



Course Weekly Outline

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Course name	Engineering Survey-II					
Course objective	1. Introducing the student to the general fundamentals of surveying and preparing them to be capable of managing survey technicians and engineers working on civil projects. 2. Introducing the student to the use of some surveying equipment, such as the leveling instrument (Level) and the Theodolite, to enable them to carry out simple surveying tasks needed in civil works, such as measuring elevations and angles. 3. Providing the student with basics on advanced surveys, such as road surveying and coordinate measurement, which allows the student to develop their capabilities in the future through courses or further study to become a professional surveyor and carry out advanced surveying tasks.					
Course description	Introducing and training the student in the fundamentals of surveying and the optimal use of surveying instruments, as well as developing their ability to carry out various leveling tasks.					
References	1. Yaseen Obaid Ahmed (1990), Engineering Surveying, Ministry of Higher Education and Scientific Research - University of Basra - College of Engineering - Basra - Iraq. 2. Ziyad Abduljabbar (2004), Engineering and Cadastral Surveying - Baghdad.					
External sources	1. Surveying: Theory and Practice by James M. Anderson and Edward M. Mikhail, (7th Edition), 2002 2. Kavanagh, Barry F., Surveying: Principles and Applications (9th Edition), 2014 3. Kavanagh, Barry F., Surveying with Construction Applications (8th Edition), 2015 4. Ghilani, C.D., and Wolf, P.R., Elementary Surveying: An Introduction to Geomatics (13th Edition), 2011 5. Schofield W. and M. Breach, Engineering Surveying, (6th Edition), 2007 6. La Putt, J.P., Elementary Surveying (3rd Edition) 2013 Reprint 7. La Putt, J.P., Higher Surveying (2nd Edition) 2013 Reprint					
Course assessment	projects / Lab.	Report	Quizzes	Assignments	Mid-term exam	Final exam
	10	10	10	10	10	50
General notes						



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Week No.	Theoretical	Experimental	Aims
1	Introduction to surveying	Measuring long distances	The aim of this Module is to provide the student with a deep understanding of surveying and construction activities; practical application of topographic surveying skills, an awareness of the preliminary considerations involved in construction developments and a knowledge of the materials and procedures employed in construction of small commercial/industrial building works.
2	Types of Surveying and devices used	Measuring long distance with tape	
3	Topograohic surveying	Measuring long distance with tape	
4	Geodetic surveying	Surveying with tape	
5	Plane surveying	Ploting amap with tape	
6	Units of Measurement	Ploting amap with tape	
7	Distances.areas&angles	Leveling devices and their types	
8	Measurement systems and conversions	Setting up levelling devices	
9	Tape errors	Finding elevation differences between points	
10	Length Error	Drawing asite map with elevation and laying asloped sewer pipe	
11	Measuring distances with Obstacles	map with elevation and laying asloped sewer pipe	
12	Applications of tape Error Calculations	map with elevation and laying asloped sewer pipe	
13	leveling	Levelings	
14	Leveling	Levelings	
15	Leveling	Levelings	