

## MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY JAMSHORO Department of Civil

## Engineering LESSON PLAN

COURSE TITLE: Engineering SurveyingCOURSE CODE: CE113CREDIT HOURS: 03						CONTACT	HOURS:48			
(	COURSE INSTRUCTER: Dr. Rizwan Ali Memon (A) / Engr. Maroosha Larik (B+C)									
]	Batch: 2	4CE	Semester: 2 <sup>nd</sup>	Semester Starting Date: 06-01-2025 Semester Susp			pension Date:24-04-2025			
COURSE LEARNING OUTCOMES:										
	CLO	0 Description					Taxonomy level	PLO		
	1	DEMONSTRATE various surveying equipment and techniques used for linear and angular measurements and for computation of the areas and volumes.						1		
	2	COMPUTE the reduction of levels and draw L-section and X-section.					C3	2		
	3	UNDERSTAND the setting out of different civil engineering works						2		

L	LESSON CONTENTS AND ASSOCIATED CLO(s)						
	Contents	CLO No.	Marks Assigned	Delivery Methods	Assessment Methods (Marks)		
	Introduction						
	- Introduction to Surveying						
	- Classification of surveying				• Assignment –I		
	- Distance Measurement						
	Theodolite Traversing			• Class	(5)		
	- Traverse and types of traverse			Lecture	• Class Test -I		
	- Bearing and designation of bearings			<ul> <li>Discussion</li> </ul>	(J)		
	- Computation of Bearings and Angles.				• What semester Exam (30)		
	- Adjustment of theodolite	1	40				
	- Traversing with theodolite	I	40				
	- Traverse computations						
	Computation of Areas and Volumes						
	- Computation of areas by using trapezoidal and Simpson rule						
	- Computation of areas by co-ordinates						
	- Computation of volume by trapezoidal and end area method.						
	No. of lectures: 20						

<ul> <li>Levelling         <ul> <li>Principles and classification of levelling</li> <li>Types of levels, their temporary and permanent adjustments</li> <li>Surveying and drafting</li> <li>Plotting profiles, cross sections, and contours</li> </ul> </li> <li>Trigonometric levelling         <ul> <li>Determination of Reduced levels of elevated objects when the base is accessible and inaccessible.</li> <li>Tachometric Surveying             <ul> <li>Tachometry, System of tachometry</li> <li>Principles and field procedures of tachometry</li> <li>Use of tachometry for traversing</li> </ul> </li> </ul></li></ul>	2	30	<ul> <li>Class Lecture</li> <li>Discussion</li> </ul>	<ul> <li>Assignment–II (5)</li> <li>Class Test -II (5)</li> <li>Final Exam (20)</li> </ul>
No. of Lectures: 15				
<ul> <li>Highway Curves</li> <li>Introduction to curves</li> <li>Types of curves:</li> <li>Simple circular curves</li> <li>Compound curves</li> <li>Reverse curves</li> <li>Reverse curves</li> <li>Transition curves</li> <li>Vertical curves</li> <li>Computation and setting out of curves by different methods.</li> <li>Setting out works</li> <li>Setting out the buildings, roads, culverts, bridges.</li> <li>No. of Lectures: 13</li> </ul>	3	30	<ul> <li>Class Lecture</li> <li>Discussion</li> </ul>	<ul> <li>Assignment–III (5)</li> <li>Class Test -III (5)</li> <li>Final Exam (20)</li> </ul>

## ASSESSMENT DETAILS

S.No. Assessment Activities			Marks .		ctivities	CLOs to be assessed	
1. Class test			15	3		1, 2, 3	
2.	Assignment		15	3		1, 2, 3	
3. Mid Semester Exam			30	1		1	
4.	4. Final Exam			1		2, 3	
Prepared by: <b>Prof. Dr. Rizwan Ali</b> Signature: Dated: 06-01-2025		Reviewed by: Curriculum Review Committee Signature: Dated: 10-02-2025		um	Approved by: <b>Chairman, CED</b> Signature: Dated: 10-02-2025		