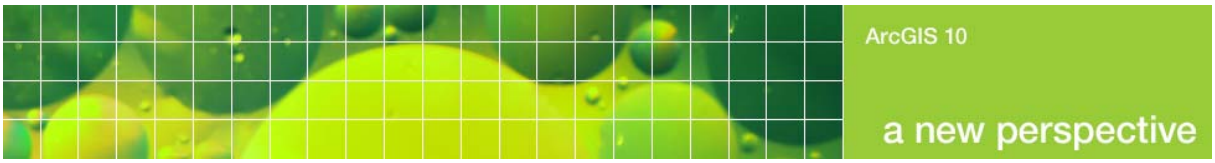


ArcGIS Desktop Part 2: Desktop Foundation 3 day

Overview

This course is the second of a 2 part foundation in ArcGIS Desktop (version 10). The Part 2 course expands on the subjects covered in the Part 1 course and introduces new functions. These include managing data in a geodatabase, further symbology and labelling options and the use of analysis tools and models. The course can be completed with an ArcView licence.
At the end of the course the students will test their new skills in a small analysis project.

The course contains 3 modules: Introduction to the geodatabase, ArcGIS presentation skills and Analysis and models. These 3 modules will also be available as separate expanded 2 day courses which cover more detail and use functionality available with an ArcEditor or ArcInfo licence. The 3 'expert' courses would be a higher level alternative to this Desktop Part 2 course.

Having completed this course along with Desktop Part 1 the student will have a good overall knowledge of the ArcGIS Desktop application. The student may then decide to attend more specialist courses.

Audience

This course is for those who have attended an ArcGIS Desktop Part 1 course and wish to build on their basic ArcGIS knowledge. This course will assume that students have basic ArcGIS 10 knowledge. An alternative to this course would be to attend the separate 2 day courses described above.

The course could also be used by existing ArcGIS users who require an introduction to some of the additional functions available in ArcGIS 10.

Goals

- Use ArcCatalog to manage spatial data
- Create and populate a geodatabase
- Manage raster data in a geodatabase
- Understand geodatabase behaviour
- Create more advanced symbology
- Create a style sheet and layer files
- Create label classes
- Create and work with annotation
- Use editing tools and templates
- Work with time based data
- Create layer and map packages
- Understand geoprocessing
- Use vector analysis tools
- Use the image analysis window
- Create and run a model
- Successfully complete a course project

Topics covered

Managing spatial data: Types of geodatabase; Upgrade a geodatabase

ArcCatalog / Catalog: Connecting to data; Catalog options; Searching, Metadata

Building a geodatabase: Geodatabase elements; Feature classes; Feature datasets; coordinate systems; Import and export; Raster data

Data adjustment: Spatial adjustment of CAD data; Georeferencing an image

Geodatabase behaviour: Subtypes & Domains; Relationship classes; Topology

Improving symbology: Symbology types; Symbology tools; Layer files; Symbol search; Style sheets; Creating new symbols; Representations (demo)

Working with labels: Label Properties / Label Manager; Label classes; Convert to annotation; Maplex (demo)

Working with annotation: Annotation layers; Editing annotation

Editing and templates: Setting up an edit session; Editing templates; Editing tools

Working with time aware data: Making data time aware; Time slider tool

Data output: Templates; Data driven pages; Layer & map packages; ArcGIS.Com

Introduction to geoprocessing: Introduction to analysis; Geoprocessing menu; Environments & Options

ArcToolbox: Introduction to the toolbox; Search for tools; Use analysis tools; Create a toolbox

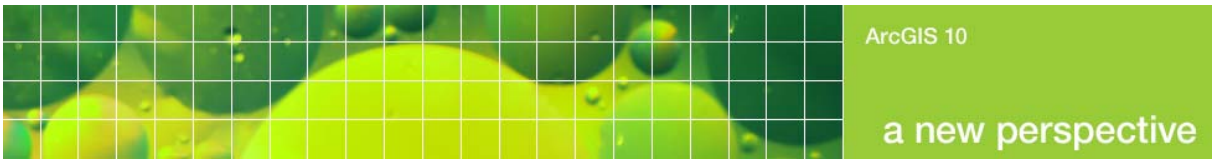
Image Analysis: Image analysis window; Raster analysis

Introduction to the Modelbuilder: Model types; Adding data & tools; Parameters & variables; Running models; Labels; Model documentation; Advanced model functions

Introduction to Python: Overview of Python and ArcPy

Course project: Putting it all together

What comes next?: Learning paths; Links; ArcGIS.com;



Prerequisites

- Completion of an ArcGIS Desktop Part 1 course or equivalent experience.
- To use the full ArcGIS.com functionality students should register for an ESRI global account. This costs nothing but gives you access to data and other materials. If time allows you may use it on the course. You can register by selecting the Support tab from www.esri.com.

