



Self-Paced Workshop: Advanced GIS I

Course Objectives

This is an advanced course on theories and application of GIS techniques for spatial analysis. This workshop is comprised of a hands-on series of activities for those who want to expand their knowledge of using GIS. This workshop will include exercises using: geostatistical analysis (using Geostatistical Analyst), spatial analysis & suitability modeling (using Spatial Analyst & Geoprocessing wizard) and performing change detection analysis (using map algebra). Each student who successfully completes this course will have developed the skill to process GIS data for advanced GIS analysis. This workshop assumes at least Intermediate GIS knowledge. If you are not sure if you qualify, please read the Beginner and Intermediate 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

- **Review of Map Algebra and Raster Analysis**
 - Using Map Algebra to find the best location
 - Use a Neighborhood function to estimate the effect of Edge Effect on Land Cover data
 - Using cell statistics to detect change
 - Using Map Algebra to find a potential location

- **Review of a Habitat Suitability Model**
 - Build the folder structure and the Geodatabases for the Project
 - Create a Custom Toolbox
 - Add Source data to a project database
 - Get your data into Shape
 - Work with ModelBuilder
 - Create a submodel

- Add Submodels to an existing model
- Run a model from its dialog box
- Run a Geoprocessing script
- Export a model to a script
- Add a script to a model
- Expose script tool parameters as model parameters
- Conditional Branching with script
- Run a report using ModelBuilder
- Working with the Documentation Editor

➤ **Review of Topology**

- Create a topology
- Modify a topology
- Manage multiple topologies
- Examining topology errors in ArcMap
- Use predefined fixes to correct errors
- Correct psudeonode errors with predefined fixes
- Using topology editing tools to correct point errors

➤ **Spatial Analysis**

- Zonal Statistics, Neighborhood Statistics and Cross Tabulation

<i>What Is Unique About Self-Paced Workshops?</i>	
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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