

GEOS231 – Geoscience Field Methods

March 3, 2011

Mapping using the pace and compass method (50 pts):

For this exercise you will make a map of a specified area of campus by the southeast corner of the science complex. Your map will include all exposed sidewalks, buildings and mature trees. You may include additional data (shrubs, building detail) as you see fit and as your time permits. You will start at one corner, which you may consider as a set location, and determine the locations of all other points in the area relative to that initial point. The way to do this is to use a compass to measure the direction from your known point to a target point, and then measure the distance to that point using paces. If you don't have a direct line from your starting corner to one of your target points, you can use another point that you've already found the location of, but be careful: I advise that you take as many of your measurements as possible from your starting point, because if you have an error in the location of one of your points, that error will also show up in the location of any other points you measure from that point afterwards.

The best way to measure distance using paces is to walk ten comfortable paces and then measure the distance you traveled. It's actually best to do this a few times and take the average. You can count paces as one step or as two steps, but make sure to count the same way when making your map as you did when you measured your pace length.

As you can imagine, keeping track of all this data will be somewhat complicated. The best way to do it is with a sketch on graph paper. Knowing your pace length and having decided on a scale at which to draw your map, you can convert your pace length from meters into "squares," thus avoiding a lot of arithmetic later on. This method will be demonstrated for you during class.

Feel free to transfer your "field map" to a clean copy to be handed in, although we also want you to turn in your field map along with your 'clean map'. Important: be sure that your maps include a) a scale; b) a north arrow; and c) a legend that describes each of the different symbols you use on your map; d) a title. **Turn in your final map and any field version of the map you may have at the beginning of class time Thursday, March 10, 2011.**