

Georgia State University – College of Arts & Sciences

Co-op Program in Geographic Information Systems

Degree awarded on completion: B.S. in Geosciences, Geography Concentration with certificate in GIS

Prior to starting their first Co-op session on site, Geosciences students should be able generate and work with geospatial data, and construct, edit, and analyze geospatial data in a GIS framework.

These five topics are covered before employment begins:

GEOG 1113	Introduction to Landforms: Introduction to landforms, their origin, development, and spatial distribution.
GEOG 4518	Digital Cartography: An introduction to the principles, methods, theory, and practices of contemporary digital cartography.
GEOG 4520	Quantitative Spatial Analysis: Techniques of spatial analysis of geographic data; emphasis on sampling, measurements, and pattern analysis of points, lines, and areas on maps.
GEOG 4530	Introduction to Remote Sensing: A survey of remote sensing technology, aerial photograph and satellite image interpretation and digital processing, and applications in engineering and environmental sciences.
GEOG 4532	Introduction to GIS: Fundamental concepts and applications of raster and vector-based GIS emphasizing analysis of digital spatial data through applied methods.

Prior to starting the second co-op session on site, students will be able to conduct more advanced analyses and design analytical approaches to particular geospatial problems. Additionally they will be able to write their own code in GIS software to develop specific applications and problem solving approaches, and develop web-serving applications for delivering geospatial data online.

GEOG 4534	Advanced Geographic Information Systems: Advanced GIS concepts relating to spatial database creation and online distribution.
GEOG 4536	Programming GIS: This course introduces programming to advanced GIS users. Students will learn GIS modeling and Python, GIS interface and application customization, coding for decision making, Python operations integration in ArcGIS, and other programming languages as appropriate.

Cooperative Education Program

B.S. in Geosciences, Geography Concentration (w/GIS certificate) 4-Year Co-op Plan

YEAR	SUMMER		FALL		SPRING		MAYMESTER	
	Course	Hours	Course	Hours	Course	Hours	Course	Hours
1			Area C Elective	3	Area B Elective	2	GEOG 4532	4
			ENGL 1101	3	HIST 2110	3	(Intro to GIS- Study Abroad in Belize)	
			MATH 1113	3	ENGL 1102	3		
			GEOG 1112	4	GEOG 1113	4		
			GEOG 1101	3	MATH 2201	4		
			Total Hours	16	Total Hours	16	Total Hours	4
2	BIOL 1103K	4	Area B Elective	2	Area C Elective	3	Area E Elective	3
	Area H Elective	3	Area E Elective	3	GEOG 4520	4	Area H Elective	3
			MATH 2202	4	GEOL 1121k	4		
			GEOG 4530	4	GEOG 4784	4		
			GEOG 4518	4				
	Total Hours	7	Total Hours	17	Total Hours	15	Total Hours	6
3	First Co-op Session				GEOG 4XXX	4	BIOL 1104K	4
					GEOL 1122k (Core Area F)	4	Area H Elective	3
					GEOG 4534	4		
					GEOG 4536	4		
					Total Hours	16	Total Hours	7
4	Second Co-op Session				GEOG 4830	4		
					GEOG 4640	4		
					GEOG 4648	4		
					GEOG 4XXX	4		
					Total Hours	16		