

Making Sense of Spatial Reference

1-Day Course

Overview

This one day course teaches students the essentials of map projections and coordinate systems and what they need to know about projecting geographic data with ArcGIS. Common datums are explained along with a discussion of the error introduced when the incorrect datum is chosen for a dataset. Various map projections, and how to manage data in these projections in ArcMap, are covered in detail.

Audience

This course is for those who are already comfortable with the basics of ArcGIS but who want to learn more about map projections and map coordinate systems in ArcGIS.

Topics covered

Geographic Coordinate Systems

- The World's Shape
- Datums
- Datum Transformations

Map Projections and Projected Coordinate Systems

- Projection Types
- Controlling Distortion
- Commonly Used Projections
- Universal Transverse Mercator Coordinate System
- State Plane Coordinate System

Projections in ArcGIS

- Defining Your Projection in ArcGIS
- Projection Information in ArcGIS
- Projecting Vector Data
- Projecting Raster Data
- Projections and Calculating Geometry
- Projections and Editing

Prerequisites and recommendations

Students should be familiar with the basic use of ArcGIS, including the topics covered in either the **Fundamentals of ArcGIS** or **ArcGIS Desktop I** classes.