SURV 3320: Photogrammetry and Drone Analysis

3 Credit Hours

Prerequisite: GEOG 3315

The course will focus on the analysis and interpretation of manned and unmanned aerial systems (UAS) that include: drones; kites; blimps; powered paragliders; and fixed wing and copter small-format aerial photography (SFAP). Furthermore, the course will examine digital image processing and interpretation of data, in addition to travel and setup for best results in evaluating SFAP and UAS imagery.

SURV 3330: Construction Surveying

4 Credit Hours

Prerequisite: SURV 3222

Layout of designed structures from land boundaries, right of way parcels, applications of coordinate geometry, hydrographic surveying.

SURV 3421: Geographic Information Systems I

3 Credit Hours

Prerequisite: SURV 2221

This course provides students with an introduction to the fundamental concepts of: Geographic Information Systems (GIS); spatial data analysis; digital elevation models; and the surveying and mapping components of GIS development. GIS is used in a diverse number of fields, including civil engineering, surveying and city planning. Lectures introduce the theory and framework of GIS, while the labs introduce: the applications; processing; and presentation of geographic and spatial data.

SURV 3441: Vector & Raster Analysis

3 Credit Hours

Prerequisite: SURV 3421

Manipulation of vector and raster data. Use of local, focal, block and zonal statistical functions. Use of coordinates, datums, projections. Development of map topology. Overlay and proximity analysis. Spatial joins and queries. Data storage models