

ENVT 105 Surveying Syllabus, Spring 2020

This course covers the principles of measurements of distances, elevations, and angles. It also includes basic error theory in measurements and calculations, traverse field techniques and office calculations, and basic principles of surveying and map making.

Prerequisites: A working knowledge of Algebra and Trigonometry.

List of topics to be covered:

Introduction to Surveying

- The History of Surveying
- Field Data Collection

Survey Mathematics

- Surveying Units of Measure
- Measurement Errors
- Rules of Calculation
- Basic Trigonometry

Distance Measurement by Taping

- Introduction to Measuring
- Taping Procedures
- Taping Errors

Electronic Distance Measurement

- EDM Operation
- EDM Calculations

Bearings, Azimuths, and Compass Use

- Bearings and Azimuths
- Compass Use

Leveling Procedures and Elevations

- Introduction to Leveling
- Leveling Equipment
- Differential Leveling
- Profile Leveling

Angle Measurements and Theodolites

- Measuring Angles
- Theodolite Use

Traverses

- Traversing
- Traverse Calculations
- Area

Stadia

- Stadia

Topographic Maps

- Contours
- Topographic Surveying

Maps and Mapping

- **Maps**
- **Map Details**

Public Lands System

- **Public Lands System**