

**GPS: Trimble Pathfinder Systems
Manassas, Virginia
March 26-28, 2008**

Checklist Summary

Check	Item	Information
	ArcGIS	Students must have basic ArcGIS skills equivalent to the ESRI Virtual Campus class "Learning ArcGIS 9" Modules 1-6.
	GPS Fundamentals	Students must have a basic understanding of GPS fundamentals equivalent to Trimble's tutorial at http://www.trimble.com/gps/index.shtml .
	Microsoft Windows	Students must have basic Microsoft Windows skills
	GPS Receivers	There must be 1 GPS receiver for each student. If NPS personnel need help, contact Tammy Stidham (202-619-7474). If BLM personnel need help, contact Dayle Sherba (907-271-3559).
	Digital Cameras	These are recommended since we will be teaching GPS-Photo Link, a software that tags photos with GPS coordinates.
	Computer	There must be 1 computer for each student. If NPS personnel need help, contact Tammy Stidham (202-619-7474). BLM personnel need to contact Dayle Sherba (907-271-3559).
	Computer Software	See list below

Item

ArcGIS Online: ESRI Virtual Campus

Modules 1-6 will take approximately 20 hours to complete and require ArcGIS version 9.2. All DOI employees have free access. Contact your agency ESRI Virtual Campus administrator. Don't wait till the last moment since there may be delays in obtaining course codes!

NPS personnel

- √ Go to <http://data2.itc.nps.gov/gis/esri/vc.cfm>
- √ Fill out the information
- √ Choose "Learning ArcGIS Desktop" from the course list
- √ You will get a course code via email (this may take a few days)
- √ Follow the directions in the email to sign up for the course

GPS Online: Trimble GPS Fundamentals

To view the tutorial you will need Adobe Shockwave Player. Note: it's possible to download the tutorial, however, it may be necessary to modify settings in Explorer, and that may require Admin Rights.

Microsoft Windows

Basic skills include: Copy, Move and Paste files from one folder to another; Open Windows Explorer; Start a Program from the Windows Start Button or Desktop Icon; Create and rename a folder; Attach a USB cable to a USB port; Browse folders content in Windows Explorer

GPS EQUIPMENT – Label every part that you bring to ensure you take it home!!

Here is a list of the Trimble GPS Systems:

Geo3
Geo XH 2005
GeoXM 2003
GeoXM 2005
GeoXT 2003
GeoXT 2005
Juno ST
Nomad
ProXH with Ranger or Recon
ProXR or ProXRS with Ranger or Recon
ProXR or ProXRS with TSC1
ProXT with Ranger or Recon
Trimble Recon GPS XB Edition
Trimble Recon GPS XC Edition

Each of the following tables lists what is needed for a different GPS receiver or group of GPS receivers

Identify the receiver you will bring to the course and then review the specific receiver section for the list of parts in the table

GPS Receiver	Parts	Critical	Recommended
Geo3	Software - Geo3, Firmware v1.2*	X	
	Support Module (Cradle)	X	
	Support Module (Cradle) Power cord	X	
	Null Modem cable that connects the Cradle to PC's Serial Port	X	
	USB to Serial Port Converter (if your computer does not have a serial port)	X	
	Carrying Case	X	
	External Antenna Kit (includes antenna, cable, antenna mounting bracket, pole)	X	
	Copy of documentation from GeoExplorer3 Release Notes - http://trl.trimble.com/docushare/dsweb/Get/Document-9671/Geo3_120_RelNotes_ENG.pdf Using the GeoExplorer3 Operation Guide http://trl.trimble.com/docushare/dsweb/Get/Document-9669/Geo3.pdf		X

