

West Virginia Association of Geospatial Professionals

**TRAINING CATALOG
OF
INSTRUCTOR-LED
WORKSHOPS
(2008-09)**

November 10, 2008

Mapping the Mountain State



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WVAGP Instructor-led Workshops

The WV Association of Geospatial Professionals (WVAGP) created this catalog to promote educational and training opportunities to its membership and the statewide geospatial community. The catalog lists 30 instructor-led workshops derived from the URISA and WVAGP training programs. A listing of qualified instructors and course descriptions are included in the WVAGP Workshop Catalog.

Purpose of WVAGP Workshop Catalog:

- (1) To publish workshops and instructors available to the GIS community, including URISA certified workshops (<http://www.urisa.org/workshops>).
- (2) To help WVAGP schedule workshops of interest by its membership
- (3) To assist GIS Professionals attain GIS certification and professional development, as well as making available best learning experiences in information technology and GIS.

Please contact us if you have an idea for a new WVAGP Workshop.

Table 1. Combined URISA and WVAGP Workshop Listing. All workshops are one day except the Intro to ArcGIS I course which is two days. Orange highlighted workshops indicate WVAGP instructors are available to provide training. The URISA Workshop Catalog is located at the URISA website (<http://www.urisa.org/workshops>). URISA workshops are taught by certified instructors.

#	GEOSPATIAL WORKSHOPS	URISA CATALOG	WVAGP CATALOG
1	3D Geospatial: Project Implementation Methods and Best Practices	X	
2	Addresses and IS/GIS Implementation Key to GIS Success	X	
3	An Overview of Open Source GIS Software	X	
4	Asset Management Planning Strategy and Implementation	X	
5	Best Practices for Developing Geographic Information Models	X	
6	Cartography and Map Design	X	
7	Database Development and Conversion	X	
8	Digital Boundary and Annexations (Incorporated boundaries)		X
9	eGovernment Planning Policy and the Portal	X	
10	FGDC Metadata		X
11	Field Automation Options for Local Government (Mobile GIS)	X	X
12	GIS Enterprise Architecture & System Integration	X	
13	GIS Program Management	X	
14	Integrating Civil Engineering and GIS/IT Disciplines	X	
15	Internet GIS State of the Art	X	
16	Introduction to ArcGIS 1		X
17	Introduction to Digital Imagery and Remote Sensing	X	X
18	Introduction to Geographic Information Systems (GIS)		X
19	Introduction to Global Position Systems (GPS)	X	X
20	Introduction to Object-Oriented Spatio-Temporal Data Modeling	X	
21	Introduction to Public Participation GIS (PPGIS)	X	
22	LIDAR Concepts, Principles and Applications	X	X
23	National Hydrography Dataset		X
24	National Spatial Reference System		X
25	Public Data Access Privacy and Security US Law and Policy	X	
26	Quality Management Introduction to Issue Tracking	X	
27	Spatial Analyst using ArcGIS Software		X
28	Tax parcel mapping in WV – Principles and Best Practices		X
29	Transportation Spatial Database Design	X	
30	Understanding Coordinate Systems / Surveying Principles		X

Table 2. WVAGP Workshop Instructors (October 2008). This directory of geospatial trainers was compiled by the West Virginia Association of Geospatial Professionals (WVAGP). If there are any additions or edits to the instructors listing, then please email WVAGP at WVAGPmail@gmail.com.

