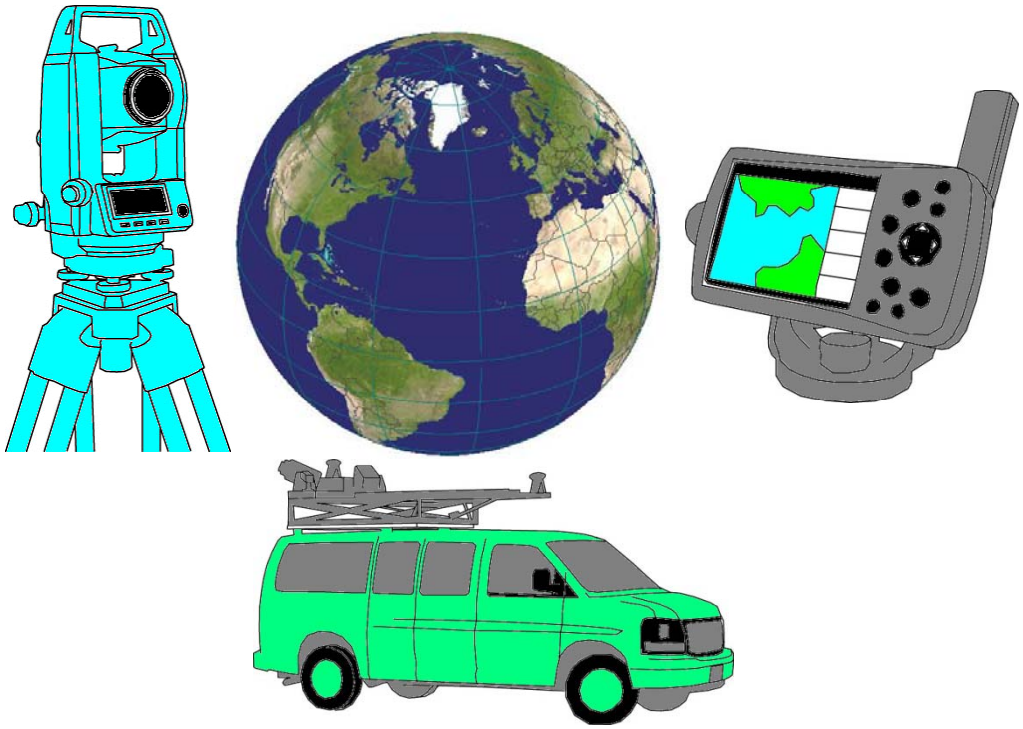

Fall 2011 Course: Adjustment of Geospatial Observations CE597 (On Campus & by Distance)

- Offered by School of Civil Engineering and Engineering Professional Education, Purdue Univ.
- 3 credits
- Questions contact instructor at 765-494-6719 or bethel@ecn.purdue.edu
- For distance registration see: https://engineering.purdue.edu/ProEd/courses
- Prerequisites: calculus
- Useful for any engineers or scientists dealing with geospatial data, with needs for optimizing registration and quantifying uncertainty

- Reconcile geospatial measurements with control points
- Register GIS data to reference data
- Fit observations to mathematical models
- Merge measurement data having different precisions
- Least squares estimation and error propagation
- Coordinate transformations and conversions
- Data sources used: GPS pseudorange, laser point clouds, total station & level, digitized map data, vehicle trajectory: position and attitude, image points (photogrammetry)
- Blunder and outlier detection
- Sequential processing and Kalman Filter
- Matlab coding practice and commercial software usage