GeoData

Introduction to ArcGIS Pro

COURSE OUTLINE

This course introduces the underlying principles and methods of Geographical Information Systems (GIS). It examines the processes involved in the capture, storage, manipulation, analysis, presentation and output of digital geographical data in a GIS and provides opportunities for the development of practical skills in processing data using an industry standard GIS software package.

The course comprises a series of presentations and computer-based practical sessions using ESRI’s ArcGIS Pro software with example data sets taken from a variety of fields. Topics covered include: What is GIS, working with tables, visualising data, map production and basic analysis.

This course is intended for those who have little or no GIS knowledge or who wish to undertake some formalized training in ArcGIS Pro having been largely self-taught in the past.

ANTICIPATED COURSE OUTCOMES / ACHIEVEMENTS

Aims and objectives

• To provide delegates with an appreciation of the fundamental concepts of GIS including its strengths and limitations.
• To introduce the core functionality of ESRI’s ArcGIS Pro software package.
• To teach the fundamental skills needed to obtain, import, manipulate, analyse, interpret, manage and output spatial data in order to investigate topics in the delegate’s area of interest.
• To demonstrate real-world uses of GIS.

Learning outcomes - by the end of the course, delegates will have a knowledge and understanding of:

• What a GIS is; what spatial data is; raster and vector data models
• The core functionality of ArcGIS Pro.
• Visualising data
• Finding data and Data Management – Introduction to AGOL.
• Handling tables including selections and queries
• Creating and editing spatial data
• Basic Analysis – basic tools and automation
• Map Production and sharing maps.
Introduction to ArcGIS Pro

Day 1
1 - The what, why, how of GIS
What is GIS? What does it mean? Questions I can answer using GIS What data can I use in a GIS? GIS Applications

Day 2
6 - Creating and editing data
Digitising basics Creating features Modifying existing features Attributing

Exercise 6 – Creating and editing data

7 – Basic analysis
Basic tools Selecting data Automation

Exercise 7 – Basic Analysis

8 – Map production and sharing
Layouts in Pro Export, print and online sharing

Exercise 8 – Creating a map layout

9 – Exploring 3D data
Local/Global scenes Visualising data in 3D Exploring 3D data

Exercise 9 – Visualising data in 3D

Day 1
2 – Getting familiar with ArcGIS Pro
Logging in to ArcGIS Pro What is a Project? What is a Map? What is a Layout? What data can I view in ArcGIS Pro?

Exercise 2 - Getting Familiar with ArcGIS Pro

3 – Visualising Data
Symbolising vector data Labelling vector data Symbolising raster data

Exercise 3 – Visualising data

4 – Finding Data and Data Management
Project Structure Data formats Connection to AGOL Portal and data upload/download Living Atlas WMS and WFS Metadata

Exercise 4 – Data Management

5 – Working with tables
Table types Using Excel and CSV data Creating spatial data from CSV files Creating and deleting attribute fields Joining and relating tables Generating summary statistics Field calculator

Exercise 5 – Working with tables