

GEOGRAPHIC INFORMATION SCIENCE, POST-BACCALAUREATE CERTIFICATE

The post-baccalaureate certificate program in Geographic Information Science (GIS) focuses on current issues, including environmental quality, climate change, sustainability of natural and nonrenewable resources, and the impact of human activities on the environment.

- a focus on advanced remote sensing, GIS, and geospatial methods
- use of the latest image processing techniques
- coverage of diverse applications in various disciplines
- training with industry-leading hardware and software systems (ArcGIS, ENVI+IDL, SARscape) and Open source platforms (e.g., QGIS, Boundless Desktop)
- late afternoon or evening classes that accommodate working professionals
- instructors with advanced degrees who work and conduct research in the field
- state-of-the-art research labs equipped with modern computing, commercial and open source software tools, various remote sensing sensors, and manned and unmanned aircrafts.

Curriculum Overview

The GIS certificate is an 18-credit program that students can pursue on a full- or part-time basis, usually completing the certificate in less than two years.

Courses cover the latest image processing techniques for optical, thermal, RADAR, LiDAR remote sensing. Students will also explore geospatial methods and principles of spatial analysis, database design, cartographic representation, machine learning, computer vision, management and data-mining with integration of GIS, remote sensing and GPS.

Theory and lectures are supplemented with hands-on projects involving risk assessment and mitigation, environmental modeling, resources exploration, sustainable development, natural resource management and transportation, subterranean mapping, and forest fire management.

Careers

Graduates have a very good employment outlook. According to the Geospatial Information and Technology Association, employment in this field is growing at an annual rate of almost 35 percent, with the commercial subsection of the market expanding by 100 percent each year.

Recent graduates from this program have been employed by various environmental, remote sensing and GIS companies, including Monsanto, the National Geospatial-Intelligence Agency and U.S. Geological Survey (USGS).

Admission Requirements

Minimum GPA: 3.00

Applicants with GPA below the minimum GPA will be considered on a case-by-case basis. To request an exception of the minimum GMAT, LSAT or GRE scores, submit a petition to the program director.

Students already enrolled in any graduate program at Saint Louis University do not need to reapply and should submit a Petition for Post-Baccalaureate Certificate Admission (Form No. 15). Other applicants must submit the following:

- Official transcripts
- One letter of recommendation
- Résumé
- Professional goal statement (500 to 800 words)

Requirements for International Students

- TOEFL score (minimum: 80) or IELTS score (minimum: 6.5)
- Applicants may be asked to schedule an online interview before final acceptance.

All admission policies and requirements for domestic students apply to international students along with the following:

- Demonstrate English Language Proficiency (<http://catalog.slu.edu/academic-policies/office-admission/undergraduate/english-language-proficiency>)
- Proof of financial support must include:
 - A letter of financial support from the person(s) or sponsoring agency funding the time at Saint Louis University
 - A letter from the sponsor's bank verifying that the funds are available and will be so for the duration of study at the University
- Academic records, in English translation, of students who have undertaken postsecondary studies outside the United States must include the courses taken and/or lectures attended, practical laboratory work, the maximum and minimum grades attainable, the grades earned or the results of all end-of-term examinations, and any honors or degrees received. WES and ECE transcripts are accepted.

Application Deadlines

The final deadline for fall admittance is May 1 for international students and July 1 for domestic students.

Gainful Employment Disclosure

The U.S. Department of Education requires (per 34 CRF Part 668) that all institutions participating in the federal Title IV student financial assistance programs (Pell Grants, federal student loans, etc.) publicly disclose certain data regarding all academic programs designated as "Gainful Employment" programs per DOE definitions.

Gainful Employment Disclosure (https://www.slu.edu/services/fin_aid/GE/FY18/45.0702-Gedt.html)

Requirements

Code	Title	Credits
Required Courses		
GIS 5010	Introduction to Geographic Information Systems	3
GIS 5020	Intermediate Geographic Information Systems	3
GIS 5040	Introduction to Remote Sensing	3
GIS 5060	Geospatial Methods in Environmental Studies	3
Elective Courses		

Select one to two of the following: 3-6

GIS 5070	Research Methods
GIS 5080	Digital Cartography and Geovisualization
GIS 5090	Introduction to Programming for GIS and Remote Sensing
GIS 5100	Microwave Remote Sensing: SAR Principles, Data Processing and Applications
GIS 5110	Interferometric Synthetic Aperture Radar
GIS 5120	Geographic Information Science, Society and Sustainability
BIOL 5190	Geographic Information Systems in Biology

Total Credits 15-18

Continuation Standards

Students must maintain a cumulative grade point average (GPA) of 3.00 in all graduate/professional courses.