

SURV 3451: Terrain Analysis

3 Credit Hours

Prerequisite: SURV 3320

This course examines the theory and methods of the generation, compilation, analysis, and applications of digital elevation data. Specific topics include GIS, terrain data models, photogrammetry and LiDAR DEM processing, terrain surface modeling, digital terrain analysis, terrain visualization, and watershed delineation. Computer exercises in the generation and processing of DEM using GIS and image processing software packages.

SURV 3500: Applied Hydrology and Hydraulics

4 Credit Hours

Prerequisite: PHYS 1111 & PHYS 1111L

This course deals with the application of hydrology and hydraulics in small site design. An emphasis is on residential subdivision and small commercial tract design. Note: This course is not available for credit for Engineering majors.

SURV 4110: Geospatial Sciences Practice

3 Credit Hours

Prerequisite: SURV 3451 and GEOG 4410

A capstone course in the applications of geospatial science technology. Course requires a project developed with an industry partner in applying geospatial science analytical skill, analysis, and mapping.

SURV 4410: Surveying Computations and Adjustments

4 Credit Hours

Prerequisite: SURV 3222 and MATH 2202

Advanced surveying computations; matrix algebra; computer methods; statistical analysis of error propagation; variance and co-variance; least squares adjustments.

SURV 4415: Geodetic Surveying Methods

4 Credit Hours

Prerequisite: SURV 3421

Topics in Geodetic Surveying Methods including traversing, leveling and GPS. Coordinate systems and projects are utilized.