

Graduate Certificate in **Geographic Information Systems (GIS)**

- Admission requirements: BA/BS from an accredited university with a minimum GPA of 3.0. Students in the GIS certificate program typically come from a diverse set of disciplinary and professional backgrounds and bring a range of expertise to the program. Applicants with degrees from disciplines other than Geography or students with a deficiency in basic skills as determined by the program director must take GEOG 380 (Maps and Geographic Information) in the term they are admitted (or prior) and receive a grade of 3.0 or above.
- Certificate requirements: Successful completion of 20 specified graduate credits with a cumulative PSU graduate GPA of 3.0 or higher (all graduate credit taken at PSU) and a cumulative program GPA of 3.0 or higher (all courses used for the Graduate Certificate), distributed as follows: 8 credits of core courses and 12 credits of electives.

Required core courses (8 credits):¹

<u>Course Number</u>	<u>Course Name</u>	<u>Credits</u>
GEOG 588 &GEOG 588L or USP 591 & USP 591L	GIS 1: Introduction to Geographic Information Systems	4
GEOG 592 &GEOG 592L or USP 592/GEOG 592L	GIS 2: Applications	4
	Subtotal	8

You may request a waiver of these courses from the program director on the basis of prior educational background under the following circumstances:

- 1) if you have taken the courses at the undergraduate level or taken them as part of an undergraduate program at PSU
- 2) If GIS I and GIS II equivalent courses were taken at another institution you must submit syllabi from those courses as part of your waiver request.

Waivers are at the discretion of the program director. If the waiver is not approved you must take GIS I and GIS II. If the waiver is approved you must take additional credits from the following list to fulfill the required 8 credits of core curriculum:

GEOG 575	Digital Compilation and Database Design	4
GEOG 581	Satellite Digital Image Analysis	4
GEOG 597	Spatial Quantitative Analysis	4

Electives (12 credits):²

<u>Course Number</u>	<u>Course Name</u>	<u>Credits</u>
G 525	Field GIS	4
GEOG 575	Digital Compilation and Database Design	4
GEOG 580	Visual Image Analysis	4
GEOG 581	Satellite Digital Image Analysis	4
GEOG 582	Satellite Image Classification and Change Detection ³	4
GEOG 585	Map Design and Production	4
GEOG 589	Building a GIS Database with GPS ³	4
GEOG 594	GIS for Water Resources ³	4
GEOG 595	Maps, Models, and GIS	4
GEOG 597	Spatial Quantitative Analysis	4
USP 543	Geographic Applications to Planning	4
USP 593	Advanced GIS Applications	3
	Subtotal	12
	Total Credits:	20

¹USP 531 or G 524 may be substituted for GIS I **only** if taken S06 or later.

²USP 531 or G 524 may be used as elective credits **only** if taken W06 or earlier.

³These courses may be substituted for elective credit even if taken earlier as omnibus courses – 507 or 510.