CIVL1100 - Survey I: Fundamentals of Surveying

Credits:	3 (2/1/0)
Description:	The student will learn the principles of vertical distance measurement, as well as construction staking and the compiling of field notes typical of the civil engineering field. This course will focus on the use of various surveying equipment and procedures including an introduction to global positioning system (GPS) concepts and methods.
Prerequisites:	
Corequisites:	
Pre/Corequisites*:	
Competencies:	1. Identify sources of information on global positioning systems (GPS), various geoid models and vertical datum. 2. Conduct and control a real-life field survey as a part of a team. 3. Develop an understanding of common survey terminology and apply these definitions to surveying techniques and applications. 4. Utilize various forms of surveying equipment and techniques in the field of study for future reference. 5. Apply survey principles for use in the civil and architectural fields. 6. Demonstrate skills in understanding property lot surveys and easements. 7. Examine global navigation satellite system (GNSS) concepts. 8. Demonstrate Real Time Kinematic Surveying (RTK) concepts and methods. 9. Explain coordinate systems and GNSS calibration theory. 10. Perform data maintenance operations on the TSC3 data collector.
MnTC goal areas:	None

**Can be taking as a Prerequisite or Corequisite.*

© 2026 Minnesota State Community and Technical College.
We reserve the right to periodically update information without notice.
The information in this publication should not be regarded as contractual in nature.