



## EGR 221: Surveying I

The study of the theory and practice of plane surveying with specific applications to civil engineering. Topics will include measurement theory and errors, distance measurement, leveling, bearings, azimuths, traverses, area determinations, stadia, topographic surveys, horizontal and vertical curves, and other related topics. Prerequisite: None. MTH 172 recommended. Three lecture and three laboratory hours per week. Instructional Support Fee applies.

### Course Student Learning Outcomes

1. Demonstrate the ability to properly use and care for common surveying equipment. 2. Identify sources of error in surveying projects. 3. Accurately and precisely lay out and measure angles, distances and elevations in the field. 4. Properly record surveying field notes. 5. Correctly perform surveying office calculations.

**Credits:** 4

**Program:** Engineering