LAST NAME	FIRST NAME	AGENCY	TRAINING FACILITY LOCATION*	SUBJECT	CUSTOMIZED TRAINING	Email / Website
Bennett	Janette	CVI	Thomas	Intro to GIS	Stream restoration	janette.bennett@canaanvi.org
Chen	Yi-Ning	State Tax Department		Parcel mapping with AutoCAD or ArcGIS; best practices	Parcels	ychen@tax.state.wv.us
Clements	Michael	U.S. Census, Geographic Areas Branch		Incorporated boundaries	Boundaries & Annexations Survey	michael.j.clements@census.gov bernadette.jenkinson.le@census.gov
Criag	Cindy	NGS		National Spatial Reference System		Cindy.Craig@noaa.gov
Ensign	Todd	NASA	Fairmont or on site	GIS; GPS	K-12 Educators	todd.i.ensign@ivv.nasa.gov
Grow	York	Earth Vector Systems		Integration of digital photos into Mobile GIS; differential correction		york_grow@evsgps.com
Heleine	George	U.S. Geological Survey		National Hydrography Dataset (NHD)		gheleine@usgs.gov
Hickey	Bob	Photo Science		Digital Orthophotos; Lidar		rhipkey@photoscience.com
Hopkins	Eric	WVGISTC (WVU)	Morgantown	FGDC Metadata		ehopkins@wvu.edu
Hughes	Dwight	USGS GNIS Division		Geographic Names Information System		dshughes@usgs.gov
Inglis-Smith	Chandra	RTI, Marshall University	Huntington; Charleston	Intro to GIS; GPS	Transportation	InglisSmith@njrati.org
Kuhn	Kevin	WVGISTC (WVU)	Morgantown or onsite	Intro to GIS, Intro to ArcGIS I*, Intro to GPS	Critical infrastructure	kevin.kuhn@mail.wvu.edu
Landenberger	Rick	America VIEW	Morgantown	Remote Sensing concepts and software, GPS	Remote sensing	rlanden@mail.wvu.edu
Lawson	Rick	ESRI		ESRI Training Courses		rlawson@esri.com

WVAGP Workshop Catalog (October 2008)

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Lovin	Jeff	Woolpert		Digital Orthophotos; Lidar		jeff.lovin@woolpert.com
Mackay	Ross	KY NGS		National Spatial Reference System	OPUS, CORS	Ross.Mackay@ky.gov
Richardson	Mark	US Fish & Wildlife Service	Shepherdstown	Intro to GIS; GPS; Remote Sensing; Advanced GIS; GPS	Conservation, Wildlife	mark.richardson@fws.gov
Shields	Renee	National Geodetic Survey		National Spatial Reference System	Height Modernization	Renee.Shields@noaa.gov
Sobonya	Mike	Kimball		Tax Parcels		sobonm@lrkimball.com
Strager	Mike	NRAC (WVU)	Morgantown	Intro to GPS	Forestry	mstrager@wvu.edu
Strager	Jackie	NRAC (WVU)	Morgantown	Intro to GIS, Intro to ArcGIS I*, Spatial Analyst, NHD	Natural Resources	jmstrager@mail.wvu.edu
Sypolt	Rick	Glenville State College	Glenville	Intro to GIS; Understanding Coordinate Systems	Surveying	Charles.Sypolt@glenville.edu
Thaxton	Rex	MountainCAD	Charleston	Intro to GIS; AutoCAD; Tax Parcels		rex@mountaincad.com
Wayne	Lynda	USGS/FGDC		FGDC Metadata		Lwayne@geomaxim.com
Wolfe	Jamie	CEGAS, Marshall University	Huntington; Charleston	GIS applications for local communities	Parcels, planning	jawolfe@marshall.edu

* A number of instructors provide onsite training

** ESRI-Certified instructor

*** Only provide training for WVAGP sponsored events

URISA Workshop Catalog: Refer to the URISA Workshops Catalog (<http://www.urisa.org/workshops>) and URISA directory of instructors (http://www.wvagnp.org/upload/education/URISA_WS_Instructors_2008.xls) for information about URISA-certified workshops.

Table 3. Course Descriptions of WVAGP Workshops. Please email WVAGP if there are any corrections, additions to the generic course descriptions or suggestions for other courses (WVAGPmail@gmail.com). See the URISA workshop catalog for descriptions of URISA instructor-led workshops. (<http://www.urisa.org/workshops>).

