

Self-Paced Workshop: Fishery Applications of GIS I & II

Course Topics

Fish Density Mapping, Biomass, Species Distribution, Suitable Location for Marine protection Zone, Mapping/Modeling CPU, Benthic Habitat Modeler, Correlation with Environmental Variables, Interpolating Point Data & more!!

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. There is no lecture for this workshop and no meetings; everything is on your own using the materials provided.

TOPICS COVERED

Introduction to ArcMap, ArcToolbox, and ArcCatalog

- Introduction to Arc Catalog
- Introduction to Viewing Data in ArcMap
- Using ArcToolbox
- Introduction to GIS Exercise

Manipulating Display Parameters in ArcMap

- Changing Simple Feature Symbolology
- Labeling Features and Adding Text to Features
- Changing a Features Symbolology Using Categorical Attributes
- Changing Raster Symbolology
- Displaying Quantitative Data

Map Making and Printing Maps Using ArcGIS

- Use a Map Template to Create a Map
- Creating Maps without Using a Template

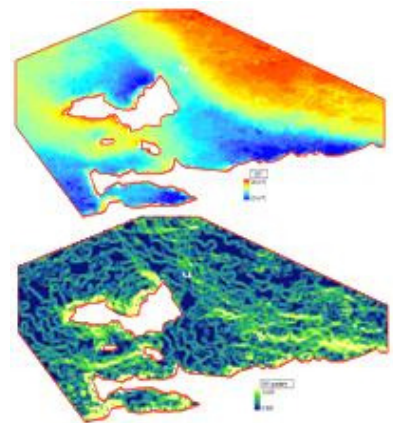
Analyzing & Reporting Spatial Data

Querying and Preparing Data in ArcMap

- Selecting Feature by Attribute
- Selecting Features by Location
- Clipping Features
- Projecting and Defining the Coordinate System or Spatial Reference

Advanced Spatial Analysis

Suitable Location for Marine Protection Area



- Dissolving Features
- Creating Graphs
- Exporting Data
- Buffering Features
- Overlaying Layers

Correlation with Environmental Variables

- Creation of Sea Surface Temperature Gradient
- Fish Abundance Mapping
- Zonal Statistics
- Integration in Excel for Statistical Analysis

Mapping/Modeling Optimal Habitat Determination

- Correlation with Environmental Variables Seasonal Optimal Habitat Determination for CPU Recommendation
- Graphing Seasonal Habitat Data
- Seasonal Comparison of Fish Habitat Maps (Using the Map Comparison Kit)

Biomass Mapping

- Converting Vector Polylines to Raster
- Converting Vector Points to Raster
- Reclassifying Raster/Grid Datasets
- Use Tabulate Areas Command in Spatial Analyst Tools
- Calculation of Relative Biomass

Advanced Point Data Integration Methods

- Density Mapping I: Estimate Density for Fish Population
- Density Mapping II: Estimate Density Using Attributes
- Species Distribution Mapping
- Random Sample Selection Tool
- Extracting Point Data from Raster

<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

Dr. Barnali Dixon / Julie Earls
 140 7th Ave. South,
 (Geo-Spatial Analytics Lab –DAV 206)
 University of South Florida St. Petersburg
 St. Petersburg, FL 33701
 Phone (727) 873-4025

E-mail: Barnali Dixon,
bdixon@mail.usf.edu