

SURV 2221L: Surveying I Lab

1 Credit Hours

Prerequisite: EDG 2160 and MATH 1113

Corequisite: SURV 2221

This course deals with the measurement of angles, distances, elevations, horizontal and vertical location using total station and level in the field. This course also covers a topographic survey project.

SURV 3222: Surveying II

3 Credit Hours

Prerequisite: SURV 2221 and SURV 2221L

Corequisite: SURV 3222L

This course focuses on the analysis and interpretation of route geometry computations and field techniques. To accomplish this, students demonstrate proficiency in: automated data collection; reduction for topographic surveys; coordinate computations for intersections; and route design projects.

SURV 3222L: Surveying II Lab

1 Credit Hours

Prerequisite: SURV 2221 and SURV 2221L

Corequisite: SURV 3222

Continuation of SURV 2221L. Topics include DTM, as-built and design surveys. GPS field methods for land surveyors is introduced.

SURV 3319: Drone and LiDAR Planning and Operations

3 Credit Hours

Prerequisite: GEOG 3315

This course instructs the fundamentals of creating controlled map products and three-dimensional (3D) models from unmanned aerial system (UAS)-mounted photogrammetry and light detection and ranging (LiDAR) camera systems. The concepts covered in this course are instructed from a software-agnostic approach that is applicable to any commercially available UAV and camera system.