

# GEOMATICS - UNDERGRADUATE MINOR

Geomatics involves the application of knowledge to the analysis, design and execution of mapping, geomatics, geospatial information systems, and surveying. When performing this work, professionals must have an understanding of: the science of geomatic measurement and analysis; the legal principles of boundary location; the laws related to boundaries and land use; and applicable mathematical and computational theories and principles. Geomatics is made up of positional accuracy, land planning and development concepts pertinent to subdivision science. Geomatics professionals work for private surveying or engineering firms, for City, County, State or Federal Highway Departments, for State Lands Commissions, for the US Forest Service and for the US Bureau of Land Management, among others.

The mission of the Department of ETSE is to provide students with the rigorous, fundamental education needed to enter and succeed in the Geomatics and related professions. To accomplish this mission, the department will introduce students to the theory and application of recognized geomatics principles.

Prefix	Title	Credits
SUR 222	Introduction to Geomatics	3
or DRFT 222	Introduction to Geomatics	
SUR 292	Legal Principles and Boundary Law I	3
SUR 361	Geodesy/Geodetic Control Surveying	3
<b>Select 3 courses from the following:</b>		<b>9-11</b>
E T 355	Site/Land Development and Layout	
GEOG 373	Introduction to Remote Sensing	
or GEOG 381	Cartography and GIS	
GEOG 481	Fundamentals of GIS	
SUR 285	Precise Digital Mapping	
SUR 312	Public Land Survey System Boundaries	
SUR 328 & 328L	Construction Surveying & Automation Technologies and Construction Surveying & Automation Technologies Lab	
SUR 351	Spatial Data Adjustment I	
SUR 452	Surveying Practicum	
SUR 461 & 461L	GNSS Positioning and GNSS Positioning Lab	
SUR 485	Emerging Techniques in Geospatial Technologies	
<b>Total Credits</b>		<b>18-20</b>