2-Day Workshop: Beginners GIS for Teachers

Overview

This course covers fundamental GIS concepts as well as how to query a GIS database, manipulate tabular data, edit spatial and attribute data, and present data clearly and efficiently using maps and charts.

Participants will learn how to use ArcGIS including: ArcMap™, ArcCatalog™, and ArcToolbox™ and explore how these applications work together to provide a complete GIS solution. ***Participants will also receive the complete training manual and lesson plan organized by module along with necessary data to be used in the classroom.***

This 2-day course is for those who are new to GIS in general. This course will introduce the basic theory and application of GIS along with hands-on experiences for each module along with case studies. This will ensure teachers' proficiency and mastery of the subject. Upon successful completion teachers will be prepared to teach in their classrooms in a 'turn-key' style.

Topics for Beginner GIS Workshop I & II for Teachers

Module I: Introduction to GIS

Learning Objectives
  - What is GIS?
  - Map vs. GIS
  - Major Components of a GIS
  - Introduction to Data Collection
  - Introduction to GIS Data Types and Resolution
  - Introduction to Projection and Datum
  - Introduction to Spatial Analysis
  - Introduction to Map Design and Communication Processes
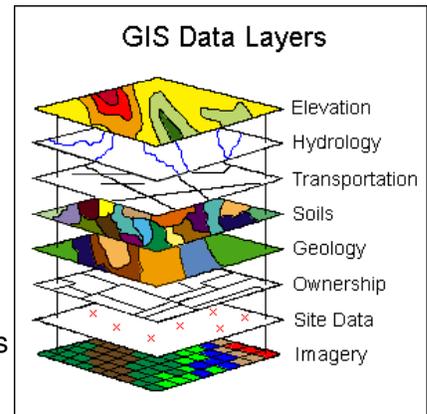
Module II: Getting Started with ArcGIS 9.x

Learning Objectives
  - Introduction to ArcGIS Software
  - Manipulating Display Parameters in ArcMap

Case Study: Find dry cleaners locations that are within certain distance of an interstate highway

Case Study: Symbolizing and displaying line and polygon features

Case Study: Symbolizing raster data - Digital Elevation Model (DEM)

Case Study: Displaying quantitative data

Module III: Map Making and Display

Learning Objectives
- Map Projection & Coordinate Systems
- Map Making and Printing Maps Using ArcGIS

Case Study: Impact of different projections and coordinate systems on maps

Case Study: Impact of different datum(s) on maps

Case Study: Map composition for Hillsborough County, FL

Module IV: Data Preparation

Learning Objectives
- Raster Reclassification
- Manipulating Vector Data and Digitizing
- Creating A Personal Geodatabase

Case Study: Convert vector data layers to raster for natural resource management

Case Study: Extracting vector data from Landsat data

Case Study: Create a personal geodatabase for city utility management

Module V: Analyzing Spatial Data

Learning Objectives
- Querying Data in ArcMap
- Selecting Features by Location
- Creating a Layer from a Selection
- Preparing Data for Analysis
- Undertaking Spatial Data Analysis

Case Study: Querying the census data

Case Study: Selecting and mapping transportation data

Case Study: Finding cities within 5 km of rivers in Florida

Module VI: Working with Locational Data

Learning Objectives
- Geocoding
- Create an Address Locator Service
- Match Addresses
- Re-match Un-Matched Addresses

➢ Adding XY Data

Case Study: Matching addresses in Atlanta, GA

Case Study: Importing GPS data in ArcMap

Module VII: Comprehensive Application of GIS

Learning Objectives
  ➢ Application of Census Geography
  ➢ Crime Mapping

Case Study: Finding sites for a potential youth center

Case Study: Crime hotspot analysis

Contact Us

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