

No prior programming experience is required!

Special Topics: Python Programming for Geospatial Analysis

Geog 4/590 - Fall 2015

Lecture: TR 10:30 -11:50am in 41 Library (Proctor Room)

Instructor: Dr. Nick Kohler; nicholas@uoregon.edu

Course Description and Learning Outcomes

This class introduces students to the automation of geospatial data collection, analysis, and presentation through the use of programming languages and graphic modeling. These tools have become key components of modern geographic analysis and data management, and provide a powerful means to collect and analyze geographic information. ***No prior programming experience is required.***

By the end of the class, students will: gain experience writing Python scripts to download, create, interact with and analyse geospatial data in ArcGIS and other software packages; understand the basic concepts behind object-oriented computing languages; and be able to create graphic models and custom tools for spatial analysis projects.

```
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
G:\Classes\Geog490\Lab2\lab2_model.py - Notepad++
lab2_model.py
1 # -*- coding: utf-8 -*-
2 # -----
3 # lab2_model.py
4 # Created on: 2015-06-01 12:50:33.000000
5 # (generated by ArcGIS/ModelBuilder)
6 # Description:
7 # -----
8
9 # Import arcpy module
10 import arcpy
11
12
13 # Local variables:
14 PlanA_Roads = "PlanA_Roads"
15 Vegetation_Type = "Vegetation Type"
16 Buffered_FC_shp = "P:\\Student_Data\\nicholas\\Lab2\\Buffered_FC.shp"
17 VegClip_shp = "P:\\Student_Data\\nicholas\\Lab2\\VegClip.shp"
18 VegClipStatistics_dbf = "P:\\Student_Data\\nicholas\\Lab2\\VegClipStatistics.dbf"
19
20 # Process: Buffer
21 arcpy.Buffer_analysis(PlanA_Roads, Buffered_FC_shp, "Distance", "FULL", "ROUND", "ALL", "")
22
23 # Process: Clip
24 arcpy.Clip_analysis(Vegetation_Type, Buffered_FC_shp, VegClip_shp, "")
25
26 # Process: Summary Statistics
27 arcpy.Statistics_analysis(VegClip_shp, VegClipStatistics_dbf, "Shape_Area SUM", "VEG_TYPE")
28
29
Python file length: 977 lines: 29 Ln: 8 Col: 1 Sel: 0|0 Doc: Windows UTF-8 w/o BOM INS
```

