



### **Applied Geometry**

2013-2014

#### Course Description:

This non-axiomatic Geometry course is designed as a basic Geometry course to follow the Applied Algebra I course. It fulfills the geometry requirement for entrance to many post-secondary institutions and adheres to the common core standards. Topics include similarity, geometric transformations, area and volume, measurement, constructions, right triangles, parallelism, spatial relationships, review of algebra and introduction of trigonometric concepts. Technology is used to enhance the topics covered. A scientific calculator is required for this course.

#### Course Content:

This Geometry content is delivered in a blended course format, with a combination of collaborative, student-centered textbook lessons and adaptive Cognitive Tutor software lessons. Our classroom activities address both mathematical content and process standards. Students develop skills to work cooperatively to solve problems and improve their reasoning and communication skills. The software was developed around an artificial intelligence model that identifies weaknesses in each individual student's mastery of mathematical concepts. It then customizes prompts to focus on areas where the student is struggling, and sends the student to new problems that address those specific concepts. The result is a powerful learning tool with the most precise method of differentiating instruction available.

The following concepts will be covered over the two semesters:

- Geometric Terms and Symbols
- Tools of Geometry
- Inductive and Deductive Reasoning
- Lines and Angles
- Area & Perimeter
- Properties of Polygons
- Properties of Triangles
- Similarity
- Congruence
- Right Triangle Trigonometry
- Properties of Quadrilaterals
- Circles
- Arcs and Angles

## Required Textbooks and/or Other Reading/Research Materials

Carnegie Learning Geometry content is delivered via parishable textbooks that support a collaborative classroom and through the online Cognitive Tutor component.

*Common Core Geometry*. by Carnegie Learning. Carnegie Learning, 2013.  
www.carnegielearning.com

## Course Requirements:

Each student is required to complete all tests, projects and assignments. Failure to do so will affect the student's overall grade.

## Grade Components/Assessments:

Grades will be based on a point system that will be converted to overall percentages. The following methods will be used, for the year, to assess and evaluate student performance:

Tests: 40 – 50%  
Quizzes: 20 – 25%  
Homework: 15 – 20%  
Alterative Assessment: 10 – 20%

Each marking period is worth 20% of a student's overall grade. The midterm and final exam are each worth 10% of a student's overall average:

Quarter 1	20%
Quarter 2	20%
<b>Midterm</b>	<b>10%</b>
Quarter 3	20%
Quarter 4	20%
<b>Final</b>	<b>10%</b>

## Required Summer Reading/Assignments:

There are no required summer reading assignments.