

**DEPARTMENT/INSTITUTE/DIRECTORATE: CIVIL ENGINEERING**


Name of Teacher: **Prof. Dr. Rizwan A. Memon** Batch: **23CE(A)** Year: **1st** Semester: **2nd**
 Subject: **Engineering Surveying** Course Code: **CE127**
 Semester Starting Date: **18-12-2023** Semester Suspension Date: **18-04-2024**

Course Learning Outcomes (CLOs):

Upon successful completion of the course, the student will be able to:

CLO	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.	C3	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	C2	2

Sr. #	Description of Topic	CLO's	No. of Lec. Req.
1.	Introduction to the surveying, classification of Surveying	1	1
2.	Measurement of Distance, Various methods of measuring distance	1	2
3.	Traverse, types of traverse	1	2
4.	Bearings, Designation of bearings	1	2
5.	Computation of bearings and angles	1	2
6.	Theodolite Traversing, Adjustment of Theodolite	1	2
7.	Traverse Computations	1	3
8.	Computation of areas from irregular boundaries	1	2
9.	Computation of areas by co-ordinates	1	2
10.	Computation of volumes	1	2
11.	Levelling, Principles and Classification of levelling	2	1
12.	Booking and Reduction of levels and related problems	2	3
13.	Profile levelling, Plotting the profile	2	2
14.	Cross-sectioning, Plotting the Cross-sections	2	1
15.	Contouring	2	1
16.	Trigonometrical leveling and Related problems	2	3
17.	Tacheometric Survey, System of Tacheometry	2	1
18.	Use of Tacheometry for traversing	2	1
19.	Problems on Tacheometry	2	2
20.	Introduction to curves, types of curves	3	1
21.	Notations/Elements of simple circular curve	3	1
22.	Setting out of simple circular curve by different methods	3	2
23.	Problems on setting out of simple circular curve	3	2
24.	Compound curve, elements of compound curve	3	2
25.	Reverse curve, elements of reserve curve	3	1
26.	Transition curve	3	1
27.	Vertical curves	3	2
28.	Setting out works	3	1
Total Lectures			48

Signature of Teacher: 

Dated: 15/12/2023

Remarks of DMRC: APPROVED

Signature of Chairman:

A handwritten signature in blue ink, appearing to be 'K. J. ...', with a circled 'K' above the first part of the signature.

Dated: 21/12/2023