WVAGP WORKSHOP DESCRIPTIONS
<p>Digital Boundary and Annexations (Incorporated boundaries) The Census Bureau conducts the Boundary and Annexation Survey (BAS) annually to collect boundary updates and other information about selected legally defined geographic areas. The BAS is the only nationwide source of information documenting the creation of new, and dissolution of old, incorporated municipalities, minor civil divisions (MCDs), and counties and equivalent areas, as well as changes in the boundaries of municipalities, MCDs, counties, and federally recognized American Indian areas (AIAs), which include reservation and off-reservation trust lands. BAS information is used to provide an appropriate record for reporting the results of the decennial census, the American Community Survey, as well as other Census Bureau data collection and tabulation programs. This presentation discusses the BAS processes focused on obtaining efficient exchange and collection of updates to legal boundaries. <i>Target Audience:</i> Individuals or agencies which utilize boundaries.</p>
<p>FGDC Metadata Metadata is crucial to the successful compilation, distribution and implementation of geospatial data sets. This presentation provides an introduction to readers new to metadata and additional tools and resources for those already familiar with it. "What is metadata? Why do I need it? What does it look like? How can I practically produce it?" Participants should find answers to these and other pertinent questions. Numerous metadata guides exist already, on the internet and elsewhere, and metadata authors should take advantage of these publications. The focus of this workshop is a practical approach to what can be a dense, sometimes opaque subject. For more information on FGDC metadata, refer to http://www.fgdc.gov/metadata.</p>
<p>Field Automation Options for Local Government (Mobile GIS) The use of digital photos for field verification of assets, conditions, and emergencies is becoming an integral part of GPS/GIS data collection. This session will examine how these photos can be linked to a GPS coordinate and/or GIS data while in the field. We will examine 2 different methods for this linking. One is to take a photo and link a GPS coordinate directly with that photo either in the field or by processing the information back at the office. The second method will be linking the photo directly to a feature in the field through the use of ESRI's ArcPad 7 and Trimble's TerraSync. Finally, we will see how these images are then incorporated into the final product – the ArcGIS system.</p>
<p>Introduction to ArcGIS I ArcGIS Desktop is ESRI's full-featured GIS software for visualizing, creating, managing, and analyzing geographic data. This course provides the foundation for becoming a successful ArcGIS Desktop user. Students learn fundamental GIS concepts and become familiar with the range of functionality available in the software. In course exercises, they work with ArcGIS Desktop and see how it provides a complete GIS software solution. <i>Time:</i> An ESRI-certified instructor leads the two day (16 hours) course. <i>Target Audience:</i> This course is designed for those who are new to ArcGIS and to GIS in general. More information: http://training.esri.com/gateway/index.cfm?fa=catalog.courseDetail&CourseID=50006053_9.X</p>

WVAGP WORKSHOP DESCRIPTIONS

Introduction to Digital Imagery and Remote Sensing

Remote sensing is rapidly becoming an invaluable tool for natural resource managers, urban and rural planners and managers, earth scientists, geographers, even science teachers. Uses include mapping land cover, assessing land cover change, monitoring natural systems (atmosphere, ocean, hydrologic, and terrestrial systems), and as base map layers in a GIS. This workshop will introduce participants to the fundamentals of digital imagery and remote sensing through a combination of lecture and hands-on demonstrations. No prior knowledge or experience is necessary. Participants will receive instruction on accessing aerial and satellite images from spatial data clearinghouses.

Introduction to Geographic Information Systems

This hands-on workshop will introduce participants to geographic information systems (GIS). GIS integrates hardware, software, and data for capturing, managing, analyzing, and displaying all forms of geographically referenced information. Topics include spatial data sources and GIS applications.

Introduction to Global Position Systems (GPS)

This workshop will introduce participants to the fundamentals of using a GPS hand-held receiver through a combination of classroom instruction and outside field work. No prior knowledge or experience is necessary. Participants will receive instruction on GPS configuration, accuracy, and working with topographic maps. All material is provided. GPS receivers will be available for use during the workshop. A laptop for downloading data will be very helpful but not required.

