

## Land Surveying and Civil Engineering Technology

### ► Contact Information

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### ► Delivery Methods

Face-to-Face: Wahpeton  
Online: Some classes

The Land Surveying and Civil Engineering Technology program is designed to prepare students for work as engineering and surveying technicians in construction-related industries, allowing graduates to pursue a broad range of careers related to surveying, civil drafting, and material testing. Upon graduation, students can be employed with state, county, and city engineering offices as well as private agencies such as consulting engineers, land surveyors and construction contractors.

Students are provided with experiences emphasizing surveying, civil drafting, and material testing. Surveying courses give students the opportunity to learn how to operate the latest technology used in distance and angle measurement. Surveying drawings and maps are developed using enhanced computer-aided drafting programs (CAD). In addition, students take courses in communications, human relations, computers and technical mathematics, which will help provide them with the skills to advance in their careers.

Green and/or sustainable construction is covered at an awareness level in the materials testing classes and the design classes.

While students are fully employable upon completion of this program, students interested in pursuing an advanced degree will find the Associate in Applied Science degree in Land Surveying and Civil Engineering Technology provides transfer options to four-year colleges and universities in related fields such as land surveying and construction management.

**NOTE:** This program requires a ZBOOK 15 Laptop or equivalent. Please refer to the NDSCS website for specifications. The cost will be approximately \$2100.00 if purchased through NDSCS. For further information, call Randy Stach, department chair, at 701-671-2116.

Course Code	Course Title	Credits
CAD 120	Introduction to AutoCAD	3
CT 111	Civil Plans and Specifications	2
CT 113	Introduction to Civil Design Applications	3
CT 121	Surveying I	4
CT 122	Surveying II	4
CT 132	Materials Testing/Quality Control	3
CT 142	Construction Safety for Civil Technicians	1
CT 211	Introduction to Geographic Information Systems	3
CT 212	GIS Applications	3
CT 214	Highway and Street Design	3
CT 215	Land Use Planning and Development	3
CT 216	Utility and Drainage Design	3
CT 221	Surveying III	4
CT 222	Surveying IV	4
CT 223	Boundary Control and Legal Principles	3
CT 224	Research and Analysis	3
CT 261	Machine Control and Project Layout	2
UAS 111	Introduction to UAS	2

### Related/General Education Courses

ENGL 110	College Composition I	3
English/Communication Elective (choose one)		3
ENGL 105	Technical Communications	
ENGL 120	College Composition II	
ENGL 125	Introduction to Professional Writing	
COMM 110	Fundamentals of Public Speaking	
MATH 130	Technical Mathematics	2
MATH 132	Technical Algebra I	2
MATH 136	Technical Trigonometry	2
FYE 101	Science of Success	1
HPER 210	First Aid and CPR (Professional/Community)	2
Social and Behavioral Sciences, Humanities, History and/or Computer Electives		4
Recommended:		
• CSCI 116 – Business Use of Computers – 3 cr		
• PSYC 100 – Human Relations in Organizations – 2 cr		

**Total Required Credit** **72**

### Admission Requirements\*

The applicants must be high school graduates or equivalent. Students considered for acceptance must complete all admission requirements.

**Please Note:** Students are placed into English, math and reading courses based on ACT, ACCUPLACER or other nationally recognized tests. Please see [www.ndscs.edu/current-students/student-success/test-center](http://www.ndscs.edu/current-students/student-success/test-center) for the NDSCS Course Placement Policy and testing information. Students may be on an extended plan of study pending their course placement.

*\*Program Admission Requirements are subject to revision. Please check the department or program website under Program Admission Requirements for current information.*

### Award

Upon successful completion of the required courses, students will be awarded an Associate in Applied Science degree in Land Surveying and Civil Engineering Technology.