Related Courses

This course is the second of a 2 part foundation in ArcGIS desktop.
As an alternative to this course you could attend one or more of the 2 day expanded courses that cover the content of this course and much more. These courses would give you a more thorough introduction to the geodatabase, to presentation skills or to analysis tools.

There are many other courses that follow on from this course depending on which areas you would like to specialise in.

Topics in detail

Managing spatial data
- What is a geodatabase?
- Types of geodatabase
- The File geodatabase
- Upgrade / Compress / Compact
- Licencing & functionality
- Exercise: Explore and upgrade a geodatabase

ArcCatalog / Catalog
- ArcCatalog v Catalog
- Indexing data
- Connecting to data
- ArcCatalog options
- Searching for data
- Metadata
- Exercise: Work with data in Ar5cCatalog

Building a geodatabase
- Geodatabase elements
- Feature classes
- Feature datasets
- Spatial reference systems
- Import / export
- Data loader
- Coordinate (X,Y) data
- Geodatabase tables
- Exercise: Create elements in a new geodatabase
- OS Mastermap
- Conversion tools
- Raster datasets / raster catalogs
- Mosaic datasets
- Raster attributes
- Exercise: Work with Raster data

Data adjustment
- Spatial adjustment
- Transformations
- Displacement links & RMS errors
- Aggregating data
- Georeferencing an image
- Georeferencing toolbar
- Exercise: Move CAD data to correct position

Geodatabase behaviour
- Overview of geodatabase behaviour
- Subtypes
- Domains
- Using Subtypes and domains
- Exercise: Create and use subtypes and domains
- Relationship classes (overview)
- Introduction to geodatabase topology
- Introduction to geometric networks
- Map topology
- Exercise: Use map topology

Improving symbology
- Categorical symbology
- Numeric symbology
- Exclusion / normalisation / colour ramps
- Grouping symbols
- Symbology tools and tips
- Table of contents labels
- Layer files
- Exercise: Assign and improve symbols
- Search for symbols
- Style Manager
- Creating style sheets
- Creating new symbols
- Exercise: Create and use a style sheet

Representations Overview
- Demonstration: Representations

Working with labels
- Label properties
- Label manager
- Label classes
- Expressions
- Convert labels to annotation
- Exercise: Create labels classes

Maplex Overview
- Demonstration: Maplex

Working with annotation
- Annotation layers
- Map annotation
- Editing annotation (templates)
- Exercise: Work with annotation

Editing and templates
- Start an edit session
- Set snapping
- Create a template
- Explore editing tools
- Exercise: Create data

Working with time aware data
- Temporal data
- Making data time aware
- The time slider
- Exercise: Work with time aware data

Data output
- Layouts and map templates
- Geo enabled PDF's
- Data driven pages
- Layer and map packages
- ArcGIS.com
- Exercise: Create data driven pages
- Demonstration: ArcGIS.com

Introduction to geoprocessing
- What is geoprocessing
- Analysis tools
- Geoprocessing menu
- Customizing the menu
- Environments / options
- Exercise: Use common geoprocessing tools

ArcToolbox
- Introduction to the toolbox
- Search for tools
- Extract / Overlay / Proximity toolsets
- Creating your own toolbox
- Exercise: Use analysis tools

Image Analysis
- The image analysis window
- Image Analysis display
- Image analysis processing
- Raster analysis tools – Spatial Analyst
- Exercise: Use the image analysis window

Introduction to the Modelbuilder
- What is Modelbuilder?
- Types of models
- Adding data and tools
- Parameters and variables
- Navigating models
- Intermediate data
- Exercise: Create a simple model
- Changing the model
- Model labels
- Model documentation
- Overview of other model functionality
- Exercise: Add labels and document a model

Introduction to Python
- What is Python?
- What can you do with Python?
- Introducing ArcPy
- Exercise: Create and run a simple script

Course Project
- Create and populate a project geodatabase
- Create a map document and use presentation skills
- Perform analysis as directed
- Create output as directed

What comes next
- Information and course wrap up