USF UNIVERSITY OF SOUTH FLORIDA ST. PETERSBURG

Self-Paced Workshop: Environmental Applications of GIS

Course Objectives

By the end of the class, you will understand and be able to complete the following processes/concepts:

1) Spatial analysis theories, techniques and issues associated with ecological and environmental applications
2) Hands-on training in the use of these spatial tools while addressing a real problem
3) Linking GIS analyses to field assessments and monitoring activities

Ecological and environmental assessment of the watersheds will address topics such as wetlands delineation and loss, classifying land use and land cover, impacts of urbanization on the landscape, habitat loss, modifications to the hydrologic cycle, and identifying sources of pollution and areas impacted by pollution. By the end of the course, attendees should be able to import data from GPS, import data from Internet and government sources, conduct raster and vector GIS analyses and use GIS-based ecological/environmental models. This workshop assumes at least Beginner GIS knowledge. If you are not sure if you qualify, please read the Beginner GIS information to see if you are comfortable with those topics first.

Self-Paced Workshop

This is a **self-paced** course, therefore the student is responsible for taking full advantage of the materials they will be sent (CD of data and PDF of Workbook). If a Certificate of Completion is desired, the student will be required to submit *.jpgs of certain exercises in a timely manner to our staff as proof of progress. Knowledgeable assistance is available via email (fbradley@mail.usf.edu) or phone (727) 873-4863 (Fred Bradley). There is no lecture for this workshop and no meetings; everything is on your own using the materials provided.

TOPICS COVERED

- ✓ Assessing Fire Damage
- ✓ Merge and Mosaic for a Wildfire Affected Area
- ✓ Working with GPS data
- ✓ Creating an IDW Surface using groundwater quality data
- ✓ Reclassifying Landuse and Determining % Coverage
- ✓ Determining Landuse Change using Map Algebra
- ✓ Using Map Algebra to Find a Suitable Location for a Landfill Habitat Suitability Model Analysis
- ✓ Dissolving Features, Creating Graphs, Clipping Layers, Exporting Data, Buffering Features, Overlaying Layers

- ✓ Using ModelBuilder to model Soil Erosion using the Revised Universal Soil Loss Equation (RUSLE)

What Is Unique About Self-Paced Workshops?	
Instructor-Led Workshop	**Self-Paced Workshop**
On 9am-4pm schedule	On your schedule
On-site (USF St. Petersburg)	At your location of choice
Instructor available in class	Assistance available via email/phone
Certificate of Completion at end of course	Certificate of Completion at end of course upon submission of *.jpgs
Use lab computers with software and data pre-installed	Install data on your computer and 180-day trial version of ArcGIS (with extensions)

Contact Us

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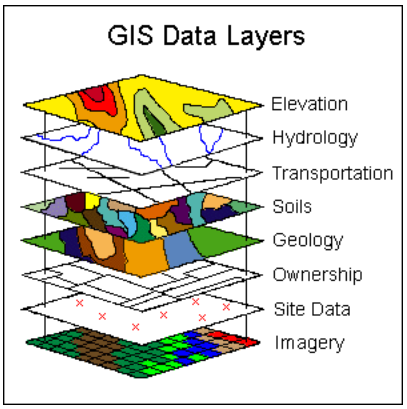

Questions for GIS	GIS Answers
Can you map that?	Mapping
Where is What?	Spatial DBMS and Geo Query
Where has it changed?	Temporal Analysis
What patterns exist?	Spatial Analysis
Where is it best?	Suitability Model
What effects what?	Statistical/Process Model
What if…?	Simulation/Management Model