

SURVEYING AND GEOSPATIAL TECHNOLOGY

Surveying and Geospatial Technology

Certificate and Associate of Applied Science

The program offers detailed instruction on land, route, control and engineering design surveying, focusing on learning the legal principles of boundary location, evaluating property corners, describing the land, calculating land areas and mapping the collected data of the natural and built environment. Students are trained in using modern surveying and mapping technologies such as Global Positioning Systems (GPS), Geographic Information Systems (GIS), Unmanned Aerial Vehicles - UAV (drones) and specialized software to collect, map and analyze geographic data for projects in the Architectural, Engineering and Construction (AEC) industry.

The certificate and Associate of Applied Science degree can provide students with opportunities to complete the educational requirements for the Surveyor in Training (SIT) exam. Students will also have work-based learning opportunities in the cooperative education course offered in the Associate degree.

Graduates of the program will be prepared for entry-level positions such as surveying and mapping technicians, engineering survey technicians, land survey technicians and construction survey technicians.

Program Learning Outcomes

Surveying and Geospatial Technology, Certificate

1. Utilize equipment and technologies used in the surveying profession.
2. Research General Land Office records and review boundary location court cases.
3. Utilize CAD software to prepare a boundary plat.

Surveying and Geospatial Technology, Associate of Applied Science

1. Apply advanced equipment and technologies skills used in the surveying profession.
2. Explain the concepts and calculations associated with the inspection, evaluation and design of a route.
3. Stake horizontal, vertical curves and prepare topographic project.
4. Plan the control for projects based upon State Plane Coordinates.
5. Apply specialized skills to a designated internship position related to the survey profession.

Advisory Committee Members

Robert Saenz, PE, Vice President & Director of Land Development, Half Associates, Inc.
 Andres Palma, PE, President & Chief Geotechnical Engineer, Millenium Engineers Group, Inc.
 Robert Tamez, RPLS, PE, Vice President, Melden & Hunt, Inc.
 Manuel Carrizales, RPLS, EIT, President, Carrizales Land Surveying

Jessica M. Maldonado, PE, PMP, CFM, Director of Professional Services, SAMES Engineering
 San Isidro P. Navarro, Director of Civil Engineering, Hinojosa Engineering, Inc.

Certificate

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Associate Degree

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Surveying and Geospatial Technology Certificate

TSI EXEMPT

Course	Title	Credit Hours
Fall		
SRVY 1301	Introduction To Surveying	3
DFTG 1409	Basic Computer-Aided Drafting	4
SRVY 2343	Surveying - Legal Principles I	3
DFTG 1470	Introduction to Civil Drafting	4
Credit Hours		14
Spring		
SRVY 1341	Land Surveying	3
SRVY 1335	Land Surveying Applications	3
SRVY 2344	Surveying - Legal Principles II	3
SRVY 2309	Computer Aided Mapping	3
Credit Hours		12
Total Credit Hours		26

Surveying and Geospatial Technology Associate of Applied Science

TSI LIABLE

Course	Title	Credit Hours
First Year		
Fall		
SRVY 1301	Introduction To Surveying	3
DFTG 1409	Basic Computer-Aided Drafting	4
SRVY 2343	Surveying - Legal Principles I	3
SPCH 1321	Business and Professional Communication	3
Credit Hours		13
Spring		
SRVY 1341	Land Surveying	3
SRVY 1335	Land Surveying Applications	3
SRVY 2344	Surveying - Legal Principles II	3
SRVY 2309	Computer Aided Mapping	3
MATH 1414	College Algebra	4
Credit Hours		16
Summer		
PSYC 2301	General Psychology	3
ENGL 1301	Composition I	3
Credit Hours		6

Second Year

Fall		
GISC 1311	Introduction to Geographic Information Systems (GIS)	3
SRVY 2339	Engineering Design Surveying	3

SRVY 2341	Engineering Design Surveying Lab	3
MATH 2412	Pre-Calculus Math	4
Credit Hours		13
Spring		
SRVY 2331	Geodetic Surveying And Mapping	3
SRVY 2335	Geodetic Surveying And Mapping Application	3
ARCH 1301	Architectural History I	3
SRVY 1380	Cooperative Education - Survey Technology/ Surveying	3
Credit Hours		12
Total Credit Hours		60