* To check Geo3 Firmware. Turn on Receiver. Note the firmware version number on boot up. Go to this Trimble site to update Firmware to 1.20

http://www.trimble.com/support_trl.asp?Nav=Collection-5551

GPS Receiver	Parts	Critical	Recommended
GeoXM 2003	Software – TerraSync Professional version 2.53 or higher.	X	
GeoXM 2005	Support Module (Cradle)	X	
GeoXT 2003	USB cable to connect cradle to computer	X	
GeoXT 2005	Support Module (Cradle) Power cord	X	
GeoXH 2005	Stylus	X	
	Screen Protector	X	
	Antenna – Hurricane for GeoXM, GeoXT Zephyr for GeoXH		X
	Antenna cable		X
	Range pole for antenna		X
	Backpack for range pole		X
	Carrying Case		X
	Copy of appropriate documentation GeoXM/XT - http://www.trimble.com/geoxm_ts.asp?Nav=Collection-37913 GeoXH - http://www.trimble.com/geoxh_ts.asp?Nav=Collection-36698 TerraSync http://www.trimble.com/terrasync_ts.asp?Nav=Collection-30232		X
	*For GeoCE 2003: USB Hub with Surge Protection	X	

*If using a GeoCE 2003, it is strongly recommended that you connect the Support Module to a laptop through a USB hub that provides surge protection. See this support document.

http://trl.trimble.com/docushare/dsweb/Get/Document-194449/MGIS_SprtNote_GeoExplorer_USB%202.0.pdf

GPS Receiver	Parts	Critical	Recommended
Juno ST	Software – TerraSync Professional version 3.01 or higher	X	
	Stylus	X	
	USB Data Cable	X	
	AC Charger	X	
	Screen protectors	X	
	External GPS Antenna		X
	Carry case		X
	Copy of documentation from Juno - http://www.trimble.com/junost_ts.asp?Nav=Collection-47259 TerraSync - http://www.trimble.com/terrasync_ts.asp?Nav=Collection-30232		X

GPS Receiver	Parts	Critical	Recommended
Nomad	Software - TerraSync Professional version 3.05 or higher	X	
	Stylus	X	
	USB Data Cable	X	
	AC Charger	X	
	Screen protectors	X	
	TerraSync http://www.trimble.com/terrasync_ts.asp?Nav=Collection-30232		X

GPS Receiver	Parts	Critical	Recommended
ProXH with Ranger or Recon	Ranger or Recon	X	
	Software - TerraSync Professional version 2.53 or higher	X	
	Power charger for Ranger or Recon	X	
	Screen Protectors	X	
	Stylus	X	
	USB data cable	X	
	Carry case for Ranger		X
	ProXH receiver	X	
	Power supply	X	
	Adaptor for range pole, backpack, vehicle mounting	X	
	Null modem cable	X	
	Range poles	X	
	Backpack	X	
	Zephyr antenna		X
	Antenna Cable		X
	Trimble vehicle magnetic mount		X
	Copy of documentation from ProXH http://www.trimble.com/pathfinderproxh_ts.asp?Nav=Collection-32834 Ranger http://www.trimble.com/ranger_ts.asp?Nav=Collection-35043 Recon http://www.trimble.com/recon_mgis_handheld_ts.asp?Nav=Collection-13993 TerraSync - http://www.trimble.com/terrasync_ts.asp?Nav=Collection-30232		X

GPS Receiver	Parts	Critical	Recommended
ProXR or ProXRS with Ranger or Recon	Ranger or Recon	X	
	Software - TerraSync Professional version 2.53 or higher	X	
	Power charger for Ranger or Recon	X	
	Screen Protectors	X	
	Stylus	X	
	USB data cable	X	
	Carry case for Ranger		X
	OCM - lead battery recharger (holds 4) and provides port for connection to PC	X	
	Null Modem cable that connects the OCM to PC	X	
	Camcorder batteries – Fully Charged!!!!	X	
	Backpack or HipBelt	X	
	12-channel GPS Receiver with 1.31 GPS software**	X	
	TSC-1 Data Cable	X	
	Dual Battery Cable	X	
	Dual Power Cable	X	
	Trimble integrated GPS/MSK Beacon Antenna	X	
	Antenna Cable	X	
	USB to Serial Port Converter (if your Computer does not have a serial port)	X	
	Trimble vehicle mount		X
	Datalogger Carrying Case	X	
	Range Pole(s) sufficient in length to raise antenna above your head	X	
	Copy of documentation from GPS Pathfinder Systems User Guide (ProXR/S)- http://trl.trimble.com/docushare/dsweb/Get/Document-163162/PFSsystems_200_UserGuide.pdf Ranger http://www.trimble.com/ranger_ts.asp?Nav=Collection-35043 Recon http://www.trimble.com/recon_mgis_handheld_ts.asp?Nav=Collection-13993 TerraSync - http://www.trimble.com/terrasync_ts.asp?Nav=Collection-30232		

