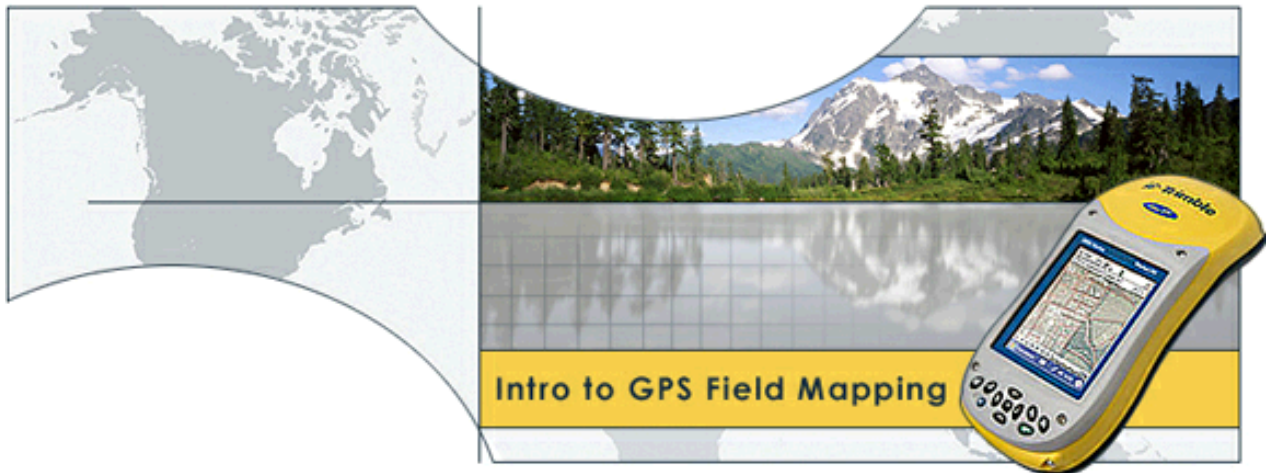


The Northwest Environmental Training Center presents:



Introduction to GPS Data Collection and Processing - GPS Fundamentals and Integration with GIS using ESRI's ArcPad & Trimble Receivers

Course ID: GPS-401

June 14 - 15, 2006, 8:30 A.M. to 5 P.M. (2 Days)

Allied Business Systems, Main Computer Lab | 10604 NE 38th Place, Kirkland, WA

Instructors: Jim Lahm, Electronic Data Solutions; and Stefan Freelan, Western Washington University

Description: This workshop provides an introduction to the concepts and applications of GPS for data collection using Trimble hand-held GPS receivers and ESRI's ArcPAD. Through a combination of lecture and hands-on field and computer exercises participants will gain a working knowledge of how GPS data can be collected and used for a variety of applications. The emphasis for this two-day workshop will be on the fundamentals of GPS data collection, the use of ArcPad and GPS Correct, and the incorporation of GPS data into ESRI's ArcGIS environment with the GPS Analyst extension. Participants will work with Trimble GeoXT GPS receivers equipped with ArcPad and GPSCorrect.

Background:

- ArcPad is a field GPS data collection, storage and editing program designed for use in a Windows Pocket PC or Windows Mobile device.
- GPSCorrect is an extension for ArcPad that collects the necessary measurement data from the GPS satellites and allows the user to apply spatial corrections to the raw GPS data back in the office. Corrected GPS data has sub-meter horizontal accuracy according to the specifications of the Trimble GeoXT. Uncorrected data is subject to horizontal errors of up to 15 meters.
- GPS Analyst is an extension for ArcGIS (8.3+) that allows the user to work with Trimble GPS data in the ArcGIS environment. It provides for the processing of GPS data to achieve maximum spatial accuracy, in addition to feature class validation, rebuilding, editing, and the analysis of GPS statistics to insure high spatial quality.

Course Outline

June 14, 2006, 8:30 A.M. to 5 P.M.

- GPS Fundamentals
- Satellite Ranging
- Differential GPS
- Sources of Error and Accuracy Issues
- Software Settings
- Logging Intervals
- Signal Strength
- Real Time GPS
- Post Processed GPS
- ArcPad Fundamentals
- Toolbars
- Maps and Layers
- Adding Layers
- Setting ArcPad Options
- The Edit/Drawing Toolbar
- ArcPad with GPScorrect
- Setting GPS Capture Options

Lunch

- Field Session One
 - Collecting new data
 - Point, Polyline, Polygon
 - Editing Layers
- Setting the Spatial Reference in ArcCatalog (GPS Analyst)
- Setting the Accuracy Requirements for a Feature Class
- Downloading the GPS Session with ActiveSync
- Bringing the Session into ArcMap
- Using the GPS Analyst Extension for ArcGIS
- Begin GPS Editing
- Differential Correction Feature Class Validation
- Rebuilding Feature

June 15, 2006, 8:30 A.M. to 5 P.M.

