Geospatial Information Science and Technology (GIST) Graduate Certificate

Geographic information science and technology (GIST) is a collective term used to describe geographic information systems, remote sensing, global positioning, internet mapping, and other approaches for collecting, managing, analyzing, and visualizing data with spatial attributes. Have you used navigation applications? Then you have used GIST!

Certificate requirements
15 hours of GIST-related graduate coursework including:
• 2 required courses (6 hours)
  Introduction to GIST
  Advanced GIST
• 3 elective courses chosen from a menu of options (9 hours)
  Technical core (3-6 hours)
  Applications (3-6)

Job preparation
The U.S. Department of Labor has identified geospatial technologies as a high growth industry: https://www.doleta.gov/brg/indprof/geospatial_profile.cfm, stating “Because the uses for geospatial technology are so widespread and diverse, the market is growing at an annual rate of almost 35 percent, with the commercial subsection of the market expanding at the rate of 100 percent each year.”

What skills will I learn?
You will learn state-of-the-art cartography and web mapping; map and data analysis; spatial analysis; wayfinding; multicriteria decision-making; effective information visualization; remote sensing-- from space, airborne, drones, and/or ground instrumentation; image and signal processing; geocomputation; and much more!

Students may complete the GIST graduate certificate in three ways:
1. As part of their coursework for any other graduate program. Departments that explicitly participate in GIST include Geological Sciences, Sociology & Anthropology, Biology, Electrical & Computer Engineering, Intelligence & National Security Studies
2. As part of the new Professional Masters program, partnered with another certificate program. The Applied & Computational Math graduate certificate or the Applied Stats graduate certificate might be especially powerful combinations – but any approved graduate certificate program will work.
3. As a standalone certificate program. Students complete just the required 15 credit hours and their transcripts will note the completion of the GIST graduate certificate.