

Advanced ArcGIS Pro

Course Length: 3 days

ArcGIS Version: Pro 3.x

App: ArcGIS Pro

Overview

For many GIS projects, there is a simplified way to accomplish a task, as well as a more advanced approach to complete the same task. Now that you are comfortable with the basic functionality of ArcGIS Pro, you may be looking for some more advanced methods of accomplishing your goals. Maybe you want to set some restrictions on your datasets to make sure the appropriate attribute values are always used, or to ensure that there are never gaps between parcel boundaries. Maybe you want to automate repetitive tasks, or perhaps you would like to tie events – such as a set of bus stops or different stormwater pipe diameters – along line features with automated ease. These advanced operations are often overlooked but can greatly enhance the efficiency and effectiveness of GIS.

Audience

This course is for those who are already comfortable with the basics of ArcGIS and want to learn more about working with the enhanced functionality of geodatabases in ArcGIS.

Topics Covered

Day 1

- The File Geodatabase – A review of the file geodatabase, its capabilities and constituents, and an overview of other GIS data formats (Geodatabase Structure; Geodatabase Compared to Other Standard Formats).
- Project and Geodatabase Management – Keeping track of ArcGIS Pro projects and the data they use (Creating a Geodatabase; Project and Geodatabase Management, including data connections and compression; Importing and Exporting).
- Address Geocoding – Turning address tables into points (The Geocoding process; Address Locator Options (Streetmap, AGOL, Open Source, Build Your Own); Geocoding Addresses; Creating an Address Locator).
- Linear Referencing – See multiple events along a line (like potholes or bus stops), use real-world measurement values for symbology and analysis (like highway mile markers), and see how attributes change along portions of the same line (like pavement quality or speed limit). (Linear Referencing Defined; Events Along a Line; Hatching).

Day 2

- Geodatabase Annotation – Creating text features that may or may not be tied to table attributes (Creating Geodatabase Annotation; Editing Geodatabase Annotation; Changing Symbology).
- Geodatabase Topology – Setting geometry rules on your datasets to maintain quality, and easily locate and fix errors (Creating Geodatabase Topology; Topology Validation; Correcting Topology Errors).
- Maintaining Attribute Integrity – Setting constraints on your datasets to ensure accuracy and maintain consistency (Constraining Attributes; Domains; Subtypes; Contingent Attribute Values; Data Reviewer Extension).

- Introduction to Arcade – Using the Arcade expression language for field calculations, label and symbology expressions, and creating custom pop-ups (Why ANOTHER Language?; Basic Syntax; Arcade Operators and Functions; Custom Symbology with Arcade; Conditional Statements; Arcade for Labeling).

Day 3

- Attribute Rules – Constrain your attributes and validate against the constraints, just like geodatabase topology, and automatically calculate some attribute values as you enter others (Why Use Attribute Rules?; Attribute Rules View; Creating and Using Attribute Rules).
- Creating Tasks – Creating repeatable processes for workflow documentation, new employee onboarding, and new skill training (What is a Task?; Working Through a Task; Creating and Sharing Tasks)
- ModelBuilder – An introduction to ArcGIS Pro’s simplest and most powerful tool for automation and custom tool creation (ModelBuilder Basics; Creating a Model).

Format

In-person instruction with hands-on practice and course materials you can keep.

Prerequisites and Recommendations

Attendees should have knowledge of Microsoft Windows® and be familiar with the basic use of ArcGIS Pro, including the topics covered in the **Introduction to ArcGIS Pro** and **Intermediate ArcGIS Pro** classes.