

Kurdistan Region Government Ministry of Higher Education and Scientific Research Erbil Polytechnic University



# Module (Course Syllabus) Catalogue

## 2022-2023

College/ Institute	Shaqlawa technical College		
Department	Architectural Technique- Evening		
Module Name	Surveying		
Module Code	Sur205		
Degree	Technical Diploma	* Bachelo	
	High Diploma	Master PhD	
Semester	2		
Qualification	Diploma		
Scientific Title	Surveyor		
ECTS (Credits)	6		
Module type	Prerequisite Core * Assist.		
Weekly hours			
Weekly hours (Theory)	( 1 )hr Class	(162)Total hrs Workload	
Weekly hours	( 2)hr Class	(162)Total hrs Workload	
(Practical)			
Number of Weeks	12		
Lecturer (Theory)	Diyar Ismail Hassan		
E-Mail & Mobile NO.	diyar.hassan@epu.edu.iq		
Lecturer (Practical)	Diyar Ismail Hassan		
E-Mail & Mobile NO.	diyar.hassan@epu.edu.iq		
Websites	https://moodle.epu.edu.iq/course/view.php?id=4694		

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## **Course Book**

Course Description	meas scale	In this course the student will study the types of survey, tools used in measurements, ranging and measuring, Units of measurements, scales, and obstacles in measuring distances, leveling and methods of computing elevations with all the drawing needed for them.				
Course objectives		On completion of this course the student will be able to: Learn a good idea about survey principles.				
Student's obligation	ever In pr and	The lecture starts on its time. The students should attend the class every lecture. Quiz is expectable every week. In practice aspect, students must attend the lab and do the lab works and write a report on the experiment that they did in one group or subgroup.				
Required Learning Materials		Learning resources: Theory: lecture halls with computers equipment for lecture				
IVIALEITAIS	pres	presentations, white board, and overhead projector.				
		Field practice: Instruments and equipment's available in the laboratory				
	Diff	Different forms of teaching will be used to reach the objectives of				
	the c	the course. All lectures write by Microsoft word or power point presentation program. White board and data show device will be				
	prese	entation program. Whit				
		entation program. Whit in every lecture.				
		in every lecture.	e board and weight	data show <b>Due</b>	device will be Relevant Learning	
	used	in every lecture. Task	e board and Weight (Marks)	data show Due Week	device will be Relevant Learning Outcome	
	Ass	in every lecture. Task Paper Review Homework Class Activity	weight (Marks) N/A 5% 2%	data show Due Week	device will be Relevant Learning Outcome N/A 2,3,4 1-4	
	Ass	in every lecture. Task Paper Review Homework Class Activity Report	e board and o Weight (Marks) N/A 5% 2% 5%	data show Due Week	device will be Relevant Learning Outcome N/A 2,3,4 1-4 1-4	
	Ass	in every lecture. Task Paper Review Homework Class Activity Report Seminar	e board and weight (Marks) N/A 5% 2% 5% 5%	data show of <b>Due</b> Week N/A	device will be Relevant Learning Outcome N/A 2,3,4 1-4 1-4 3	
Evaluation	used	in every lecture. Task Paper Review Homework Class Activity Report Seminar Essay	weight (Marks) N/A 5% 2% 5% 5% 5% N/A	data show Due Week	device will be Relevant Learning Outcome N/A 2,3,4 1-4 1-4 3 N/A	
Evaluation	Ass	in every lecture. Task Paper Review Homework Class Activity Report Seminar Essay Project	e board and o Weight (Marks) N/A 5% 2% 5% 5% 5% N/A N/A N/A	data show of <b>Due</b> Week N/A	device will be Relevant Learning Outcome N/A 2,3,4 1-4 1-4 3 N/A 4	
Evaluation	Ass	in every lecture. Task Paper Review Homework Class Activity Report Seminar Essay Project Quiz	weight (Marks) N/A 5% 2% 5% 5% 5% N/A	data show of <b>Due</b> Week N/A	device will be Relevant Learning Outcome N/A 2,3,4 1-4 1-4 3 N/A	
Evaluation	Assignments	in every lecture. Task Paper Review Homework Class Activity Report Seminar Essay Project	e board and o Weight (Marks) N/A 5% 2% 5% 5% 5% N/A N/A N/A 8%	data show of <b>Due</b> Week N/A	Relevant Learning Outcome N/A 2,3,4 1-4 1-4 3 N/A 4 4	
Evaluation	Assignments	in every lecture. Task Paper Review Homework Class Activity Report Seminar Essay Project Quiz Lab. Reports	e board and a Weight (Marks) N/A 5% 2% 5% 5% 5% N/A N/A N/A 8% 10%	data show of <b>Due</b> Week N/A	Relevant Learning Outcome N/A 2,3,4 1-4 1-4 3 N/A 4 4	
Evaluation	Assignments Mid	in every lecture. Task Paper Review Homework Class Activity Report Seminar Essay Project Quiz Lab. Reports dterm Exam-Practical	e board and a Weight (Marks) N/A 5% 2% 5% 5% 5% N/A N/A N/A 8% 10% 15%	data show of <b>Due</b> Week N/A	device will be Relevant Learning Outcome N/A 2,3,4 1-4 1-4 3 N/A 4 4 4 4	

