

# University of Mary Washington

## Student Learning Outcomes for Geospatial Analysis

1. Students will demonstrate knowledge of basic principles, concepts and techniques of cartographic and visualization theory related to the production of maps and reports consumed through stand-alone documents and online content.
2. Students will demonstrate comprehensive and up-to-date knowledge of Web GIS, including the basic concepts, state-of-art technical skills to build Web GIS applications and the knowledge needed to choose from various Web GIS development options.
3. Students will understand the geographic foundations of geospatial intelligence and its applications in health science, national security, disaster management and other subject matter issues with a focus on analytical techniques.
4. Students will understand why spatial thinking is important for describing, analyzing, modeling, and visualizing our world and how a spatial thinking mindset is used to formulate solutions to spatial problems.
5. Students will understand sensors and image acquisition methods, basics of the electromagnetic spectrum, characteristics of remote sensing imagery, and the ability to apply this knowledge through an application.

Students will know Applied Quantitative Spatial Analysis, exploring the role of scale, measurement and sampling through the lens of accepted workflows including data acquisition, processing, analysis, validation, and presentation/reporting.