Minnesota North College

PROGRAM PLANNER
ACADEMIC YEAR 2026-27

Land Surveying

Certificate | 23 credits

Campus: Vermilion

23 Credits Required Coursework	Prerequisites	Credits	Hr Lc/Lb
BIOL(NRT) 1255 – Dendrology and Plant Ecology (fall) (MnTC Goal 3)	(CLR, CLW)	3	(2/2)
BUS 1530 – Legal Environment of Business (spring)	(CLR)	3	
MATH 1220 – College Algebra (fall or spring) (MnTC Goal 4) AND	(MATH 0300)	3	
MATH 1225 – Trigonometry (spring) (MnTC Goal 4)	(MATH 1220)	2	
OR			
MATH 1300 – Precalculus (spring) (MnTC Goal 4)	(MATH 0300)	(5)	
NRT 1211 – Forest Field Skills (fall)	(CLR, MATH 0100)	3	(2/2)
NRT 2221 – Land Surveying Internship*	(NRT 1211; 2.0 GPA)	1	
NRT 2236 – Land Surveying (fall)	(NRT 1211 or NRT 2315)	3	(1/4)
NRT 2256 – Surveying / Mapping Techniques (spring)	(NRT 2236; NRT 2241**; NRT 2315)	2	(0/4)
NRT 2315 – Intro to Geographic Information Systems (spring)	(NRT 1211 or WQAL/WSHD 1656)	2	(1/2)
PDEV 1130 – Employment Strategies (fall)		1	

*Internship may be taken any time during certificate.
**Or instructor approval for Land Surveying Certificate-only students.

Program Description

The Land Surveying Certificate combines 23 credits in the area of mathematics, field skills, land surveying, GIS, AutoCAD, and an internship in the surveying profession.

The certificate does not replace an Associate of Science degree in Land Surveying for employment, but is designed as a sub-credential certificate of the Land Surveying AS. The benefit of the certificate is to enhance an existing degree program and gain additional experience with GIS, GPS and applications of mapping, above and beyond other Associate degrees. Land Surveying students may want additional field experience in combination with their transfer degree, or students who are pursuing a Natural Resources Technology program may want to enhance mathematical and surveying application skills to maximize employment opportunities at the technician level.

Occupational Titles

Surveying Aide or Technician, Engineering Technician

Program Learning Outcomes

Graduates of this program will:

1. Demonstrate competence in Land Navigation and Public Land Survey systems.
2. Understand and demonstrate the use of basic terminology, principles, equipment, and skills required for land measurements.
3. Utilize the basic functions of digital tools for data collection, analysis and presentation (GPS/GIS/PowerPoint/Excel/graph functions).
4. Demonstrate awareness of historical, political, economic, and social factors which may affect the Surveying profession.
5. Develop the quantitative mathematical skills necessary to measure, monitor, analyze and manage all aspects of natural resources.

Program Faculty Contact

Rita Koch (rita.koch@minnesotanorth.edu or 218-235-2160)