GPS Receiver	Parts	Critical	Recommended
ProXR or ProXRS with TSC1 Datalogger	TSC-1 datalogger	X	
	Software - Asset Surveyor 5.27* on TSC-1	X	
	OCM - lead battery recharger (holds 4) and provides port for connection to PC	X	
	Null Modem cable that connects the OCM to PC	X	
	Camcorder batteries – Fully Charged!!!!	X	
	Backpack or HipBelt	X	
	12-channel GPS Receiver with 1.31 GPS software**	X	
	TSC-1 Data Cable	X	
	Dual Battery Cable	X	
	Dual Power Cable	X	
	Trimble integrated GPS/MSK Beacon Antenna	X	
	Antenna Cable	X	
	USB to Serial Port Converter (if your Computer does not have a serial port)	X	
	Trimble vehicle mount		X
	Datalogger Carrying Case	X	
	Range Pole(s) sufficient in length to raise antenna above your head	X	
	Copy of documentation from GPS Pathfinder Systems User Guide (ProXR/S)- http://trl.trimble.com/docushare/dsweb/Get/Document-163162/PFSystems_200_UserGuide.pdf TSC1 Asset Surveyor Software User Guide http://trl.trimble.com/docushare/dsweb/Get/Document-8144/User.pdf TSC1 Asset Surveyor Operation Manual http://trl.trimble.com/docushare/dsweb/Get/Document-8145/Oper.pdf TSC1 Asset Surveyor Release Notes http://trl.trimble.com/docushare/dsweb/Get/Document-37959/Relnotes.pdf		

*Check the TSC-1 Asset Surveyor version by observing display of version during bootup. Update is available at http://www.trimble.com/support_trl.asp?Nav=Collection-9620

GPS Receiver	Parts	Critical	Recommended
ProXT with Ranger or Recon	Ranger or Recon	X	
	Software - TerraSync Professional version 2.53 or higher	X	
	Power charger for Ranger or Recon	X	
	Screen Protectors	X	
	Stylus	X	
	USB data cable	X	
	Carry case for Ranger		X
	ProXT receiver	X	
	Power supply	X	
	Adaptor for range pole, backpack, vehicle mounting	X	
	Null modem cable	X	
	Range poles	X	
	Backpack	X	
	Hurricane antenna		X
	Antenna Cable		X
	Trimble vehicle magnetic mount		X
	Copy of documentation from ProXT http://www.trimble.com/pathfinderproxt_ts.asp?Nav=Collection-32839 Ranger http://www.trimble.com/ranger_ts.asp?Nav=Collection-35043 Recon http://www.trimble.com/recon_mgis_handheld_ts.asp?Nav=Collection-13993 TerraSync - http://www.trimble.com/terrasync_ts.asp?Nav=Collection-30232		X

GPS Receiver	Parts	Critical	Recommended
Trimble Recon GPS XB Edition	Trimble Recon	X	
	Software - TerraSync Professional version 2.53 or higher	X	
	Stylus	X	
	USB Data Cable	X	
	Power supply for Recon	X	
	Screen protectors	X	
	GPS Pathfinder XB receiver	X	
	Power supply for receiver	X	
	Adapter for mounting GPS receiver on range pole or backpack		X
	Backpack w/wo range pole for GPS receiver		X
	Copy of documentation from Recon XB Edition http://www.trimble.com/recon_xb_ed_ts.asp?Nav=Collection-43272 TerraSync - http://www.trimble.com/terrasync_ts.asp?Nav=Collection-30232		X