LIDAR Concepts, Principles and Applications

LIDAR (Light Detection And Ranging) has become widely accepted tool to generate accurate terrain models used in a variety of GIS applications. *Target Audience:* Newcomers to LIDAR technology who want to get a basic understanding of how the tool works, what the map production is like, and how they may be able to incorporate this type of data into their GIS.

National Hydrography Dataset

This workshop provides an overview of how the National Hydrography Dataset (<http://nhd.usgs.gov/>) may be used for stream mapping and modeling. Topics Presented - Basics of NHD; How to access NHD and bring up in ArcMap; NHD data structure; NHD in mapping; navigating the flow network; NHD and related water resources datasets specifically for use in West Virginia. Demonstrations will cover the use of NHD datasets in ArcGIS. *Target Audience:* Individuals or agencies which utilize stream mapping data.

National Spatial Reference System (CORS, OPUS, Height Modernization, Mgmt.)

NOAA's National Geodetic Survey is the federal agency responsible for defining, maintaining, and providing access to the National Spatial Reference System (NSRS), the Nation's official reference frame for geospatial data.

CORS NETWORK: The National Geodetic Survey (NGS) coordinates two networks of continuously operating reference stations (CORS): the National CORS network and the Cooperative CORS network. Each CORS site provides Global Positioning System (GPS) carrier phase and code range measurements in support of 3-dimensional positioning activities throughout the United States and its territories (map). Surveyors, GIS/LIS professionals, engineers, scientists, and others can apply CORS data to position points at which GPS data have been collected. The CORS system enables positioning accuracies that approach a few centimeters relative to the National Spatial Reference System, both horizontally and vertically.

OPUS: The National Geodetic Survey operates the On-line Positioning User Service (OPUS) as a means to provide GPS users easier access to the National Spatial Reference System (NSRS).

HEIGHT MODERNIZATION: Height Modernization is a program within NGS designed to enhance the vertical component of the NSRS, and make it more easily accessible through the use of new technologies such as GPS. The Height Modernization Workshop will provide an overview of the how the Program began and is being implemented across the country. Attendees will learn about the various heights involved and how they are related, the process of doing height modernization surveys, and work being done at NGS and with its Height Modernization partners to support implementation, including development of guidelines, models, and tools.

GIS MANAGEMENT: The workshop describes the importance of utilizing the National Spatial Reference System (NSRS) as the framework for Geospatial data development for land and water use development. An introduction to the Territorial Framework project will be provided detailing project specifications, goals, and outcomes. Workshops sub-topics include components of the NSRS, Accuracy and Precision in a GIS, GPS, Metadata, and Datums. In addition, an overview of NGS Products and Services is also provided. The presentation is intended for a wide variety of GIS practitioners, Geodesist, and Land Surveyors who are involved in geospatial data development and management.

Spatial Analyst using ArcGIS Software

ArcGIS Spatial Analyst software supports a broad range of sophisticated spatial modeling and analysis applications. This course teaches how to use ArcGIS Spatial Analyst to produce and control raster data. Students create a variety of raster surfaces including hillshade relief maps, slope and aspect surfaces, and density and distance surfaces. In course exercises, students work within the ArcGIS geoprocessing environment to create, execute, and automate spatial analysis workflows. Target Audience: This course is designed for experienced ArcGIS users who want to work with rasters to identify spatial relationships, develop suitability models, or calculate the cost of travel over a surface.

Tax Parcel Mapping in WV - Principles and Best Practices

Topics include the new uniform tax mapping procedures for creating manual or computer-generated tax maps. It will include a review of the cartographic design, content, and submission guidelines of county tax maps. Discussions on digital conversion trends and best practices. Demonstrations of tax map editing and display using ESRI ArcGIS and AutoDesk mapping software.

Understanding Coordinate Systems / Surveying Principles

A hands-on workshop of basic surveying and coordinates system principles for GIS professionals.