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Training Course Outline

Training the GIS Professional

Performing Analysis with ArcGIS for Desktop - 2 Days

Overview

Learn a standard workflow you can apply to any spatial analysis project. You will perform different types of analyses to efficiently create reliable results that support informed decision making. This course uses ArcGIS for Desktop Advanced (ArcMap) and some exercises use tools in the ArcGIS Spatial Analyst extension.

Course concepts apply to ArcGIS 10.2, 10.3, and 10.4.

Please note: Esri Inc. call this course ArcGIS 3 - Performing Analysis

Topics Covered

- Getting Started with Spatial Analysis: What is spatial analysis? Proximity analysis; Overlay analysis; Statistical analysis; Temporal analysis; The spatial analysis workflow.
- Planning and Preparing for Analysis: Analysis methods; Raster data considerations; Preparing points for raster analysis; Standardising spatial reference; Working with geoprocessing environments and documentation; Data preparation for raster analysis: Interpolation.
- Performing Proximity Analysis: What is proximity analysis? When to use proximity analysis; Categories of proximity analysis; How do ArcGIS tools measure proximity? Buffering at a world scale; Data type and proximity analysis.
- Performing Overlay Analysis with Vector Data: What is overlay analysis? Overlay techniques; Performing overlay; Apportioning attributes; Overlay with Use Ratio Policy.
- Performing Overlay Analysis with Raster Data: What is raster overlay? Deriving surfaces from raster sources; Deriving rasters from vector sources; Using raster overlay Binary overlay analysis; Weighted overlay analysis; Reclassification; Considerations for reclassification; Assigning weights.
- Analysing Spatial Patterns: What is a spatial pattern? Exploring descriptive statistics; Mean centre; Standard deviational ellipses; Working with data distributions; The Average Nearest Neighbour tool; The Spatial Autocorrelation tool; Hot spot analysis; Exploring patterns.
- Analysing Temporal Patterns: What is temporal analysis? Working with time-aware data; i sncorporating time in your analysis; Temporal patterns and spatial statistics; Measuring statistics over time Space-time analysis; Grouping analysis.

Goals

- Automate analysis tasks using geoprocessing models
- Create a weighted suitability model to select the optimal location for a new site
- Apply spatial statistics to examine distribution patterns and identify hot spots
- Model temporal data to analyse and visualise change over time

Who should attend

- GIS Analysts
- GIS Technical Leads

Prerequisites

Completion of ArcGIS 2 - Essentials of ArcGIS 10.x for Desktop or equivalent knowledge

Contact Us

For GIS training enquiries and bookings visit esriuk.com/training, email us at training@esriuk.com or call us on 01296 745504

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