- Review of Day One
- Field Work Review
- Question and Answer
- Using the GPScorrect tool
- Selecting Data for Use in a Mobile Device
- Selecting Editable Layers for the Field
- Transferring the Data into the GeoXT
- Field Session Two
 - Advanced Data Collection
 - Applying Offsets
 - Creating a Layer
 - Assigning Symbolology
 - Editing Previously Collected Data
 - Moving a Vertex

Lunch

- Transferring the GPS session into ArcCatalog
- Bringing the Session into ArcMap
- Begin GPS Editing
- Differential Correction
- Data Validation
- Rebuilding Features
- Data Editing
- Data Analysis by Position
- GPS Statistics
- Data Collection Principles with GPS Analyst
- Questions and Answers
- Technical Support

Summary

Conclusion

About the Instructors: Jim Lahm has been a Trimble Certified Trainer since 1994 and a Trimble certified dealer since 1986. Mr. Lahm currently works with Electronic Data Solutions in Portland, Oregon. Stefan Freelan is the GIS Specialist for Huxley College at Western Washington University in Bellingham, WA. He provides technical support and instruction for GIS and GPS courses and projects.

Intended Audience: This course is intended for professionals involved with either GPS data collection or the incorporation of GPS data into GIS. No prior experience with GPS or ArcPad is required. Step by step instructions and pre-made map projects will be provided for ArcGIS novices, however, some experience with ArcGIS is recommended (this workshop is not an introductory GIS course).

After completing this course, participants will be able to:

- Understand GPS technology (concepts and theory)
- Understand GPS coordinate systems, datums, and conversion options
- Collect GPS data with ArcPad
- Transfer GPS data off of the receiver
- Use GPScorrect
- Perform differential correction using the GPS Analyst extension
- Use a Trimble GPS receiver for basic navigation purposes
- Export/Import GPS data as an X-Y data file with ArcGIS 9
- Begin spatial analysis within ArcGIS using GPS data
- Understand some of the applications and limitations of GPS data for spatial analysis

Education Level: Introductory/Intermediate

Course Materials: Each participant will receive a book containing lecture notes, exercises, and reference material.

What to Bring: Pen or pencil and a water bottle (to reduce waste). Please wear comfortable clothing appropriate for the prevailing weather. Snacks will be provided but lunch will be on your own. Participants who have access to a Trimble GeoXT GPS receiver with ArcPad installed are encouraged to bring their equipment to the class (including data transfer cradle and cables).

Continuing Education Units: 1.3

Registration: \$495 (\$395 reduced tuition is available to Native American Tribes; nonprofits; government agencies; students; and NEBC, NWAEP, and NAEP members). A registration form is included with this PDF file. You may also register online at www.nwetc.org or by calling the Northwest Environmental Training Center at (206) 762-1976.

To request further information, please call us at (206)762-1976 or send us an email at info@nwetc.org.

Northwest Environmental Training Center, 501(c)(3)
Alaska - Idaho - Montana - California - Oregon - Washington
650 S. Orcas Street, Suite 220, Seattle, WA 98108
www.nwetc.org, 206-762-1976

Directions:

Driving East on 520:

Take the LAKE WASHINGTON BLVD. N.E. Exit
Continue on BELLEVUE WAY NE/LAKE WASHINGTON
BLVD NE
Continue on LAKE WASHINGTON BLVD NE
Turn Right on NE 38TH PL
Turn Left into business park parking lot
Park in lot on the right of entry road

Driving West on 520:

Take the 108TH AVE. N.E. Exit
Turn Right on 108TH AVE NE
Turn Left on NE 38TH PL
Turn right into business park parking lot
Park in lot on the right of entry road



