W1: INTRODUCTION TO ARCGIS PRO

Instructor: Jennifer Harrison

Time: 8:00 AM – 5:00 PM

Location: LRC209 (Building G)

Capacity: 24

Requirements: A prior knowledge of GIS is required

Level: Beginner to Intermediate

Description:

This workshop will help you get ready for your conversion from ArcMap to ArcGIS Pro. Using terminology that you are familiar with the instructor will introduce you to the new Pro interface. You will get an understanding of the new ribbon/tool interface, get familiar with the new ArcCatalog pane in Pro, and learn how to do the basic things we do every day in ArcMap (working with symbology, layer properties, queries, etc.). The course is not an introduction to GIS concepts. It is a migration course, for those who are already comfortable with ArcGIS Desktop (ArcMap).

Topics covered include:

- Importing ArcMap .mxd files into ArcGIS Pro (what comes over, what doesn’t, and what to watch out for)
• Getting familiar with the new ribbons and tools in ArcGIS Pro
• The new ArcGIS Pro Catalog Pane
• Working with symbology and layer properties
• Building queries
• Running geoprocessing tools
• Making a layout

To be successful in this course, attendees should be comfortable with ArcGIS Desktop (ArcMap).

W2: WORKING WITH PYTHON IN ARCGIS DESKTOP
**Instructor:** Vince A. DiNoto, Jr.
**Time:** 8:00 AM – 5:00 PM
**Location:** LRC 217 (Building G)
**Capacity:** 16
**Requirements:** Participants will be provided all hardware and software needed; a prior knowledge of ArcGIS for Desktop is required
**Level:** Intermediate
**Description:**
Written for GIS professionals who have never programmed before, this workshop introduces attendees to the basics of scripting using the Python language. Attendees will get an understanding of what it means to script in the context of ArcGIS desktop, including where scripts are written, how to attach a script to a tool and a button in the ArcMap interface, and how to find the code behind an existing Python tool.
Participants will also learn how to write their first script, as they walk through a series of scripting basics including:

- Python syntax and rules
- The `print` statement
- Working with string, numeric and Boolean variables
- Using loops to repeat portions of a script
- Using conditional statements to let your script make decisions
- Accessing components of ArcMap and GIS data using `arcpy`
- Writing to files

To be successful in this course, attendees should be comfortable with ArcGIS Desktop (ArcMap).

W3: ARCGIS ONLINE: DATA, VISUALIZATION, AND ANALYSIS
**Instructors:** Nicole Ernst
**Time:** 8:00 AM – 5:00 PM
**Location:** 108 (Building B – Technology Building)
**Capacity:** 16
**Requirements:** A prior knowledge of GIS is required
**Level:** Beginner to Intermediate
**Description:**
In this workshop, participants will explore the functionality of ArcGIS Online that will enable them to:
• Find and bring data into web maps,
• Create Story Maps using the old and new Story Map builders, and
• Explore data using the analysis tools that are available in ArcGIS Online.

W4: FIELD DATA COLLECTION – PART 1: COLLECTOR
Instructor: Nic Braune
Time: 8:00 AM – 12:00 PM
Location: 104A (Building B - Technology Building)
Capacity: 16
Requirements: A prior knowledge of ArcGIS for Desktop is required
Level: Beginner to Intermediate
Description:
Field Data Collection has evolved in the last 10 to 15 years where BYOD (Bring Your Own Device) is common compared to days of stand-alone GPS/GNSS units and data collectors and especially people wanting to work directly with their data instead of having to import/export datasets. In the workshop we will:

• look at various data collection applications as well as different receivers
• see how a simple data collection application can be built and deployed to the field
• go outside to collect data using our simple data collection application
• discuss GPS/GNSS accuracy levels and tips/tricks of everyday field data collection
• view and discuss the data that was collected in the field

At the end of the workshop, attendees will have a knowledge of applications available to them for field data collection, what type of accuracy to look for when they are developing a field data collection project, and basic understanding of field data collection workflow/tips and tricks.

W5: FIELD DATA COLLECTION – PART 2: SURVEY 1-2-3
Instructor: Jessica Lott
Time: 1:00 PM – 5:00 PM
Location: 104A (Building B – Technology Building)
Capacity: 16
Requirements: A prior knowledge of ArcGIS Online is required
Level: Beginner to Intermediate
Description:
The learner should understand the concept of making maps and will need an Esri ArcGIS Online account (temporary accounts will be provided for the workshop day). Furthermore, the user will need a smart device that has GPS/GNSS capability, note not all tablets contain true GPS’s (all cellphones do). The learner will develop an understanding of how to build a Survey 123 application online and the collection of data.

W6: UAV FLIGHT FUNDAMENTALS AND BEST PRACTICES
Instructor: Chris Cruz & Chris Wright
Time: 8:00 AM – 12:00 PM
Location:LRC217B (Building G)
**Capacity:** 16  
**Requirements:** None  
**Level:** Beginner  
**Description:** The learner will develop an understanding of flight and how to control an Unmanned Aerial Vehicle (UAV). The learner will experiment with a simulator and then control a small aircraft in manual flight. Once the skills have been achieved, the pilot will fly their craft through obstacles. All flights will be accomplished indoors and thus no certifications are required. The aircrafts will not be using GPS/GNSS units since they are indoors.

**W7: UAV – DATA PROCESSING**  
**Instructor:** Chris Cruz & Chris Wright  
**Time:** 1:00 PM – 5:00 PM  
**Location:** LRC217B (Building G)  
**Capacity:** 16  
**Requirements:** None  
**Level:** Intermediate  
**Description:** The learner should have an understanding of map construction prior to this workshop and some basic understandings of UAV flights is useful. The learner will construct data sets from imagery provided by the instructors. This will include the stitching together of overlapping images and the creation of elevation models from the point cloud created by the images. Camera types and uses will also be discussed. The workshop will utilize ArcGIS Pro for all applications.

**W8: ArcGIS ENTERPRISE: AN INTRODUCTION TO ARCHITECTING AND DEPLOYMENT STRATEGIES**  
**Instructor:** Nicole Grams, Solution Engineer, Esri State Government Team; Chase Fisher, Solution Engineer, Esri Local Government Team; Dan Haag, Regional Manager, Esri St Louis  
**Time:** 8:00 AM – 12:00 PM  
**Location:** 163C (Building F – Administration Building)  
**Capacity:** 24  
**Requirements:** Basic understanding of ArcGIS Enterprise and it’s components  
**Level:** Beginner/Intermediate  
**Description:** ArcGIS Enterprise is the next evolution of the server product line including: ArcGIS Portal, ArcGIS Server, ArcGIS Data Store, and ArcGIS Web Adapter. This workshop will provide an introduction to ArcGIS Enterprise and the software components that satisfy a range of enterprise GIS capabilities. We’ll also address the fundamentals of architecting the base ArcGIS Enterprise deployment, review the software components and server roles, introduce tools that allow one to manage and maintain the environment as well as lead you through more complex deployment scenarios that include utilizing new capabilities. Finally, we’ll explore the Portal for ArcGIS component of ArcGIS Enterprise that allows you to share maps, scenes, apps, and other geographic information with other people in your organization. The content that you share is delivered through a website that you can customize to fit your organization’s look and feel.