

# Graduate Certificate: Geospatial Data Science

## COLLEGE OF LIBERAL ARTS

Learn more about the graduate certificate in Geospatial Data Science.

## About the Certificate

Data science is an emerging interdisciplinary field with roots in computer science, mathematics and statistics. Spatial data are common and high value, including government administrative data, remotely sensed images, smartphone and vehicle location data, and volunteered geographic information (VGI). Our courses introduce students to big data handling, data mining, geosimulation, geospatial analytics and machine learning. The Department of Geography and Urban Studies faculty have expertise in cartography, GIS, machine learning, remote sensing, spatial data science, spatial statistics and urban analytics.

This graduate certificate complements our Professional Science Master's in Geospatial Data Science and may serve as a gateway into the program. Students in the certificate program pursue a curriculum that provides training in geospatial data science that also complements graduate programs offered in the College of Education and Human Development, College of Liberal Arts, College of Public Health, College of Science and Technology, Fox School of Business and Management, and the Lew Klein College of Media and Communication.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the certificate program's administrator for more information.

**Job Prospects:** Combined training in GIS and data science prepares individuals to take on lead data science teams in technology-based companies, governmental agencies and nonprofit organizations who regularly work with big geospatial data and undertake projects that require geospatial skills and a spatial perspective.

**Non-Matriculated Student Policy:** Courses are available to non-matriculated graduate students with approval from the Graduate Chair or Assistant Director. Non-matriculated students may take up to 9 credits prior to matriculation, but an exception can be made to accept all 12 certificate credits for those who want to pursue the Professional Science Master's in Geospatial Data Science. For more information, please email [psmgis@temple.edu](mailto:psmgis@temple.edu) about registering as a non-matriculated student.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall and Spring:* Admission is on a rolling basis. Interested students should contact [psmgis@temple.edu](mailto:psmgis@temple.edu) for permission to enroll in coursework. Students are processed by the Office of Continuing Studies.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
GUS 5161 or GUS 5073	Statistics for Urban Spatial Analysis Geovisualization	3
GUS 8061	Big GeoSpatial Data	3
<b>Electives</b>		
Select two from the following: <sup>1</sup>		6
GUS 5031	GIS Programming	
GUS 5032	Geosimulation	
GUS 5062	Fundamentals of Geographical Information Systems	
GUS 5063	Remote Sensing	

GUS 5065	Urban Geographical Information Systems
GUS 5066	Environmental Applications of GIS
GUS 5067	GIS and Location Analysis
GUS 5068	Census Analysis with Geographical Information Systems
GUS 5069	GIS for Health Data Analysis
GUS 5072	Advanced Remote Sensing
GUS 5162	Advanced Statistics for Urban Applications
GUS 8066	Application Development for Geographic Information Systems
GUS 8069	GIS Ethics and Professional Practice

**Total Credit Hours****12**

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Electives are selected from any of the required or elective courses for the Geospatial Data Science PSM, as identified above.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/geospatial-data-science-certificate-graduate-la-gsds-grad>

### Admissions Information:

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### Department Contacts:

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