CME 290 – Engineering Surveying
Summer session 1: May 18 to June 12, 2015
9:30 am to 12:30 pm T, W, R
SEL room 1253
Instructor – Ben O’Connor

Know your place in the world...Literally

Surveying is a science focused on quantifying the three-dimensional position of points, distances, and angles associated with features of the Earth’s terrain. The use of surveying in civil engineering includes applications examining topography, hydrography, construction site design, highway alignment, and as-built layouts. The technology used by surveyors to collect and analyze spatial data has grown extensively over recent years, which makes it even more essential for civil engineers to have experience with collecting, interpreting, and understanding the various types of surveying data.

This hands-on course will introduce students to the relevant theoretical principles governing surveying data collection that include: units of measure and uncertainty, leveling, distance and angle measurement, and coordinate systems. Concurrently, students will learn to use total station and global positioning system (GPS) equipment by conducting measurements throughout campus, and 1 – 2 field trips to be arranged in class. Analysis of surveying data will be introduced using a variety of software products including geographic information system (GIS) and site design (e.g., MicroStation) packages.

Students need to comfortable with basic geometry, trigonometry, and calculus. In addition, students should expect some lecture mixed with both indoor and outdoor hands-on exercises each day, so please dress appropriate for weather conditions and wear closed-toe shoes. Course materials will be provided by the instructor and reference textbooks will be on reserve at the UIC Library. No previous experience with surveying is required.

Please feel free to contact me at oconnorb@uic.edu with any questions regarding the course.