

## Land Surveying and Civil Engineering Technology

### ► Contact Information

Jeff Jelinek, program coordinator  
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 701-671-2268  
 Horton Hall 242

### ► 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, 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. Some positions are in fixed locations, while others require limited to extensive travel.

Students are provided with experiences emphasizing surveying, drafting and materials testing. Surveying courses give students the opportunity to learn how to operate the latest instruments used in distance and angle measurement. Surveying drawings and maps are developed using enhanced computer-aided drafting programs (CAD). Courses in soil testing, water-quality management, concrete and asphalt provide students with hands-on experience in materials testing. 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 the purchase of a notebook computer. The cost will be approximately \$1,900. For further information, call Jeff Jelinek, Land Surveying and Civil Engineering Technology program coordinator, at 701-671-2268.

### Admission Requirements\*

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

Required minimum placement scores:

<u>ACT</u>	<u>ACCUPLACER</u>	<u>ACCUPLACER</u>
Reading – 15	Reading Comp – 61	<u>NEXT GENERATION</u>
English – 15	WritePlacer – 3-4	Reading – 240
Math – 17	Arithmetic – 51	Writing – 237
	Elementary Algebra – 25	QAS – 232

Or transfer equivalencies will apply as appropriate

Applicants not meeting the above requirements are encouraged to visit with the academic counselor at 701-671-2257 or the Construction and Design Technology department chair at 701-671-2116 for strategies to meet the admission requirements.

*\*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.

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 ( <i>Professional/Community</i> )	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**