



The University of Jordan
Faculty of Engineering & Technology
Civil Engineering Department

CE0901283 Surveying Lab.
 Spring 2014

2010 Course Catalog

1 Credit hour (3 h lab. Per week). Distance Measurements and Chain Surveying; use of the level and leveling staff, setting out levels, profile and cross sections; leveling; Contours exercise; The theodolite and its uses: traverse computations; Topographic Survey; Electronic Distance Measurement (EDM); Measurement of areas with planimeter; and volumes computation; - The use of laser theodolite and level; The use of Total Station.

Text Books

	Text book 1	Text book 2
Title	Fundamentals of Surveying,	Fundamentals of Surveying,
Author(s)	Schmidt and Kam W. Wong	Prof. Yousif Syam (Arabic Reference)
Publisher	-	-
Year	1983	-
Edition	Third edition	-

References

Books	1. Surveying by Bannister and Raymond 2. Surveying Practice by Kissam 3. Elementary Surveying by Brinker and Wolf 4. Site Surveying and Leveling by Clancy 5. Surveying for Civil Engineers by Kissam 6. Surveying Theory and Practice by Davis <i>et. al</i>
Journals	
Internet links	

Instructor

Instructor	Prof. Mohammed T. Obaidat , E-mail: m_obaidat@ju.edu.jo
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Prerequisites

Prerequisites by topic	Linear Algebra, Statistics and Probability.
Prerequisites by course	Math. 101
Co-requisites by course	Surveying Course.
Prerequisite for	-

Objectives and Outcomes¹

Objectives	Outcomes
1. To know the instruments of surveying and their uses. [a,b,c,d,e,f,g,h,I,j,k]	1.1 practice the basic principles of surveying. [a, b, d, f, i, j, k] 1.2 use surveying instruments. [b,c,d,e,f,g,h,i,j,k]
1. To practice surveying and civil engineering	2.1 Make CE projects using surveying instruments. [a,b,c,d,e,f,g,h,i,g,h,I,j,k]

¹ Lower-case letters in brackets refer to the Program outcomes

projects. [a,b,c,d,e,f,g,h,i,g,h,I,j,k]	
2. To practice computer applications related to surveying. [a,c,d,e,i,k]	3.1 to know and use some surveying software such as Surfer, land-development, etc. [a,c,d,e,i,k]

Topics Covered		
Week	Topics	Chapters in Text
1	Introduction to the lab.	Lab. Work doesn't depend on text book that much.
2	Linear measurement instruments (Tape, pacing, Desto, Tape accessories). Pacing Excercise	Lab. Manual Prepared by Instructor
3-4	Property Survey Project	Lab. Manual Prepared by Instructor
5-7	Leveling Project (Theory, Instrument, Project, X-sec., Areas, Volumes, Profile, 3D, etc)	Lab. Manual Prepared by Instructor
8-9	Theodolite instrument (Theory, Instrument, Project)	Lab. Manual Prepared by Instructor
10	Planimeter Instrument	Lab. Manual Prepared by Instructor
11-12	Construction Survey Project (Building setout, columns, footings, and axes)	Lab. Manual Prepared by Instructor
13-16	Total Station (Theory, functions, setup, projects, practice, etc)	Lab. Manual Prepared by Instructor

Evaluation		
Assessment Tool	Expected Due Date	Weight
Projects, Excercises, and Quizzes.	One week after homework problems are assigned	40%
Midterm Exam	According to the department schedule	20 %
Final Exam	According to the University final examination schedule	40 %

Contribution of Course to Meeting the Professional Component
The course contributes to building the applications and skills of using surveying instruments, and usage of measurements and earth work in Civil Engineering Projects.

Relationship to Program Outcomes (%)

A	B	C	D	E	F	G	H	I	J	K
5%	25%	10%	5%	20%	5%	5%	5%	5%	5%	10%

Relationship to Civil Engineering Program Objectives

PEO1	PEO2	PEO3	PEO 4	PEO 5	PEO 6
√	√	√	√	√	√

Prepared by: Prof. Mohammed Taleb Obaidat
 Last Modified: Feb. 12, 2014