



DEPARTMENT/INSTITUTE/DIRECTORATE: CIVIL ENGINEERING

Name of Teacher: **Engr. Maroosha Larik** Batch: **23CE(B+C+D)** 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	1
3.	Chaining on sloping ground and examples	1	1
4.	Traverse, types of traverse	1	1
5.	Bearings, Designation of bearings	1	1
6.	Examples/ Problems on bearings	1	1
7.	Local Attraction and Magnetic Declination	1	1
8.	Computation of angles from the bearings	1	1
9.	Computation of bearings from angles	1	2
10.	Theodolite, its types, uses and adjustment of Theodolite.	1	1
11.	Example problems on Traverse computations	1	2
12.	Computation of areas by trapezoidal and Simpson rule	1	2
13.	Computation of areas by co-ordinates	1	1
14.	Computation of volumes by trapezoidal and End to end area method	1	2
15.	Levelling, Principles and Classification of levelling	2	1
16.	Temporary and Permanent adjustments in levelling	2	1
17.	Examples/ Problems on levelling	2	2
18.	Profile levelling, Plotting the profile	2	2
19.	Cross-sectioning, Plotting the Cross-sections	2	1
20.	Contouring	2	1
21.	Trigonometric leveling and determination of R.L of elevated objects.	2	3
22.	Tachometric survey, system of tachometry and uses.	2	2
23.	Field procedures of tachometry and related problems.	2	2
24.	Introduction to curves, types of curves	3	1
25.	Elements of simple circular curve, Degree of curve, relationship b/w degree & radius of curve	3	2
26.	Setting out of simple circular curve by different methods and related problems.	3	2
27.	Compound curve, elements of compound curve, setting out of compound curve and related problems	3	2
28.	Reverse curve, elements of reserve curve. Problems on reverse curve	3	2
29.	Transition curve, Elements of transition curve, setting out of reverse curve and related problems	3	2
30.	Vertical curves, Types of vertical curves. Problems on vertical curves.	3	2
31.	Setting out Works. Setting out of buildings, roads and culverts	3	2
Total Lectures			48

Signature of Teacher:



Dated: 13/12/2023

Remarks of DMRC: APPROVED

Signature of Chairman:



Dated: 21/12/2023