

Undergraduate Certificate in GIS: Geographic Information Systems Analysis

The Undergraduate Geographic Information System (GIS) Option: Geographic Information Systems Analysis is a certificate that provides students with up-to-date theory and technology in spatial analysis, spatial visualization of analysis results, and geodata management to support spatial analysis. This certificate prepares students for careers in GIS across many sectors, including governmental, non-profit, and corporate organizations. Completing this certificate specifically qualifies students to apply for entry-level GIS positions in the city and county of Los Angeles.

A total of 18 semester units are required for the Undergraduate Geographic Information System (GIS) Option: Geographic Information Systems Analysis Certificate.

Program Learning Outcomes:

Upon completion of this certificate, students will be able to:

- 1) Model the GIS workflow of collecting and editing spatial data; analyzing spatial data; interpreting results; and presenting those results in an appropriate format.
- 2) Analyze spatial data using appropriate methods for vector and raster data.
- 3) Construct cartographically-appropriate maps.
- 4) Create and manage individual-use and multiuser geodatabases.
- 5) Automate spatial techniques using models and Python.

Curriculum (18 units):

GEOG 3690 Fundamentals of Geographic Information Systems	3	(Register First in the Certificate Course Sequence.)
GEOG 4660 Remote Sensing	3	(Register First Year Fall or Second Year Fall, Prerequisite: GEOG 3690)
GEOG 4680 Digital Cartography	3	(Register First Year Spring, Prerequisites: GEOG 2680 & GEOG 3690)
GEOG 4690 Spatial Analysis & GIS Modeling	3	(Register First Year Fall or Second Year Fall, Prerequisite: GEOG 3690)
GEOG 4700 GIS Programming and Customization	3	(Register Second Year Fall, Prerequisite: GEOG 3690)
GEOG 4710 GIS Database Management	3	(Register Second Year Spring, Prerequisites: GEOG 3690)

Total: 18 Units

Admission Requirements:

- To apply for the Undergraduate Certificate Program in GIS, students must consult with an academic advisor about adding an Undergraduate Certificate to their Current Academic Objective. Once added, it will appear on your Academic Requirements Report (CAAR) and Degree Planner.
- Students need to submit the completed certificate application to the Department Chair and a receipt for the \$25 fee paid to the Cashier Office for the certificate application.
- Please note Undergraduate Certificate must be completed at the same time as the bachelor's degree.
- For more information about the Undergraduate Certificate and inquiry about the application form, please visit - <https://www.calstatela.edu/registrar/certificates>

