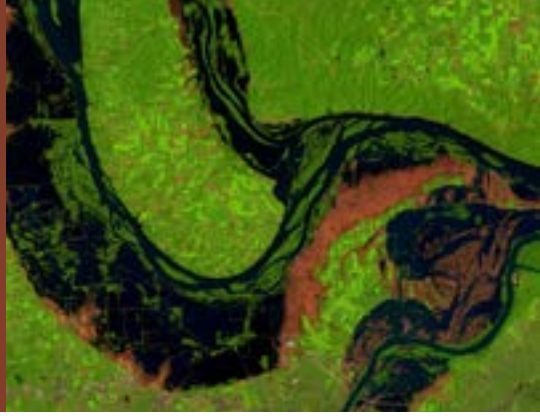
Master of Science in Geographic Information Science



Program Overview

Geographic Information Science (GIScience) involves creating, handling, storing, and studying spatially and temporally referenced information. Geospatial scientists use geographic information systems (GIS)—software programs, technologies, and institutional configurations—to help solve a variety of environmental, social, and economic issues, many of which are central to sustainability science.

The Master of Science (M.S.) in GIScience combines geospatial theory and practical training in GIS and remote sensing methods and software. Graduates are well-qualified to meet the growing demand for professionals with geospatial knowledge and skills.

The program focuses on interdisciplinary research. Students apply GIS, remote sensing, geovisualization, spatial analysis and statistics, database management, and GIS programming within natural science, social science, and integrative human-environment domains using innovative technologies and software programs.

The M.S. in GIScience is a 30-credit-hour program in which students complete 18 credit hours of required courses and 12 credit hours of electives. The program features:

» a coursework-only, **no thesis** option,
» a coursework plus research project option,
» a coursework plus thesis option,
» a curriculum informed by the Geographic Information Science & Technology Body of Knowledge, and
» class times that accommodate working professionals.

Program Details

» Admittance deadline for international students: May 1
» Admittance deadline for domestic students: August 1
» No admittance in spring or summer sessions
» Tuition and fees: $1,100/credit hour
» Application fee: $55

Graduation Requirements

» Total credit hours: 30
» Core courses: 18 credit hours
» Electives: 12 credit hours

Core Courses

» Introduction to GIS
» Research Methods
» Introduction to Remote Sensing
» Intermediate GIS
» Geospatial Methods in Environmental Studies
» Digital Cartography and Geovisualization

Course Electives

» Programming for Remote Sensing
» Microwave Remote Sensing: SAR Principles, Data Processing and Applications
» Interferometric Synthetic Aperture Radar
» Geographic Information Science, Society and Sustainability
» GIS in Biology
» Research Topics
» Thesis Research
» Spatial Planning Methods
» Demography: Measuring & Modeling
» Spatial Demography: Applied Statistics for Spatial Data
» Applied Spatial Analysis

Website

https://www.slu.edu/programs/graduate/geographic-information-science-ms.php

graduate@slu.edu

GEOGRAPHIC INFORMATION SCIENCE
Department of Earth and Atmospheric Sciences
SAINT LOUIS UNIVERSITY

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Research Opportunities

Department of Earth and Atmospheric Sciences faculty work and conduct research in the field. They have been awarded grants from various institutions, including the National Aeronautics and Space Administration (NASA), Centers for Disease Control and Prevention, U.S. Environmental Protection Agency, Geological Society of America, National Geospatial Intelligence Agency, National Institutes of Health, National Park Service, National Science Foundation, U.S. Army Corps of Engineers, Electric Power Research Institute, Missouri Department of Natural Resources, Ameren, and others.

Why GIScience?

Geospatial technology and research is a multibillion-dollar industry, and people with advanced geospatial skills are increasingly in demand in the workforce. Geospatial data management and analysis are no longer responsibilities only of geographers, surveyors, and cartographers. Professionals in a wide range of disciplines—including sustainability, natural and social sciences, social work, city planning and management, sales, marketing, communications, and government—use geospatial technologies to study trends, analyze data, and make decisions.

Global tasks can include monitoring climate change, predicting and assessing natural hazards, exploring geology and resources, and studying biodiversity. More localized tasks involve monitoring the environment, developing local economies, encouraging tourism, addressing transportation issues, and improving public safety and services.

Why Saint Louis University's GIScience Program?

GIScience program provides an integrated learning environment in which students use innovative GIS and advanced remote sensing methods, technologies, and applications to research and address current environmental, social, and economic issues.

Students in the M.S. in GIScience program can customize the degree based on their academic interests and professional goals. They also have frequent opportunities to attend workshops and seminars with major remote sensing, GIS, and GPS companies.

Post-Baccalaureate Graduate Certificate in Advanced Remote Sensing and GIS

Department of Earth and Atmospheric Sciences also offers a 15-credit-hour Graduate Certificate in Advanced Remote Sensing and GIS. This program is geared toward students already pursuing a master's degree in another department and working professionals who would like to sharpen their GIS and remote sensing skills without completing a full master's degree program.

Core Courses

» Introduction to GIS
» Introduction to Remote Sensing
» Intermediate GIS
» Geospatial Methods in Environmental Studies

Course Electives

» Research Methods
» Digital Cartography and Geovisualization
» Programming for Remote Sensing
» Microwave Remote Sensing: SAR Principles, Data Processing and Applications
» Interferometric Synthetic Aperture Radar
» Geographic Information Science, Society and Sustainability
» GIS in Biology

GIScience Faculty

· Greg Brunner, M.Sc.
· Jack Fishman, Ph.D.
· Jason Knouft, Ph.D.
· Daniel M. Hanes, Ph.D.
· Elizabeth A. Hasenmueller, Ph.D.
· Sidike Paheding, Ph.D.
· Zaitao Pan, Ph.D
· Vasit Sagan, Ph.D. (Program Coordinator)
· J.S. Onesimo Sandoval, Ph.D.
· Ethan Shavers, Ph.D

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