MCS GEOTECH (P) LTD

Certified G.I.S Professional

MODULE-3 – Course Elaboration

Getting started with spatial analysis

- Lesson introduction
- What is spatial analysis?
- Proximity analysis
- Overlay analysis
- Statistical analysis
- Temporal analysis
- The spatial analysis workflow
- Frame the question
- Lesson review
- Review Test

Planning and preparing for analysis

- Lesson introduction
- Planning for analysis
- Analysis methods
- Raster data considerations
- Preparing points for raster analysis
- Data quality
- Standardizing spatial reference
- Working with geoprocessing environments and documentation
- Data preparation for raster analysis: Interpolation
- Lesson review
- Review Test

Performing proximity analysis

- Lesson introduction
- What is proximity analysis?
- When to use proximity analysis
- Categories of proximity analysis
- How do ArcGIS tools measure proximity?
- Buffering at a world scale
- Data type and proximity analysis
- Calculating decibel levels with raster proximity analysis
- Lesson review
- Review Test

Performing overlay analysis with vector data

- Lesson introduction
- What is overlay analysis?
- Overlay techniques
- Performing overlay
- Apportioning attributes
- Overlay with Use Ratio Policy
- Lesson review
- Review Test

Performing overlay analysis with raster data

- Lesson introduction
- What is raster overlay?
- Deriving surfaces from raster sources
- Deriving rasters from vector sources
- Locating a vineyard using raster overlay
- Binary overlay analysis
- Weighted overlay analysis
- Weighted overlay workflow
- A typical raster overlay question
- Reclassification
- Considerations for reclassification
- Assigning weights
- Lesson review
- Review Test

Analyzing spatial patterns

- Lesson introduction
- What is a spatial pattern?
- Exploring descriptive statistics
- Mean center
- Standard deviational ellipses
- Working with data distributions
- The Average Nearest Neighbor tool
- The Spatial Autocorrelation tool
- Hot spot analysis
- Exploring patterns
- Lesson review
- Review Test

Analyzing temporal patterns

- Lesson introduction
- What is temporal analysis?
- Working with time-aware data
- Incorporating time in your analysis
- Temporal analysis of piracy incidents

- Temporal patterns and spatial statistics
- Measuring statistics over time
- Space-time analysis
- Grouping analysis
- Lesson review
- Review Test