



# Geodatabase Fundamentals & Linear Referencing

*Virtual Training Class*

Provided by **Keck & Wood, Inc.**

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## **Course Overview**

This course teaches students the fundamentals of the Geodatabase; creating and managing the Geodatabase, using domains, subtypes and topology to better manage your data, using images with the Geodatabase, and using specialized editing tools to correct and clean data, and creating routes.

Students will learn how to use Geodatabase by working through two realistic projects. The first project is preparing data for a burn plan on the Florida Panther Refuge; the second is working with stream data from the Wenatchee National Forest to analyze fish populations.

## **Target Audience**

This course is designed for those with no or limited experience with ESRI's Geodatabase format that wish to learn more about how they work and how to use them.

## **Prerequisites and recommendations**

This course does require basic know of ArcGIS Desktop software. Students taking this course should have taken the ArcGIS Desktop II: Tools & Functionality Class or have similar real world experience.

## **What You Get!**

- Audio and Visual Lectures
- Software Demonstrations
- Exercises and Data
- Bound, Hard-Copy Lecture Materials

## **Course Outline**

The course is divided into three sections, Geodatabase Basics, Validating Data, and Linear Referencing.

In the first section we will look at the basics of creating and managing a Geodatabase, and then converting data to the Geodatabase format. Students will create feature classes and feature datasets, added attribute fields, and use tools such as the simple data loader to import data. Students will also learn methods for managing raster data in a Geodatabase.

In the second section, students learn how to use the Geodatabase to validation tools to check data for attribute and spatial errors. Students will create topologies, subtypes and domains and see how these are used to ensure data quality and make data editing easier.



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In the third section, students work with Routes and Linear Referencing. Routes let you attach multiple data tables to linear features for analysis and mapping. The easiest way to think about routes is the milepost numbers you see as you drive down roads. Once you have established a route with “mileposts” you can then link this to multiple data sources. In the last module, we’ll show you a sample extension that will make it easier to manage and create reports on your Geodatabase.

## Modules

### Section 1: Geodatabase Basics

- Module 1: Geodatabase Concepts and Basics
- Module 2: Converting Data to the Geodatabase Format
- Module 3: Working with Rasters in the Personal Geodatabase

### Section 2: Validating Data

- Module 4: Validating Attributes - Subtypes, Domains, Relationship Classes
- Module 5: Validating Features - Topology in the Geodatabase
- Module 6: Editing Topology

### Section 3: Linear Referencing

- Module 7: Understanding Linear Referencing
- Module 8: Editing and Using Routes for Analysis
- Module 9: The Geodatabase Designer

## Cost

The fee for this course is \$150.00 per student plus shipping.

## Required Software

- ✓ ArcGIS Desktop 9.x (ArcView, ArcEditor, or ArcInfo)
- ✓ Internet Browser (Internet Explore 6 or higher recommended)

**For information about this course, other GIS training offered or the full range of GIS/Mapping services provided by Keck & Wood, Inc. please contact:**



## Keck & Wood, Inc.

2750 Premiere Parkway, Suite 900  
Duluth, Ga. 30097  
(678) 417-4000  
(678) 417-4055 Fax  
[www.keckwood.com](http://www.keckwood.com)

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