

# Spatial Analysis Essentials for ArcGIS - 2 days

## Overview

Unlock insights hiding in data.

This course is for anyone who needs a solid grounding in spatial analysis concepts and workflows. Discover how analysing data based on location can reveal previously unknown patterns and relationships, illuminating new possibilities and deeper insights to share with stakeholders. You'll tackle a variety of real-world projects as you explore interesting scenarios and learn a standard, repeatable workflow to increase accuracy and confidence in your analysis results.

Please note: Those who have previously attended Spatial Analysis with ArcGIS Pro should not take this course as many of the same concepts are covered

## Who should attend

- GIS professionals who need to analyse spatial patterns and need to know how data is moving and changing in their project area. Also, those who need to know how accurate their data is and how this accuracy will affect their results

## Goals

- Understand the types of spatial analysis and techniques you can apply based on the question you want to answer or the problem you want to solve.
- Organise a project for success by planning each analysis step, choosing suitable tools, and preparing data to ensure valid results.
- Automate analysis workflows using batch-processing and models that let you quickly and interactively explore multiple scenarios.
- Sample workflows used for more complex projects, including interpolation and suitability modeling, and evaluate results using spatial statistics.

## Topics Covered

- Building a foundation for spatial analysis: What is spatial analysis? Benefits of spatial analysis; spatial analysis questions; spatial analysis types; spatial analysis workflows; applying spatial analysis.
- Planning and preparing for spatial analysis: Data properties; Raster data considerations; visualising charts;
- proximity analysis: using proximity in everyday life; distance measurement methods; choosing the best distance measurement; outputs of proximity analysis; buffering using different distance measures; measuring distance using cost.

## Topics Covered Continued

- Overlay analysis; how overlay works; overlay output; working with overlay tools; choosing the appropriate tool.
- Automating spatial analysis: Automating methods in ArcGIS Pro; batch processing.
- Creating surfaces using interpolation: Tobler's first law of geography; what is interpolation? Types of interpolation methods; deterministic interpolation
- Suitability modelling: What is suitability modelling? When to use raster analysis; deriving surfaces from other sources; raster functions and geoprocessing tools.
- Spatial statistics: spatial patterns; what are spatial statistics? Interpolating inferential statistics; Characterising spatial patterns; hot spot analysis.

## Prerequisites

Completion of An Introduction to ArcGIS Pro for GIS Newcomers or equivalent working knowledge

## Contact Us

For GIS training enquiries and bookings visit [esriuk.com/learning](https://esriuk.com/learning), email us at [learning@esriuk.com](mailto:learning@esriuk.com) or call us on 01296 745504