

Module 1: Project 1

An explosive situation in Springfield, Virginia

In this module, we learn the following ArcGIS procedures:

- (1) Create a process summary (p. 8)
 - (2) Document the map (p. 8)
 - (3) Set the environments (p. 10)
 - (4) Analysis Tools: Proximity (p. 13)
 - (4) Create multiple ring buffers (p. 13)
 - (6) Analysis Tools: Extract (p. 14)
 - (7) Network Analyst (p. 16)
- p. 7 Q5 GCS means “Geographic Coordinate System.” Please see:
http://wvgis.wvu.edu/otherdocs/standardsandpubs/wv_coordinate_systems_aug02.html for more information.
- p. 8-10 These setup procedures are absolutely important. Please make sure you get familiar with all.
- p. 11 #3 Click the “Import” button in the Symbology dialog box. Add the “usa_street.lyr” and make the data location to “usa_street.”
#4 From the Label Manager dialog box (accessible from the Labeling tool bar), create a new class (Click the name of available one in the Label Class and type a name in Add Label Class) and perform the SQL Query
- p. 12 #5 “77.175842” is missing the minus sign. Thus, it should be “-77.175842.”
Don’t forget to use the Add Point button (a double-circle symbol)
#7 Select only the right bottom portion of the ramp where the incident occurred.
- p. 15 #B4 You may need to hide unnecessary buildings using the DQL first. Then highlight the 0.5 buffer and perform the Selection.
#C6 Draw > New Marker > Change Symbol
- p. 16 WCC currently does not have the license for the Network Analyst, so I cannot help you (that is, my computer does not have it on).

Module 1: Project 2

Skirting the spill in Mecklenburg County, North Carolina

- p. 26 For Select by Location, which option will you use? May be “Intersect”?
- p. 27 Select outside of the Buffer (i.e. shelter), and perform the Select by Location. Then Export the data.

Module 2: Project 1

Demographic decisions

In this module, we learn the following ArcGIS procedures:

- (1) Use the Field Calculator (Attribute Table) (p. 44)
 - (2) Calculate the Diversity indexes (p. 45)
 - (3) Use ArcScene: 3D image (p. 48)
 - (4) Download the data from U.S. Census Bureau (p. 49)
 - (5) Create a histogram (p. 52)
- p. 41 #3 “Hollow” is available on the color pallet of the symbols.
#4 The “Callout” label may simply mean a “Callout” box, which is available on the Drawing tool bar.
- p. 44 #7 It is far easier to hide fields from the Layer Properties’ “Fields” tab.
- p. 44 #10 If you made any mistake while using the Field Calculator, simply delete the field from the Options and repeat the process.
#14 This hint is very important!
- p. 46 #2 Data > Export data
- p. 48 #5.1 Open ArcScene from the Startup > ESRI (or ArcGIS). It is a separate program from ArcMAP.
#5.4 The “Expression Builder” is a button at the middle right in the dialog box.
#5.6 This probably means just “Add” the file.
- p. 50 #13 The “Excel” button exists near the bottom of the page, in the zip area.
#B3 The “Delete” is available in the right area of the Home Tab.
- p. 51 #C2b The coordinate system should be imported from the “Tracts_00” (See p. 40).
\$C10 The Selection is available in the Options in a table, or you can also access from the Selection menu.
- p. 52 #17 This “Label” means the label column in the Symbology page. It is not the Label tab.
#7.1 May be, the “house” is a typo of “FIPS”?
#7.4 Select the “Graphs” from the “Tools” menu.
- p. 55 I hope you are not dead yet.

Module 2: Project 2

Determining diversity in Washington, D.C.

p. 60 “1.19” in the 3rd line must be a typo. It should be “1.0.”

