

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 |
| Select 3 courses from the following: | | 9-11 |
| 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 | Construction Surveying & Automation Technologies | |
| SUR 351 | Spatial Data Adjustment I | |
| SUR 452 | Surveying Practicum | |
| SUR 461 | GNSS Positioning | |
| SUR 485 | Emerging Techniques in Geospatial Technologies | |
| Total Credits | | 18-20 |