GIS 102: Applications of Geographic Information Systems

Geographic Information Systems (GIS) are powerful tools that allow the user to study the relationship among data that can be presented spatially, such as on a map. GIS allows the user to create dynamic electronic maps that can be modified at the user's will to present desired data. Students use the concepts learned in GIS 101 and apply them to projects that will help them gain hands-on experience in the use of ArcGIS software. Students also choose a project where they demonstrate their ability to use GIS to analyze data, create a map, add features to a map, and create a high-quality layout for the presentation of a class project. Prerequisite: GIS 101. Two lecture hours and two laboratory hours per week. Instructional Support Fee applies.

Course Student Learning Outcomes

1. Use the tools of GIS, including overlap, clipping, buffering, geoprocessing, and spatial analyst to analyze data sets to solve problems 2. Understand and use the Raster data and raster data storage 3. Understand and perform analysis using networks 4. Understand the basic properties and uses of Coordinate systems and choose the right projections for the a project 5. Perform basic map editing and add and edit map features 6. Understand the Geodatabase model and create a geodatabase 7. Understand data quality issues and the Metadata that accompany data sets and use the Metadata editor tool and templates

Credits: 3

Program: Geographic Information Systems