Intermediate GIS

Course Objectives

This is an intermediate course on theories and application of GIS techniques for spatial analysis. Each student who successfully completes this course will have developed working knowledge and skills necessary to process GIS data and conduct simple spatial analysis. Students will be introduced to the concept of and will have hands-on experience with preparing data (including GPS) for GIS analysis, suitability analysis and damage assessment methodologies.

TOPICS COVERED

Essentials of Spatial Analysis
Essentials of GPS
Essentials of Digitizing and Editing of Vector Lines, Polygons
Essentials of Interpolation
Essentials of Remote Sensing Data Integration in a GIS
Essentials of Vector Overlaying Operations (clipping, merging, dissolving, buffering) with Epidemiology Application
Essentials of Raster Analysis
Topology
Map Algebra
Neighborhood Analysis
Edge Effect Analysis
Report Preparation (zonal statistics, neighborhood statistics and cross tabulation)
Suitability Analysis (Habitat and Location for Business)