

# Python Primer for ArcGIS Pro– Writing Your First Script

*Course Length:* 1 day

*ArcGIS Version:* 2.x

*App:* ArcGIS Pro

## Overview

Tailored to the non-programmer, this course introduces the attendees to scripting basics: variables, loops, conditional statements, etc., via a series of short lecture presentations and hands-on “try-its” to accomplish a worthwhile task. The task is to create a script that will write a log file of broken links in a project and then run that script as a tool from ArcToolbox. If you have never programmed before, this course is the perfect course to prepare you to be successful in the more detailed Python for ArcGIS - Writing Scripts to Manipulate GIS Data.

## Audience

Attendees should be familiar with the basic use of ArcGIS Pro, including the topics covered in the TeachMeGIS Introduction to ArcGIS Pro and Intermediate ArcGIS Pro classes, and should also be familiar with geoprocessing.

## Topics Covered

- Introduction to Python – Discover what Python is and places it is commonly used, as well as basic syntax. (Python; String Syntax)
- Comments, Numbers, and Variables – Learn how and why to use comments in a script, the proper syntax for numbers, and how to declare variables. (Comments and Numbers; Variables)
- Rules and Functions – Discuss rules for writing scripts, such as case sensitivity, as well as string functions and how to include paths in a script. (Python Rules; String Functions)
- Objects, Properties, and Methods – Find out what site packages and objects are, as well as the difference between properties and methods. (Object Oriented Scripting; arcpy)
- Looping – See how to use loops to repeat lines of code for a set of items. (Working with Loops)
- Using the Help – Access the help documentation to get code samples and use the arcpy.mp module. (Help; arcpy.mp)
- Write to a File – Have scripts create a text file. (Writing to a Text File; File Workflow)
- Input Arguments – Make a script that prompts for arguments at run time. (Making Scripts Dynamic; sys Module; Capturing Arguments)
- Create a Script Tool – Create a custom toolbox and custom script tool (Toolboxes in ArcToolbox; Custom Script Tools)
- Document the Tool – Write the help for the custom script tool that you created. (What is Help?; Creating Help Documentation)

## **Format**

This class is taught in two formats: In-person instruction with hands-on practice and live, instructor led online.