The certificate in Geographic Information Science has as its core the study and use of geographic information systems (GIS). Central to this program are the theoretical and applied fundamentals of the collection, management, analysis and representation of spatial data. The program builds on this core by exploring both traditional and novel methods for geo-visualization. Methods include teaching about various GIS and remote sensing technologies used to collect and analyze spatial data and how to use these technologies, critically discussing the implications of geo-spatial technologies on individuals and society, demonstrating how geo-spatial technologies are used effectively in urban and regional planning processes; and by exploration of applications of GIS to environmental, resource and policy/management issues.

**Why UMD**

The five-course series offers students the opportunity to expand their knowledge and expertise in the area of Geographic Information Science (GISci). Participants in the certificate will receive the theoretical and technical education needed to acquire, manage and critically analyze and represent geo-referenced data. The program offers basic and advanced courses in map design and geo-visualization, geographic information systems, remote sensing and geo-spatial technologies in general.