



Surveying Engineering and Surveying Technology

FERRIS STATE UNIVERSITY

COLLEGE OF ENGINEERING TECHNOLOGY



SURVEYING ENGINEERING

The Bachelor of Science degree program in Surveying Engineering is an exciting field of study that involves retracing existing land boundaries and establishing new ones, performing engineering and architectural design surveys, laying out vertical and horizontal control to construct and maintain infrastructure, managing Geographic Information Systems (GIS), determining the size, shape and gravitational force of the earth and mapping both topographic on the land and hydrographic under the sea. The tools of surveyors include classical and modern instruments that measure angles, distances and changes in elevation, Global Navigation Survey Systems (GNSS), RADAR, LIDAR, SONAR, aerial photography and satellite imaging along with a wide variety of computer applications.

Surveying services are required to support the design and layout of highways, railroads, bridges, tunnels, buildings, and utilities. Surveyors also perform critical tasks in the fields of natural resource management, mineral exploration, and navigation.

The program offers a blend of practical applications with theoretical concepts to help graduates become professional surveyors. A career in Surveying Engineering offers opportunities in the government, the military, and the private and academic sectors. Job opportunities are plentiful and the field continues to invest in highly educated graduates that fill a number of diverse roles.

SURVEYING TECHNOLOGY

The Associate in Applied Science degree program in Surveying Technology provides students with the skills and knowledge necessary to function as effective members of a surveying team. The program includes the use of basic surveying instruments, the evaluation of the accuracy of field data, the production of representational drawings of collected information, in a computer aided drafting (CAD) environment. The program has courses that include laws and the legal history pertaining to boundary establishment, conformance with established survey standards, and effective communication with clients and colleagues.