

Course Syllabus

1. Course number and name: 020TOGNI4
2. Credits and contact hours: 2 credits, 2 ECTS credits, 1x1:15 course hours
3. Instructor's or course coordinator's name: Saad Sfeir and Ghassan Ghattas
4. Textbook and other supplemental material:
 - a. Professor course text.
5. Specific course information
 - a. Catalog description Introduction to surveying. Geodesy and cartography. Levelling. Measuring instruments. Topographic plans. Profiles and volumes. Setting out techniques. Surveying base plan and official documents folder.
 - b. Prerequisites: None.
 - c. Required/Elective/Selected Elective: Required.
6. Specific goals for the course
 - a. Specific outcomes of instruction:
 - Understand the necessity of having a detailed land survey base plan prior to any construction design work.
 - Analyze and compute any required data on the construction site.
 - On site building stake out.
 - Cut and fill volume calculations.
 - b. KPIs addressed by the course:

KPI	a1	b3	k2
Covered	X	X	X
Assessed	X	X	X
Give Feedback			

7. Topics and approximate lecture hours:
 - Introduction to surveying, plan coordinates, bearings, vertical and horizontal angles (1.5 Lecture)
 - Introduction to geodesy and cartography, ellipsoid, geoid, geographic coordinates, projections. (1.5 Lecture)
 - Introduction to the Lebanese cadastre (1.5 Lecture)
 - Introduction to surveying equipment (1 Lecture)
 - Angle measurements using the theodolite instrument (1.5 Lecture)
 - Electronic distance measurement (EDM) (1 Lecture)
 - Traversing using a total station (1 Lecture)
 - Building and boundary stake out (1 Lecture)
 - As built surveys (1 Lecture)
 - Introduction to terrain modeling and volume calculation (2 Lectures)
 - Leveling and leveling calculations (1 Lecture)