

GEOGRAPHIC INFORMATION SYSTEMS CERTIFICATE OF ACHIEVEMENT

This certificate is designed to prepare students for entry-level employment in Geographic Information Systems (GIS) and automated mapping technology, utilizing Earth resources data satellites, aerial photography, and computerized data banks of spatial data.

Code	Title	Units
Required Courses		
GIS 130	Introduction to Geographic Information Systems (GIS)	3
or GEOG 130	Introduction to Geographic Information Systems (GIS)	
GIS 133	GIS Cartography and Base Map Development	3
GIS 134	Data Acquisition and Management	3
GIS 135	Spatial Analysis with GIS	3
GIS 136	GIS for Science, Government, and Business	3
or GIS 137	GIS Advanced Applications	
Elective Courses - Select a minimum of four units from the following:		
GEOG 100	Map Interpretation and Geospatial Analysis	3
or GIS 100	Map Interpretation and Geospatial Analysis	
GIS 039	Global Positioning Systems (GPS) Field Techniques	1
GIS 098	GIS Work Experience	1-4
GIS 222	Independent Study in Geographic Information Systems	1-3
Total Units		19

Code	Title	Units
Recommended Courses		
CIT 101	Introduction to Computer Literacy	3
GEOG 110	Physical Geography	3
GEOL 101	Introduction to Physical Geology	3

Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

This is a Gainful Employment Program

Program Learning Outcomes

- Entry-level technician in the field of GIS, automated cartography (geoinformatics/geo-visualization), and remote sensing for science, government, and business applications
- Scanning, hand-digitizing, and collecting global positioning systems (GPS) cartographic data as a means to create a base map
- Entering textual and numerical information as a means to create a tabular database
- Integration of raster data layers, including remotely sensed imagery, and vector data layers, including points, lines, and polygons
- Basic GIS map analysis, including descriptive spatial statistics, inferential spatial statistics, and spatial autocorrelation