Because it is built on Ohio's Learning Standards, this course will enable students to deepen and extend understanding of Algebra 1 concepts, while providing the basis of skills necessary to complete the four years of mathematics required in high school. Ohio's Learning Standards apply throughout the course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

### Course Content:

Domain	Standard Clusters
Algebra Functions	<ul style="list-style-type: none"><li>Look at algebraic manipulation as a meaningful enterprise in which they seek to understand the structure of an expression or equation and use properties to transform it into forms that provide useful information (e.g., features of a function or solutions to an equation). This perspective will help students continue to usefully apply their mathematical knowledge in a range of situations, whether their continued study leads them toward college or career readiness.</li></ul>
Geometry	<ul style="list-style-type: none"><li>The understanding of the criteria for triangle congruence and similarity is foundational in finding solutions to real-world problems involving triangles, quadrilaterals, circles, parallelism and trigonometric ratios. With the ability to use physical and computational construction tools, geometric models can be created. Geometric visualization becomes not only a tool for understanding algebra but also a tool in analyzing and solving problems. Students should experience the power found in using geometric understanding as a problem-solving tool.</li></ul>
Modeling	<ul style="list-style-type: none"><li>Seeing mathematics as a tool to model real-world situations should be an underlying perspective in everything students do, including writing algebraic expressions, creating functions, creating geometric models and understanding statistical relationships. This perspective will help students appreciate the importance of mathematics in daily life.</li></ul>
Statistics	<ul style="list-style-type: none"><li>Students should be able to create a visual representation of a data set that is useful in understanding or solving a problem.</li></ul>
Number and Quantity	In particular, students should recognize that much of mathematics is concerned with understanding quantities and their relationships. They should pick appropriate units for quantities being modeled, using them as a guide to understand a situation, and be attentive to the level of accuracy that is reported in a solution.
	<ul style="list-style-type: none"><li></li></ul>

All mathematics courses should focus on a small number of topics taught in depth, with a balance among skills, understanding, reasoning and problem solving. The purpose in these courses is to develop the ability to tie together Number and Quantity, Algebra, Functions, Geometry and Statistics around a common theme, career or reasoning. Courses may be built from any of the content standards from the initial mathematics courses, the mathematical connections to a career pathway or relevant real-world problems. The curriculum should engage students in using mathematical models to solve real-world problems, through effective and accurate use of mathematical notation, vocabulary and reasoning. This is an opportunity to provide courses that directly connect the learning of school mathematics to the world students will embrace as graduates.

