

# LAND SURVEYING AND GEOMATICS

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## Program Description

The Land Surveying program prepares students to use equipment that is an integral part of land development for areas of engineering, construction projects and planning. Students learn to measure elevations, use equipment to measure on or below the surface and use technology to process data. The students will gain the knowledge needed for state certification.

All surveyor-specific courses can be completed for the two-year degree.

An online certificate program allows students who are already working as survey interns to complete the necessary computation/calculation, error analysis, and math and ethics coursework to enable them to take and successfully pass the state's Professional Surveyor Exam (progressive work experience in land surveying and geomatics is an additional requirement for examination eligibility).

Land Surveying and Geomatics students will:

- Understand the fundamentals of land surveying and the importance of record research;
- Use the components of Global Positioning Systems (GPS) and Geographical Information Systems (GIS) and be able to gather and analyze data from these systems;
- Develop spreadsheets and utilize other relevant computer programs (CAD and industry specific software programs) to provide accurate surveying analytics;
- Apply higher level mathematical concepts that are necessary to complete complex survey tasks (analytical geometry, upper level algebra, calculus, statistics);
- Utilize the Common Law roots of Boundary Law, its importance in maintaining accurate records and be able to apply those principles in surveying;
- Work within the ethical, as well as the practical, role of surveying, including the applicable state and local laws.

## Career Opportunities

- Surveyors
- Geodetic Surveyors
- Soil and Water Conservationists
- Landscape Architects
- Title Examiners, Abstractors, and Searchers
- Appraisers, Real Estate

## Contact Information

Office of Student Services  
CMU Tech, Bishop B102  
2508 Blichmann Avenue  
970.255.2670

## Programs of Study Associates

- [Land Surveying and Geomatics \(AAS\)](#)

## Certificates

- [Land Surveying and Geomatics \(Technical Certificate\)](#)