	A fear a small time this standards will be able to small it. A	
	After completing this students will be able to explain in the	
	following area:	
	1-Learn student the Surveying is the technique of determining the	
Specific learning	positions of different points on the surface of the earth, and	
	representing them on a sheet of paper known as plan or map to any	
outcome:	suitable scale.	
	2. Familiarize with the fundamental instruments used in surveying.	
	3- Levelling work using level device. And its apparatus.	
	4- Having useful knowledge about tools and method of surveying	
	Magazines and review (internet):	
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	Magazines and review (internet): 1- Level and topographical area Author: Dr. Abdulkarim	
Course References:	1- Level and topographical area Author: Dr. Abdulkarim	
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Course References:	<ol> <li>1- Level and topographical area Author: Dr. Abdulkarim Touma.</li> <li>2- Practical space Prepared by: Ziad Abaljbar Jassim - Ibrahim</li> </ol>	
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<b>Course topics (Theory)</b>	Week	Learning Outcome
Definition of survey, benefits, types	1	1
Ranging and Measuring, Methods of Measurements	2	1,4
Erecting & Dropping Perpendiculars Chain or tape surveying	3,4	1,2,4
Obstacles in measuring distances:	5	1,2
Topographic map and its application, methods of locating contours, characteristics of contours, contour interval, calculation of reservoir capacity.	6,7	2,3
Definition of Levelling, Levelling Staff, Bench mark, Datum line, Back sight, Fore sight, Intermediate sight, Turning point,	8,9	2,4
Methods of computing Elevations in leveling: (Height of Instrument Method, Rise and Fall Method) and correction of errors, Permissible error	10,11	2,3,4
Profile & cross-section leveling , volume of earthworks ( cut & fill)	12	3,4

Practical Topics	Week	Learning Outcome
Identify the survey devices in the surveying laboratory.	1	1
Measuring the horizontal distance with the approximate ways	2	1,2
Exercise on Erecting & Dropping Perpendiculars	3	1,4
Exercise on Obstacles in measuring distances:	4	2,4
Using level instrument, Levelling Staff, Bench mark, Datum line, Back sight, Fore sight, Intermediate sight and Turning point.	5,6	2,3,4
Measuring elevations and solving examples with different ways.	7,8	3,4
Appointment of contour line in the field with different ways and practical exercises to draw the contour lines.	9,10	3,4
Raising closed polygon using a compass and reading inner angles of the closed polygon	11	2,4
Sketching horizontal curves ,solving practical examples of the curved design	12	1,3,4

### **Questions Example Design**

Q1 / Define contour line, contour interval and Explain briefly methods of drawing contouring?

Q2) The following consecutive readings were taken with a level on continuously Sloping ground at a common interval of 20m. The last station has an elevation of 155.272 m. Rule out a page of level book and enter the readings. Calculate

- (i) The reduced levels of the points by rise and fall and height of instrument methods, and
- (ii) the gradient of the line joining the first and last points. (0.420, 1.115, 2.265, 2.900, 3.615, 0.535, 1.470, 2.815, 3.505, 4.445, 0.605, 1.925, 2.885.)

Q3) There are two kinds of Measurements used in Plan Surveying, what are they?

#### **External Evaluator**

As assistant Professor I have reviewed the Course Catalogue related to the subject of surveying for second semester, Department of Architectural Techniques, Technical college of Shaqlawa, I found that the course Catalogue is very good describing the aim and objectives of the subject. Moreover it is covering all the required syllabus and contents of the course and describes satisfactorily the aspects related to the course which is approved by the department.

Dr. Bahman Omar Taha Lecture Ph.D. in Structural Engineering