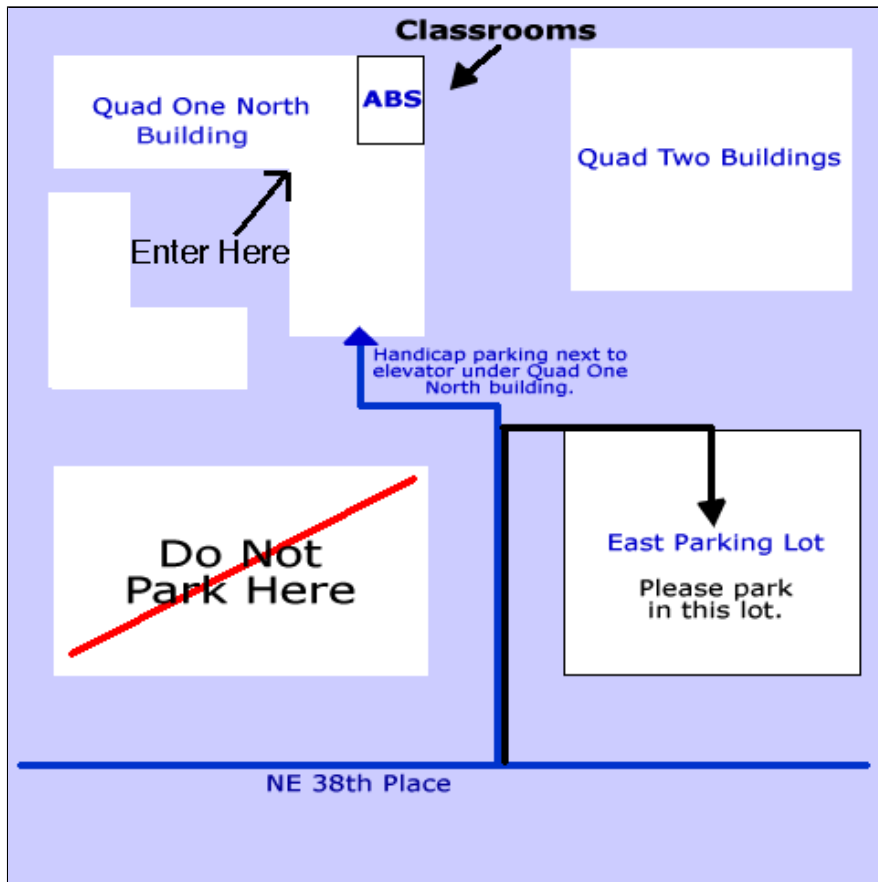
REGIONAL MAP



VICINITY MAP



PARKING LOT MAP





Accommodations Near Allied Business Systems, Computer Lab
10604 NE 38th Place, Kirkland, Washington

Please feel free to call us at (206)762-1976, if you have any questions regarding lodging.

The following is a list of nearby hotels. Reservations should be made directly with the hotels.

<p align="center">La Quinta Inn - Kirkland 10530 NE Northup Way Kirkland, WA 98033 (800) 687-6667 (425) 828-6585 www.laquinta.com Notes: Within walking distance of our training center.</p>	<p align="center">Bellevue Travelodge 11011 NE 8th Avenue Bellevue, WA 98004 (800) 578-7878 (425) 454-4967 www.travelodge.com</p>
<p align="center">Courtyard by Marriott 14615 NE 29th Place Bellevue, WA 98007 (800) 321-2211 (425) 869-5300 www.marriott.com</p>	<p align="center">Silver Cloud Inn - Bellevue 10621 NE 12th Street Bellevue, WA 98004 (800) 205-6937 (425) 637-7000 www.silvercloud.com/bellevue.htm</p>
<p align="center">Residence Inn - Bellevue 14455 NE 29th Place Bellevue, WA 98007 (800) 331-3131 (425) 497-9226 www.residenceinn.com</p>	<p align="center">Sheraton Bellevue Hotel 100 - 112th Avenue NE Bellevue, WA 98004 (800) 325-3535 (425) 455-3330 www.sheraton.com/bellevue</p>
<p align="center">Best Western Bellevue Inn 11211 Main Street Bellevue, WA 98004 (800) 528-1234 (425) 455-5240 www.bestwestern.com/bellevueinnbellevuewa</p>	<p align="center">Hyatt Regency - Bellevue 900 Bellevue Way NE Bellevue, WA 98004 (425) 462-1234 www.bellevue.hyatt.com/property/</p>
<p align="center">Doubletree Hotel - Bellevue Center 818 112th Avenue NE Bellevue, WA 98004 (800) 222-8733 (425) 455-1515 www.doubletree.com</p>	<p align="center">The Woodmark Hotel on Lake Washington 1200 Carillon Point Kirkland, WA 98033 (800) 822-3700 (425) 822-3700 www.thewoodmark.com</p>



NORTHWEST ENVIRONMENTAL TRAINING CENTER

650 S. Orcas Street, Suite 220, Seattle, WA 98108

Ph: (206)762-1976, Fax: (206)762-1979

www.nwetc.org

REGISTRATION FORM

Name: _____ Today's Date: _____

Agency/Organization: _____

Street Address: _____ Mail Code: _____

Street Address (cont.): _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

Email: _____ Title: _____

Intro to GPS Data Collection and Processing (GPS-401), May 14 - 15, 2006 \$ _____

Allied Business Systems Computer Lab, Kirkland, Washington. Registration: \$495 (*\$395)

*Reduced rate applies for Native American Tribes; nonprofits; government; educational institutions; students; and NEBC, NAEP, NWAEP members.

Payment Method: Check PO Credit Card (Visa or Mastercard) Total: \$ _____

Credit Card or PO #: _____ Exp: _____

Cancellation and Deadlines:

Registration fees are fully refundable up to 30 days prior to the event and 50 percent refundable thereafter up to the day prior to the event. Registration may occur up to the day prior to the event provided that space is available.