

Salahaddin University - Erbil
College of engineering - Civil Department

Module Name	Engineering Surveying		Code	1112
Course Status	Core	Duration:	15 week – one semester	Credit point 6
Pre-requisites	Non		Total Work Load 162 hr	Class Attendance 90 hr Self Studies 72 hr
Course Description	<p>Surveying has to do with the determination of relative spatial location of points on or near the surface of the earth. It is the art of measuring horizontal and vertical distance between objects, of measuring angle between lines, of determining the direction of lines, and of establishing points by predetermined angular and linear measurements. The students are introduced to the theory of engineering measurements. Topics covered include use of instruments, computing measurements, errors, measuring distance, elevation, angles, and directions. The course also covers route surveying, construction surveys, and statistical analysis of field data. This course is a three-hour lecture and field work.</p>			
Course Objectives	<p>1-To introduce the theory and practice of the measurement of angles, distances, and heights. 2-To become familiar with the surveying instruments and their way of operation. 3-To introduce the basics of setting out geometrical elements such as construction sites, highway curves, etc.</p>			
Learning Outcome	<p>Upon successful completion of this course, the student should be able to: 1- Use appropriate surveying instruments to measure angles, distances and heights. 2- Determine sources of error and take needed measures to minimize the error. 3- Understand the role of surveyors in construction. 4- Apply typical surveying computations. 5- Be familiar with various technologies and techniques used for surveying in the context of construction activities</p>			
Literature & text Books	<p>Willima Irvine and finlay maclennan "surveying for construction" fifth edition. Charles Ghilani, "Elementary Surveying: An Introduction to Geomatics".</p>			
Type of Teaching	Theory Lectures 2 hr	Tutorial 1 hr	Practical 3 hr	
Evaluation Profile	Students are required to do first midterm exam on 8 week, class room activities, quizzes, home works and final exam on week 15th. So that the final grade will be based upon the following criteria:			
	Course period efforts (out of 50%)	Midterm Exam (90 min written exam at week 8)		20 %
		Short exams (Quiz) at least 2 during the course period (one of them must befor week 8)		10 %
		assignments and home works at least 2 during the course period		6 %
		Class Room Activities, Reports and Seminars		4 %
		Lab Reports and Activity during the course period		10 %
	Course period efforts (out of 50%)	written exam (120 min written exam week 15)		40 %
Practical Lab. exam (week 15)		10 %		