

# GEOGRAPHIC INFORMATION SCIENCE, CERTIFICATE

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Requirements for an undergraduate certificate may be completed at any campus location offering the specified courses for the certificate.

## Program Description

The 12-credit Geographic Information Science (GIS) certificate is aimed at students who wish to be current in geographical representation and geospatial analysis. Through courses for the GIS certificate, students will understand and know how to apply various GIS and geospatial analysis tools to represent, analyze, and advise on the geospatial dimensions of natural and social phenomena. Students will gain firsthand experience using the most up-to-date tools and techniques available in the field of GIS today. Areas of study include cartography, remote sensing, and geographic information systems.

Learning objectives: Describe the conceptual foundations on which geographic information science and systems are based, use geospatial tools to perform spatial analysis and mapping tasks, and create solutions to geographic problems using geographic information science and technology.

## What is Geographic Information Science?

Geographic Information Science (GIScience) is one of four key subdisciplines within Geography (along with human geography, physical geography, and environment-society geography). Its primary areas of study include cartography (map-making), remote sensing, and geographic information systems. Students who study GIScience learn how to use the latest tools and techniques to visually represent and analyze spatial data in order to understand and address real-world environmental and social problems. Applications of geographic information science range from emergency response to natural resource management to social policy analysis to location intelligence for business.

## You Might Like This Program If...

- You like technology and maps, and want to acquire skills using a spatial perspective to differentiate yourself in the workforce after graduation.
- You would like to apply spatial science and technology to solve social, environmental, and industrial problems. You want to apply the geographic perspective through science and technology to enhance the knowledge, skills, and abilities developed in your major program of study.