



**SAINT  
JOSEPH  
PREP**

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## **Geometry**

*Grade 9/10*

This course will explore critical thinking and reasoning as they apply to geometric topics, including the relationships between points, lines, and planes; congruencies of angles formed with parallel and perpendicular lines; polygons and quadrilaterals; the similarity and proportions in triangles, including trigonometry and scale\*; and circles. Students are introduced to mathematical logic and inductive and deductive reasoning, as they learn to build a formal mathematical proof and analyze applications of geometry and logic in the world around them. Students will develop skills in mathematical writing and drawing\*, both digitally and by hand using a protractor and compass, effective use of the graphing calculator, and public speaking, teamwork, and organization as they present their proofs and analysis. Upon completion of this course, students will have demonstrated a thorough knowledge of the relationships existing in two- and three-dimensional shapes through problem solving and proof combined with applications of algebra and variable equations\*.

\* honors level topics