

ArcGIS I: Introduction to GIS

Format: Instructor-Led

Duration: Two days

Description

This course teaches what a GIS is and what you can do with it. Working with various components of the ArcGIS platform, you will create GIS maps, explore and analyze the data behind the maps, and learn easy methods to share your maps and analysis results. By the end of the course, you will have a solid understanding of how GIS maps and ArcGIS tools are used to visualize real-world features, discover patterns, obtain information, and communicate that information to others.

Who Should Attend

Individuals who do not have any prior GIS education or workplace experience with GIS.

Learn How To

Quickly create and share a GIS map using ArcGIS web-based tools and content.
Find and organize geographic data and other GIS resources for a mapping project.
Accurately display features on a GIS map and efficiently access information about them.
Analyze a GIS map to identify where features that meet specific criteria are located.
Share GIS maps and analysis results so they can be viewed using desktop applications, websites, and mobile devices.

Pre-requisite

Experience with Windows-based software for basic file management and browsing is required.

Course Outline

What is the ArcGIS platform?

- ✓ Tools to easily find, create, share, and use GIS maps
- ✓ Multiplatform accessibility

What is GIS?

- ✓ Components of a GIS
- ✓ Understanding the geographic approach
- ✓ What can you do with a GIS?
- ✓ Making and sharing a map using ArcGIS Online

What makes data geographic?

- ✓ Representing real-world features digitally
- ✓ Geographic data formats and non-geographic data formats
- ✓ Documenting important information about data with metadata

Mapping real-world feature locations using coordinate systems

- ✓ Geographic and projected coordinate systems
- ✓ Identifying a dataset's coordinate system
- ✓ Changing a dataset's coordinate system
- ✓ Changing the coordinate system for a map

Finding GIS maps and data

- ✓ Considerations when selecting data
- ✓ Sources of GIS data

Exploring a GIS map

- ✓ Navigating around places of interest
- ✓ Finding features and accessing feature information
- ✓ Changing feature symbology
- ✓ Visualizing change over time

GIS analysis

- ✓ Solving spatial problems
- ✓ Five-step process
- ✓ Determining where and when things occurred
- ✓ Sharing analysis results as graphs and layers

Sharing GIS maps and results

- ✓ Common ways to share maps and results
- ✓ Sharing tools and data
- ✓ Sharing results as web maps and web mapping applications
- ✓ Accessing content through ArcGIS Online

ArcGIS II: Essential Workflows

Format: Instructor-Led

Duration: Three days

Description

In this course, you will acquire fundamental skills needed to author, share, and use geographic information and maps across the ArcGIS system. You will learn how to efficiently find, explore, manage, and analyze geographic data and create informative maps that showcase your work. The course covers a variety of techniques to effectively share GIS maps and resources with decision makers, stakeholders, and the public.

Who Should Attend

GIS professionals and others who have an introductory-level knowledge of GIS concepts and limited ArcGIS experience.

Learn How To

Use ArcGIS software and content to create high-quality maps that combine data from different sources.

Organize, create, and edit geographic data so that it is accurate and up to date.

Manage, symbolize, and label map layers to support visualization and data exploration.

Design an attractive page layout for maps that will be printed.

Apply a standard workflow to analyze GIS data and solve spatial problems.

Share maps and analysis results so they are accessible on multiple platforms.

Prerequisites

Completion of ArcGIS I: Introduction to GIS or equivalent knowledge is required.

Course Outline

Authoring, sharing, and using GIS maps

- ✓ Understanding the workflow
- ✓ Creating maps that combine local data with ArcGIS Online content
- ✓ Publishing a map to the web

Organizing geographic data

- ✓ Finding data for a project
- ✓ Storing data from different sources in a file geodatabase
- ✓ Documenting data for a project

Managing map layers

- ✓ Setting scale ranges to improve map display
- ✓ Presenting filtered views of data using definition queries

- ✓ Creating group layers and basemap layers to organize map contents

Displaying data

- ✓ Understanding quantitative and qualitative data
- ✓ Symbolizing features by attribute values
- ✓ Classification methods
- ✓ Normalizing data

Working with tabular data

- ✓ Adding fields and calculating values
- ✓ Summarizing fields
- ✓ Table joins and relates

Creating and editing data

- ✓ Editing workflow
- ✓ Feature templates
- ✓ Creating new features
- ✓ Updating feature shapes and attributes
- ✓ Editing data using an ArcGIS Online template

Labeling features

- ✓ Labeling workflow and options
- ✓ Understanding reference scale
- ✓ Automating label placement using Maplex
- ✓ Python label expressions

Designing map layouts

- ✓ Cartographic design principles
- ✓ Adding map elements
- ✓ Creating and publishing single maps and map books

Preparing data for analysis

- ✓ Evaluating data quality
- ✓ Changing a dataset's coordinate system

Solving spatial problems

- ✓ Analysis workflow
- ✓ Working with geoprocessing tools
- ✓ Creating models

Sharing geographic information

- ✓ Options for sharing maps and layers
- ✓ Sharing analysis workflows using geoprocessing packages
- ✓ Publishing a map service