

PSC-5200 -- 2011 -- Some suggestions for final "Semester" projects, etc.

1. Possible FINAL PROJECTS if you are having trouble deciding on one...
 - A. Compare at least 2 models of GPS for accuracy (repeatability) and precision on a "standard site" length, area, reference points, etc. with and without WAAS.
 - B. Compare at least 2 models of GPS for accuracy (repeatability) and precision at a known point. However, compare averaging your readings over 1 min, 15 min, and 30 min with and without WAAS.
 - C. Set up a Garmin "Nuvi" (automobile audible guidance system) and compare with a GPSmap60; or, with a Garmin Oregon using various position in the vehicle (dash, seat, etc.)
 - D. Evaluate a GPS-linked digital camera for georeferenced photo surveying.
 - E. Evaluate a regular GPS digital camera for georeferenced photos while using a Garmin gps to log your track.
 - F. Compare an iPaq 5915 for HGIS geospatial analysis or logging compared to an Archer PocketPC – hooked to a very good GPS (like a Garmin GPSmap-60csx)
 - G. Compare the accuracy and sensitivity (linking in the shadow of a building or tree compared to a full view of the sky) of the Garmin GPSmap60csx vs. a Garmin GPSmap60monochrome.

2. Examples of GPS equipment that we have that you can check out Rasmussen's Prec. Ag. Lab:
 - A. One 2011 Garmin "Tracker" unit (can track over the Internet)
 - B. One 2011 Garmin GPS-62st unit (state of the art in sensitivity, recreational grade units)
 - C. One 2010 Laser Rangefinder unit that can be linked with GPS coordinates (manually) to estimate points across a canyon, etc.
 - D. Approximately 19 HP iPaq rx-5915 or rx-5910 combination PocketPC & GPS units
 1. These have built in maps with most streets in all cities of the U.S.
 2. These can be "set" for either "automobile" (fast moving filter) use or "walking" (slow moving filter)
 - E. Approximately 20 Garmin GPSmap60csx color handhelds
 - F. Approximately 4 Garmin Legend handhelds
 - G. Approximately 20 Garmin Oregon handhelds
 - H. 2 Garmin older Rhino GPS with FRS walkie-talkie and "friend tracker"
 - I. 2 Garmin Rhino (color) GPS with GMRS walkie-talkie and "friend tracker"
 - J. Approximately 10 Garmin GPSmap60 monochrome handhelds
 - K. Approximately 2 Garmin GPS V (with WAAS) handhelds
 - L. Approximately 2 Garmin GPS III+ (with WAAS) handhelds
 - M. Approximately 2 Garmin GPS III (pre-WAAS) handhelds
 - N. 2 magnetic auxillary antennas for the Ipaq 5915
 - O. 1 Trimble Pro-XL "Omnistar correction" unit (difficult to use)
 - P. 1 NEW iPaq Legacy 210 PocketPC unit
 - Q. 1 NEW iPaq Legacy 110 PocketPC unit
 - R. 3 Juniper Systems Archer PocketPC units
 - S. Several iPaq 2400-series and 2200-series PocketPC units
 1. 2 Holux compact-flash GPS unit for iPaq or Archer or Legacy with switchable "XL" mode
 2. 1 "SD" type GPS unit for iPaq or Archer or Legacy
 3. 2 Older compact-flash GPS units for iPaq or Archer or Legacy
 4. 2 magnetic auxiliary antennas for the CF cards
 5. Numerous cables to connect Garmin units to iPaq and Archer Pocket-PC's

- T. Several special purpose GPS systems for tracking, data logging, or photo-logging
- U. A GPS “logger” for use with a camera when hiking, with software to “link” your photos to GPS points.
- V. A GPS-linked digital camera for georeferenced photos
- W. A GPS-linked dog or cattle tracker collar (Garmin ASTRO series)