



Mastering Python for Geoprocessing in ArcGIS

CD-ROM Training Class

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

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Course Overview

This course is designed to teach the fundamental programming constructs of the Python language and how it can be integrated with ArcGIS[®] Desktop to automate geoprocessing tasks. Course participants will be led through a series of 12 modules covering topics such as basic Python language features, the Geoprocessor ArcObject[™] and its associated classes, creation of dynamic scripts which can be added to ArcToolbox[™], error handling techniques, and many others.

Target Audience

This course is designed for beginner to advanced level ArcGIS programmers who wish to learn how to create geoprocessing scripts in the ArcGIS Desktop interface. Such scripts can be used to automate and/or batch process various analysis with in ArcGIS.

Prerequisites and recommendations

This course is not for new computer or ArcGIS users. Students taking this course should have taken ArcGIS Desktop II & III or have similar real world experience. They should also have an understanding of basic programming concepts.

Course Goals

After successfully completing this course users will have acquired a number of new skills related to Geoprocessing with Python. These new skills include:

- Fundamental understanding of the Python programming language.
- How to write Python scripts to do geoprocessing tasks such as buffer, clip, overlay, insert, update, and delete rows from a table or feature class, and any other system tool provided by ArcToolbox.
- How to create custom toolboxes in ArcToolbox
- How to read the Geoprocessor Object Model Diagram
- How to write dynamic scripts that can be attached to ArcToolbox.
- Understanding of the Geoprocessor ArcObject and how it controls access to the geoprocessing objects.

Course Modules

1. Getting started with Python in ArcGIS
2. The Geoprocessor ArcObject
3. Basic Python Language Features
4. Obtaining descriptive information about ArcGIS Data
5. Using Cursor Objects to select, edit, and add records to tables and feature classes
6. Enumeration Objects for listing ArcGIS data
7. Miscellaneous objects

8. Integrating Python scripts with ArcToolBox
9. Geoprocessing Tools
10. ArcGIS Server Tools
11. Scheduling Geoprocessing Tools
12. Using Messages to report python output



Cost

- The fee for the virtual course is \$150.00 per student.

Discounts are available for groups or if bundled with other training.

Required Software

- ✓ ArcGIS Desktop 9.2 or 9.3 (ArcView, ArcEditor, or ArcInfo)
- ✓ Internet Browser (Internet Explore 7 or higher recommended)

Other GIS training classes offered

- ✚ ArcGIS Desktop I: Getting to know GIS (ESRI Official Class - Instructor Led)
- ✚ ArcGIS Desktop II: Tools & Functionality (ESRI Official Class - Instructor Led)
- ✚ ArcGIS Desktop III: GIS Workflows & Analysis (ESRI Official Class - Instructor Led)
- ✚ Using AutoCAD® data in ArcGIS (Instructor Led Class)
- ✚ ArcGIS Server Basics: Installation, Services & Tweaks (Instructor Led)
- ✚ Geocoding and Address Matching in ArcGIS
- ✚ Introduction to Geoprocessing with Python (Virtual Class)
- ✚ Introduction to VBA in ArcMap (Virtual Class)
- ✚ Introduction to ArcObjects (Virtual Class)
- ✚ Customized Classes for ArcGIS Desktop and Server

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



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