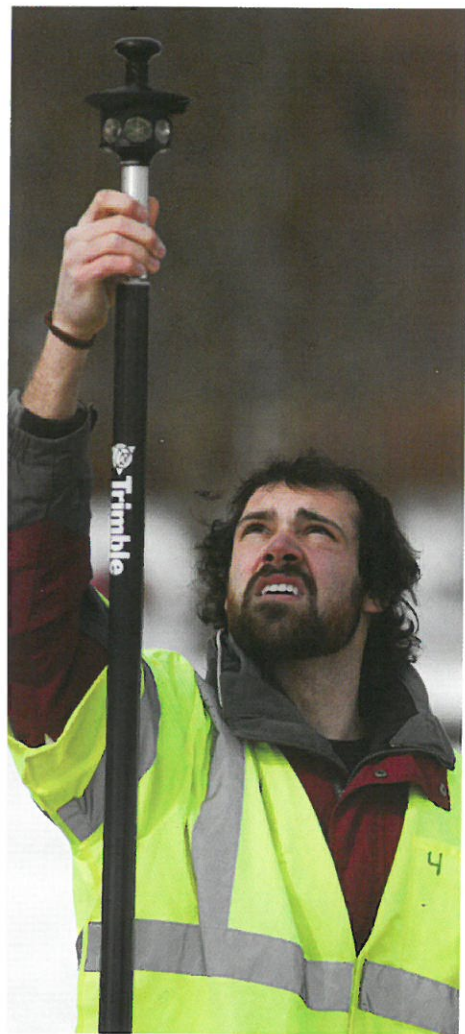




Surveying Engineering and Surveying Technology

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.

PROGRAM STRENGTHS

- The Surveying Technology program at Ferris State University was established in 1957
- Over \$25,000 in student scholarships are awarded annually
- The growth outlook is 9% - 17% annually according to the National Bureau of Labor Statistics
- One of the best equipped indoor and outdoor laboratories in the United States
- Small classes taught by experienced faculty members
- Graduates qualify for the Professional Surveyor (PS) and Professional Engineer (PE) examinations in the State of Michigan
- State-of-the-art equipment provided by manufacturers
- The Industry Advisory Board including a wide range of industry leaders

PROGRAM OFFERINGS

Ferris State University offers four educational programs designed to meet the needs of various individuals who pursue a career in the surveying industry.

1. ASSOCIATE IN APPLIED SCIENCE IN SURVEYING TECHNOLOGY

The Associate in Applied Science degree program prepares students to enter the workforce as a surveying technician.

2. BACHELOR OF SCIENCE IN SURVEYING ENGINEERING

The Bachelor of Science degree in Surveying Engineering builds on the Associate in Applied Science degree with advanced courses in:

- Global Positioning Systems (GPS) and High Definition (HD) Surveying
- Geographic Information Systems (GIS)
- Boundary Surveying
- Photogrammetry and Remote Sensing

3. ONLINE CERTIFICATE PROGRAM IN GEOGRAPHIC INFORMATION SYSTEMS (GIS)

- Principles of GIS
- Data collection methodologies for GIS
- Student selected project on GIS applications

4. CERTIFICATE IN POSITIONING FOR HYDROGRAPHIC SURVEYING

The certificate in Certificate in Positioning for Hydrographic Surveying is a three course sequence certificate (includes GIS, Remote Sensing, Great Lakes Research Technologies) offered in collaboration with Northern Michigan College.

5. SURVEYING ENGINEERING CERTIFICATE

STUDENT ORGANIZATIONS

- The Burt and Mullet Student Chapter of the Society of Professional Surveyors (NSPS).
- The Mary Feindt Chapter of the Lambda Sigma Honor Society.

OPTIONS FOR GRADUATES

Upon completion of the Bachelor of Science degree in Surveying Engineering graduates have several career path options.

- Become employees and eventual partners or owners of private surveying engineering firms after obtaining their license
- Work for government agencies such as the National Geospatial intelligence Agency (NGA), the Bureau of Land Management, National Highway Administrations, and State Departments of Transportation
- Pursue a graduate degree

PROGRAM RECOGNITION

- Accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET)
- Approved and recognized by the Michigan State Board of Professional Surveyors

PROGRAM ENROLLMENT

To apply visit the web site:

www.ferris.edu/admissions/application

CONTACT INFORMATION

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