

GIS 260: Applied Geographic Information Science

Data collection, management, analysis, and presentation using GPS/GIS data loggers and ArcGIS software to design projects, import, collect, rectify, and analyze data and present results in cartographic form. Students receive instruction in field and computer procedures using commercial grade GPS/GIS hardware and software.

Course Student Learning Outcomes

1. Differentiate between navigation, GIS mapping and surveying grade Global Positioning System applications, and terms.
2. Import graphic data from external sources for use in a GIS data base
3. Extract attribute data from external sources for use in a GIS data base
4. Use GPS mission planning software to design a successful observing program.
5. Use GIS database software to design a feature list that facilitates efficient collection of data in the field. Set up a
6. Transfer field lists from a computer to a GPS/GIS data logger; collect GIS data using a GPS/GIS data logger; transfer data files from the data logger to a computer for processing.
7. Perform differential correction of GPS positions derived from C/A code.
8. Analyze differentially corrected GPS positions for accuracy, and reject those not meeting prescribed standards.
9. Develop a GIS database/cartographic product from corrected field data; use this product to extract and display information in various ways for various audiences.

Credits: 5

Prerequisites: CAT 118 or instructor permission.

Program: **Geographic Info Science**