

The below curriculum outlines the requirements of the GIS certificate program. Exceptions must be approved by the GIS certificate program coordinator.

| <b>Course</b>                                      | <b>Title</b>                                      | <b>Credits</b> |
|--|---|----------------|
| <b>Level One (choose one):*</b>                    |   | <b>3.0</b>     |
| GIS 494/598  | Applied GIS (GIS for Non-Majors)                  |                |
| PAF 571  | Geographic Information Systems (GIS) and Analysis |                |
| PUP 576  | GIS Workshop for Planners                         |                |
| <b>Level Two (choose two):</b>                     |   | <b>6.0</b>     |
| ABS 485  | GIS in Natural Resources                          |                |
| GIS 471/591  | Spatial Stats for Geography and Planning          |                |
| GIS 521  | GIS Programming                                   |                |
| GIS 561  | Fundamentals of Spatial Optimization              |                |
| GIS 562  | Location Analysis and Modeling                    |                |
| GIS 591  | Data Mining and Data Driven Geography             |                |
| GIS 563  | Local Statistical Modeling                        |                |
| <b>Graduate Elective:**</b>                        |   | <b>3.0</b>     |
| <b>Graduate Elective:**</b>                        |   | <b>3.0</b>     |
| <b>GIS/GPH 591</b>                                 | Seminar: GIS Capstone                             | <b>1.0</b>     |
| <b>Total credits required for GIS certificate:</b> |   | <b>16.0</b>    |

\*Students may waive the Level One course by showing proof of taking a GIS concept/theory course offered either through a University or community college in the last two years. Students waiving the Level One course must take an additional elective to complete the 16 credits needed to earn the certificate.

\*\*Choose electives from an approved list of GIS-related courses

### Course Requirements

A maximum of 6.0 credits of 400-level elective coursework may be included on the plan of study but must be approved by the GIS certificate program coordinator.

### Pre-admission Credit

No more than 6.0 credits taken prior to admission into the GIS certificate program may be included on the plan of study.

### Culminating Experience

The culminating experience is an applied professional project GIS/GPH 591 GIS Capstone.

### Approved Electives

Refer to the following list of pre-approved electives while planning your coursework. Some courses are offered outside of SGSUP and therefore are subject to change. View the [Schedule of Classes](#) for the most current course offerings. Other courses may be taken, but must be approved by the department if they are not on the Approved Electives list. Submit the *Petition for Transfer or Interdisciplinary Elective Courses* form to request approval.

| Course  | Title                                    | Credits |
|---------|--|---------|
| ABS 560 | Ecological Modeling                      | 3       |
| CSE 412 | Database Management                      | 3       |
| GCU 542 | Geographical Analysis of Transportation  | 3       |
| GPH 569 | Digital Analysis of Remotely Sensed Data | 3       |
| GIS 584 | Internship                               | 1-4     |
| GPH 598 | Advanced Digital Analysis                | 3       |
| GIS 598 | Geodesign and Urban Planning             | 3       |