

## Niagara University – Continuing Education

### Getting Started with GIS: ArcGIS Desktop I: - 2 days Instructor-Led Course

#### Overview

The first of three courses in the ArcGIS Desktop Foundational Training Curriculum, this course teaches the fundamental concepts and basic functions of a GIS, the properties of GIS maps, and the structure of a GIS database. In course exercises, you will develop basic software skills by working with ArcGIS Desktop tools to visualize geographic data, create maps, query a GIS database, and analyze data using common analysis tools.

#### Who Should Attend

- Individuals who do not have any prior GIS education or workplace experience with GIS.
- Managers and GIS support staff who infrequently use ArcGIS and need to understand how GIS fits into their organization.

**Goals** After completing this course, you will be able to:

- Understand what GIS is, what it can do, and how others are using it.
- See how your organization can benefit from a GIS.
- Create a basic GIS map.
- Work with different types of geographic data.
- Access information about geographic datasets and features.
- Apply a systematic approach to analyzing data in order to find patterns and relationships.

#### Topics Covered

##### GIS overview

- Basic functions of a GIS
- Real-world applications
- Components of a GIS map
- Features, layers, and data frames
- Map scale
- Relationship between features and attributes
- Exploring a GIS database
- Attribute tables
- Identifying features
- Symbolizing and labeling features based on their attributes

##### Map layouts

- Data view and layout view
- Layout tools
- Map templates

- Modifying map elements
- Printing maps
- Understanding location
- Coordinate systems and map projections
- Reading and finding location coordinates on a map
- Measuring area and distance on a map
- Raster data and vector data
- Representing real-world features
- Storing real-world locations
- Symbolizing rasters
- Using raster and vector data together
- The geodatabase
- Geographic data
- Data formats
- Methods of creating geographic data
- Using ArcCatalog to explore geographic data
- Metadata
- Querying data
- Attribute queries
- Spatial queries
- Analyzing spatial relationships
- Overlay
- Buffering features
- Accessing tools in ArcToolbox
- Performing Union and Intersect operations
- Solving problems with GIS
- The geographic inquiry process
- Applying GIS tools to solve a geographic problem
- Creating a map to present results

### **Prerequisites**

Knowledge of Windows-based software for basic file management and browsing is required.

**Registration – online at [www.niagara.edu/ce](http://www.niagara.edu/ce) or (716) 286-8181**