GPS Receiver	Parts	Critical	Recommended
Trimble Recon GPS XC Edition	Trimble Recon	X	
	Software – TerraSync Professional version 2.53 or higher	X	
	Stylus	X	
	USB Data Cable	X	
	Power supply for Recon	X	
	Screen protectors	X	X
	Rugged extended CF-Cap	X	
	GPS Pathfinder XC receiver – CompactFlash card-based GPS receiver		X
	Copy of documentation from Recon GPS XC Edition http://www.trimble.com/recon_xc_ed_ts.asp?Nav=Collection-44280 TerraSync - http://www.trimble.com/terrasync_ts.asp?Nav=Collection-30232		X

Digital Cameras – Label every part that you bring to ensure you take it home!!

Parts	Critical	Recommended
Digital Camera made in the last 5 years	X	
Camera Charger / Power Cord	X	
Batteries	X	
Parts necessary for transferring images to computer	X	
Know how to download images onto a computer	X	
Know how to change the time on your camera		x
Carrying Case		X

Computer - Label every part that you bring to ensure you take it home!!

	Critical	Recommended
Computer. CPU speed: 800MHz min., 1.0 GHz; Processor: Pentium or higher; 512 MB recommended.	X	
Power Cord	X	
Mouse (not required if you have a Touchpad and are comfortable using it)	X	
Carrying Case	X	
USB port	X	
At least 300MB of free space on the C:/drive.	X	
Antivirus Updated (Norton, Symantec, etc.)	X	
CD ROM drive		X
Surge Protector		X
CAT 5 Network cable for internet		X
Thumb /Flash / Jump Drive		X
For NPS Personnel Only: User Name and Password for admin privileges.	X	

Computer Software

<p>GPS Pathfinder Office (PFO)</p>	<p>If you don't own a copy, contact Dayle Sherba to obtain installation code good for training purposes, only.</p> <p>Everyone needs a copy of PFO on their computer. Here's how to determine which version of GPS Pathfinder Office (PFO) to install.</p> <p>If the GPS receiver does not use TerraSync software then install v3.1 or v4.0 of PFO. If the GPS receiver does use TerraSync software and if the TerraSync software is v2.x, install v3.1 of PFO if the TerraSync software is v3.x, install v4.x of PFO</p>
<p>GPS Pathfinder Office Updates</p>	<p>No additional cost.</p> <p>After installing PFO, click on Help / "Check for new GPS Pathfinder Office Updates Now". (Language files are already installed.)</p>
<p>ArcGIS 9.2 Service Pack 4</p>	<p>No additional cost.</p> <p>Everyone needs ArcGIS version 9.2, on their computer.</p> <p>NPS personnel will be able to connect to ArcGIS license server via Intranet, if you have POWER permissions. Dongles with updated license files must be brought to class for NON-NPS and NON POWER personnel.</p> <p>Note: version 9.1 will not be allowed</p>
<p>GPS-Photo Link</p>	<p>If you don't own a copy you may download a trial version that allows you to use it 10 times for free from http://www.geospatialexperts.com/download.html. We recommend version 4.0.</p> <p>If you own a copy, please update to version 4.0 or 4.1.</p> <p>If you want to tag photos with GPS coordinates, then you must install this software.</p>
<p>ActiveSync Version 4.5</p>	<p>No additional cost.</p> <p>http://www.microsoft.com/windowsmobile/activesync/default.mspx</p> <p>Install this software <i>only if you are using a GPS equipment with a touch screen</i>: GeoXM, GeoXT, GeoXH, Recon, Juno, Nomad</p>