Module 3: Project 1 Taking a bit out of Houston’s crime

In this module, we learn the following ArcGIS procedures:

- (1) Use Geocoding (p. 75)
 - (2) Use Multiple Ring Buffers (p. 80; also see Module 1, p. 13)
 - (3) Produce density maps (p. 84)
- p. 74 #8-11 New procedures. They are important parameters to use the Spatial Analyst (p. 84).
#9 “Raster Analysis Setting” is located in the lower part of the Environments dialog box. You may need to scroll down to see it.
#10 Click “As Specified Below” to type in “200.”
- p. 75 #3 This is a different way to set up the Address Locator” from the GTKArcGIS textbook.
#3-5 Ignore the error messages that appear while you type the parameters.
- p. 76 #6 “Output Address Locator” window is located at the bottom of the dialog box. You may need to scroll down to see it.
- p. 81 #6 Do not forget to set up the Buffer Unit at the bottom to “Miles.”
#9 For details about the Field Calculator, refer to p. 45. Only input you need to type is “1.”
Warning: You may not able to add a field to an attribute table, if ArcCatalogue is open. Close ArcCatalogue.
- p. 82 #11 Do not forget to check the box for “Sum.”
- p. 84 #2 To turn on Spatial Analyst, from the menu bar click:
Tools > Extensions... > Check the box for the Spatial Analyst
- p. 85 #7 Make sure you have set all the parameters in the Environments. The Spatial Analyst requires: Current Workspace, Scratch Workspace, Output Coordinate System, Extent (in General Settings), Cell Size, and Mask (in Raster Analysis Settings).
Warning: If your computer’s RAM or disk space is low, the Spatial Analyst may not perform. Clean up the disk sometimes helps. Also, it seems there are many other reasons why the Spatial Analyst may not work. Restart your computer (after clean up the disk), and if it still does not work, please do not try it further to frustrate yourself. It may (this has happened to me twice), or may not (this may

happen to you), work next time. Sorry, I cannot tell for sure what is wrong about this right now.

Module 3: Project 2

Logging Lincoln's police activity

You may encounter a similar problem mentioned in Project 1 above for the Spatial Analyst. My guess is memory overflow, but not sure.

Module 4: Project 1

Coastal flooding from Hurricane Katrina

In this module, we learn the following ArcGIS procedures:

- (1) Display Elevation, bathymetry and hydrography (p. 111)
- (2) Reclassify values (Reclass, Spatial Analyst) (p. 113)
- (3) Use the Times Tool (Spatial Analyst) (p. 114)

- p. 110 #1 Projection is NAD 83 Albers.
- p. 111 #4 The check box for "Invert" is located in the lower right side.
#5 To collapse the legend, click the "-" sign in the box for the layer.
- p. 113 #3 "Unique Values" is a bottom 2nd from the top.
- p. 114 #4 ArcMap may change the output drive to a wrong one (other than the one you designated in the Environment for the ArcToolbox). Just retype the correct path.
Step 4 Very interesting and useful procedure.
- p. 116 #7 My result (1384402) was different from the textbook. I do not know why.
- p. 118 #6 You can use SQL in the Label MGR, or you can just do Add Category in the Label MGR.
- p. 120 You need to add layers above the imagery (ArcGlobe).

Module 4: Project 2

Hurricane Wilma storm surge

To label major roads, refer to notes for p. 118, #6, above.

Module 5: Project 1

Homing in on Maricopa County, Arizona

In this module, we learn the following ArcGIS procedures:

- (1) Use Distance tool (Spatial Analyst) (p. 140)
- (2) Convert vector polygon feature classes to rasters (p. 143)
- (3) Create a weighted overlay using a model (p. 148)

p. 139-142 Names of the hospital and school may be typo. As far as I can see, they should be “Chandler Community Hospital” and “Phoenix Community College.”

p. 142 Step 3 When I did this, the mask disappeared. Also the output location was wrong. I am not sure how to prevent this. Any suggestion or findings?

p. 146 #2 “Sheet0\$” may not appear in the attribute table.
#3 You can also use Shift + Enter.

p. 151 Step 9 Do not forget to Run the model (See p. 150, #21 in the textbook).

Module 5: Project 2 Station location in Franklin County, Ohio

When the model (or any other procedures) does not work, close ArcMap and restart. This may help resolve some malfunctions.

PAU!