Course Name: *Surveying Basics SE 211* (for Surveying and Civil Eng.)
Prerequisite: Math 107
Instructor: Prof. Ismat El Hassan

Course Objectives:
The objectives of this course is to give the student the basics of the ground survey measurement techniques

Course Contents:
- Principles of survey observations: types of survey measurements, and types of errors
- Distance measurement using Tape
- Distance measurement using Optical Instruments (ODM)
- Distance measurement using Electromagnetic Instruments (EDM)
- Leveling
- Angle Measurement using Optical and Electronic Theodolites
- Planimetric area determination

Field and lab Tasks:
- Training on distance measurement using tapes, ODM and EDM techniques.
- Training on horizontal and vertical angle measurements using theodolites.
- Training on leveling operations
- Measurement of planimetric areas using planimeter.

Tutorials: See Tutorials link

Outcome Assessment:
Lab, Field work, Reports: 20 marks
Tutorial problems: 10
Midterm Exam: 20
Final Exam: 50
Total 100