

ArcGIS® Pro: Essential Workflows

STUDENT EDITION

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Course introduction

- Introduction
- Course goals
- Additional resources
- Installing the course data
- Icons used in this workbook
- Understanding the ArcGIS Platform

1 Getting started with ArcGIS Pro

- Lesson introduction
- Sign in to ArcGIS Pro
- Exercise 1: Locate and use common functionality
 - Start ArcGIS Pro and create a project
 - Add a folder connection and add data
 - Use the ArcGIS Pro Help to find tools
 - Use the Explore tool to navigate the map
 - Explore feature attributes
 - Select features interactively
 - Modify project properties
 - Locate features
- Lesson review

2 Creating geodatabase data

- Lesson introduction
- Common GIS data sources
- Data properties to consider
- Explore data sources
- Geoprocessing in ArcGIS Pro
- Getting data into the geodatabase
- Exercise 2A: Convert data into the geodatabase
 - Convert feature classes from one geodatabase to another
 - Convert a shapefile into a geodatabase
 - View data in ArcGIS Pro
- Importing subsets of data
- Create spatial and attribute queries
- Exercise 2B: Create and export subsets of data using queries
 - Create an attribute query and export features
 - Create a spatial query and export features
- Lesson review

3 Working with spatial reference

- Lesson introduction
- Shape of the earth
- Datums
- Setting vertical datums
- Two types of coordinate systems
- Exercise 3A: Set the spatial reference of a map
 - Add a layer to a map
 - Examine the coordinate system of a layer
 - Enable the geographic transformation warning
 - Apply a geographic transformation
- Map projections
- Distortion and spatial properties
- Game of distortions
- UTM and national coordinate systems
- Exercise 3B: Apply a new spatial reference to a feature class
 - Add additional layers to a map
 - Prepare reproject parameters
 - Reproject a feature class
- Lesson review

4 Using ModelBuilder for data conversion

- Lesson introduction
- Uses of ModelBuilder
- Explore a model
- Using models to automate processes
- Exercise 4: Build a model to convert multiple shapefiles
 - Create a model and set its properties
 - Add an iterator to the model and set its parameters
 - Add a conversion tool to the model and set its properties
- Lesson review

5 Visualizing data

- Lesson introduction
- Symbolizing layers
- View symbolized data
- Classifying numeric data
- Exercise 5A: Symbolize vector data
 - Symbolize data using unique values
 - Symbolize data using graduated colors
 - Symbolize points using graduated symbols
 - Symbolize features by density
- Set scale dependencies and definition queries

- Exercise 5B: Control the visibility of features
 - Add a map to a project, and then add layers
 - Set scale dependencies
 - Create definition queries
- Show raster symbology options
- Lesson review

6 Adding text to the map

- Lesson introduction
- Labeling basics
- Exercise 6A: Add and modify labels
 - Create a map and add a layer
 - Label the features
 - Change the label field
 - Modify the label font
 - Change the label position
- Label classes
- Exercise 6B: Create label classes and scale dependencies
 - Explore attributes
 - Create label classes
 - Set scale dependencies on label classes
- Geodatabase annotation feature classes
- Standard or feature-linked annotation
- Feature-linked annotation
- Exercise 6C: Convert labels to annotation
 - Add new layers
 - Add new labels
 - Convert labels to annotation
 - Modify annotations
 - Create new annotations
- Lesson review

7 Visualizing data in 3D

- Lesson introduction
- Why should you use 3D?
- Local and global scenes
- Scene elevation source
- Ground elevation surface
- Custom elevation surface
- Extruding features
- Exercise 7: Work with 3D scenes
 - Open a map file
 - Set the vertical coordinate system
 - Convert a map to a scene

- Set elevation properties for the scene
- Create a hillshade layer and set elevation properties
- Set the display properties
- Extrude the damaged buildings
- Display the earthquakes in 3D
- Link a 2D view and a 3D scene

Lesson review

8 Create features from tabular data

Lesson introduction

Ways to create points from tabular data

Adding x,y event data

Exercise 8A: Display x,y coordinate data

- Explore tabular data

- Display x,y event data

- Convert event data into the geodatabase

Geocoding addresses

Geocoding steps

Address locators

Exercise 8B: Geocode address locations

- Add and explore data

- Create an address locator

- Geocode addresses

- Explore output data

Lesson review

9 Relating tabular data

Lesson introduction

Associating tables

Cardinality

Joins

Relates

Creating a relate

Exercise 9: Join and relate tabular data

- Add a table and explore its attributes

- Convert an Excel file to a geodatabase table

- Add and calculate a field

- Join the tables

- Use the joined fields

- Export the joined layer

- Create a relate

Choose join or relate

Lesson review

10 Creating new features

Lesson introduction

Creating features and attributes

Exercise 10: Edit features and attributes

- Modify a feature template

- Digitize a polygon feature

- Update attributes

- Digitize line features

Lesson review

11 Modifying existing features

Lesson introduction

Why modify features?

Feature modification tools

Exercise 11: Use feature modification tools

- Modify vertices

- Reshape a feature

- Split a polygon

- Merge polygon features

Lesson review

12 Using ModelBuilder for analysis

Lesson introduction

Types of analysis

ModelBuilder and analysis

Selecting by attributes and buffering

The Clip and Intersect tools

Exercise 12: Create a model to analyze robberies

- Insert a map and create a model

- Query robberies

- Add the Buffer tool to the model and set parameters

- Add the Clip tool to the model and set parameters

- Add the Intersect tool to the model and set parameters

- Run the model and view the results

- Modify parameters and rerun the model

- Prepare the model for sharing

Lesson review

13 Sharing a static map

Lesson introduction

Overview of sharing in ArcGIS Pro

What is a map layout?

Map layout objectives
Layout design
An improved map design
Create a layout and add map elements
Exercise 13: Create and share a map
 Create a layout
 Add a map frame to the layout
 Add map elements to the layout
 Create another layout in the project
 Export the map to PDF
Lesson review

14 Sharing dynamic maps

Lesson introduction
Dynamic sharing
Sharing roles and permissions
Sharing content to ArcGIS Online
Exercise 14: Package data using ArcGIS Pro
 Share a map package
 Share a web map
 Access shared content
Lesson review

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