

CIVIL ENGINEERING TECHNOLOGY

Program Description

The Civil Engineering Technology program prepares students for employment as civil engineering technicians, CAD technicians, materials testing technicians, or related entry level technician positions in engineering and construction related industries.

Students will learn with a combination of hands-on laboratory courses and lecture courses. Primary civil engineering technology instruction includes 2-D and 3-D modeling, drafting and plan preparation using computer aided design and drafting (CADD) and geographic information systems (GIS) software, material testing fundamentals with lab and field testing procedures, construction project management fundamentals, water and wastewater fundamentals, land surveying fundamentals with field procedures, land development and planning fundamentals, and elementary structural analysis.

Preparation

Students considering Civil Engineering Technology should have good reading comprehension and an interest in applied mathematics. Helpful background includes high school algebra, computer literacy, technology, and/or construction. Continuing education is common to keep up with changes in technology.

Program Requirements

Students who complete the curriculum requirements earn an Associate in Applied Science degree or a Program Certificate.

Students should be able to perform laboratory exercises inside or outside during the school year and be able to lift light equipment and material loads.

MATH 107 (Pre-Calculus) is a first semester/first year course. Students not prepared to start MATH 107 may require additional courses and/or time to complete the Associate in Applied Science degree.

Although there are computer labs on campus for instructional and lab use, students may wish to own or have access to a personal computer to use outside of class or available lab times. For many of the program courses, students can download full or academic versions of the software used in class for little to no cost from the software companies. However, students should be aware that personal computers used for this purpose should be Windows based and have sufficient speed and storage capacity since the software is very hardware and memory intensive. Recommended minimum computer hardware requirements for students using personal computers can be found on the Land Surveying Technology page on the Bismarck State College website.

Career Opportunities

The Civil Engineering Technology program prepares graduates for immediate employment as civil engineering technicians, CAD technicians, and materials testing technicians in a high demand employment sector. Potential employers include federal, state, county, or local governments, engineering firms, surveying firms, testing firms, utilities, mining and power companies, and construction firms.

Additional Information

Many of the credits from this program may also be applied towards the Land Surveying Technology Associate in Applied Science degree (AAS). Students interested in earning both degrees should contact their advisor to discuss what degree plan and schedule adjustments are necessary.

Contact

701-224-5651 • 800-852-5685
bsc.aeat@bismarckstate.edu

Degree Plans

- Civil Engineering Technology Associate in Applied Science
- Civil Engineering Technology Program Certificate