

PROGRAM REPORT

Title of the Program: Value Added Program on “Total Station”

Number of Day : 5 day **Date of Conduction :** 6/4/2024 to 13/4/2024 **Time:** 9.00 am to 4.00 pm

Venue: Classroom No.-112, 1st Floor, Civil Engineering Department

Number of Participants: 62

Male: 40

Female: 22

Program Objectives:

1. To set up and use Total Station equipment.
2. To study AutoCAD Software and Interpolation of survey data to generate Maps.
3. To develop methods through the knowledge of modern science and the technology and use them in the field.

Name & Details of the Resource Person:

Mr. Vaibhav Shinde, Civil Engineer and Surveyors, Abhishek Consultant, Nashik

Course Overview:

The department of civil engineering Late G. N. Sapkal College of Engineering, Anjaneri, Nashik organized a **Value Added Program on “Total Station”** in collaboration with “Abhijeet Consultant”. Prof. (Dr.) K. A. Salunke, Head of Civil Engineering Department, Nashik, and staff of civil engineering department were present for program. The inauguration of the program was done by Dr. S. B. Bagal Sir, Principal, LGNSCOE. The program was coordinated by Prof. M. Z. Khairnar and it was arranged for students of civil engineering department successfully from 6/4/2024 to 13/4/2024. Total 54 students and 8 staff are participated in this workshop. This program was conducted by Mr. Vaibhav Shinde and its technical team.

The training aims to provide adequate working knowledge on total station and AutoCAD software which are widely in use across civil engineering and other industries. In this training faculties are divided into groups and each group performed the task to use total station in our college campus.

Course Highlights:

1. Introduction on Total Station.
2. Data Management & Boundary survey.
3. Column Marking, Stake Out, Curve Setting and Road Survey Offset method.
4. Topographical Maps, Contour Generation.
5. Cross Section and Longitudinal Sections, Interpolation, Grid Etc.

Course Structure:

1. Lecture Session - 6 hrs
2. Practical Session (session on Total Station operation) - 24 hrs
3. Certificate Distribution Session - 0.5 hr

Topics covered:

i) Lecture Session

1. Surveying
2. Introduction
3. Methodologies adopted and instruments used presently and in earlier days
4. Coordinate System and Projections
5. Traverse Surveying
6. Open Traverse & Closed Traverse
7. Bowditch Adjustment Method
8. Theory of errors in observations
9. Total Station Field Data to Computer
10. Plotting Survey Data in AutoCAD
11. Area Calculations
12. CAD Drawings

ii) Practical Session

1. Control Point establishment & Error adjustment
2. Boundary Survey & Topographic survey
3. Stakeout, Area, and Volume Calculations and Demarcation of Points
4. Generations of Cross & Longitudinal section for Road work.
5. Precise distance measurement techniques, including measurement errors and correction methods

Outcomes of the Workshop:

In this Training Students will be able to

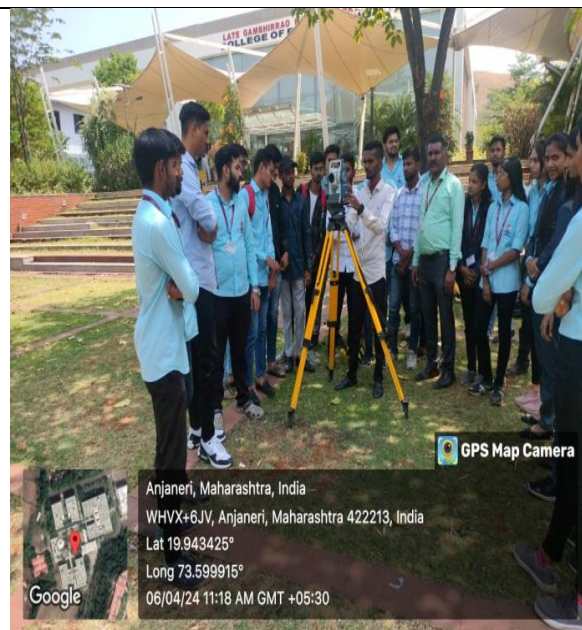
- Set up and use of Total Station equipment for establishing control, detail surveying, setting out and coordinate checks.
- Generate and extract field survey data using specialized AutoCAD software. Interpret the drawings and maps for calculating different physical quantities like length, area, volume, elevations etc.

Photographs:

 <p>Anjaneri, Maharashtra, India WHVX+6JV, Anjaneri, Maharashtra 422213, India Lat 19.943261° Long 73.600026° 06/04/24 10:43 AM GMT +05:30</p>	 <p>Anjaneri, Maharashtra, India WHVX+6JV, Anjaneri, Maharashtra 422213, India Lat 19.943262° Long 73.600028° 06/04/24 10:43 AM GMT +05:30</p>
<p>Dr. S. B. Bagal Sir, Principal, LGNSCOE, felicitating Mr. Vaihav Shinde, Surveyor</p>	<p>Dr. K. A. Salunke Sir, HOD Civil Dept., felicitating Mr. Rohit Khare, Surveyor</p>
 <p>Anjaneri, Maharashtra, India WHVX+6JV, Anjaneri, Maharashtra 422213, India Lat 19.943391° Long 73.598978° 06/04/24 10:43 AM GMT +05:30</p>	 <p>Anjaneri, Maharashtra, India WHVX+6JV, Anjaneri, Maharashtra 422213, India Lat 19.943262° Long 73.600029° 06/04/24 10:44 AM GMT +05:30</p>
<p>Mr. Mukul Nikam, President, CESA, welcomed Mr. Om Sasane, Surveyor.</p>	<p>Ms. Rajeshwari Deshmukh, Vice President, CESA, welcomed Dr. S. B. Bagal Sir.</p>



Mr. Om Lad, Student, BE Civil Engineering, welcomed Dr. K. A. Salunke, sir.



Expert While teaching students how to set up a total station & perform control point establishment & error adjustments



Expert while teaching topographic survey methods and data collection to students

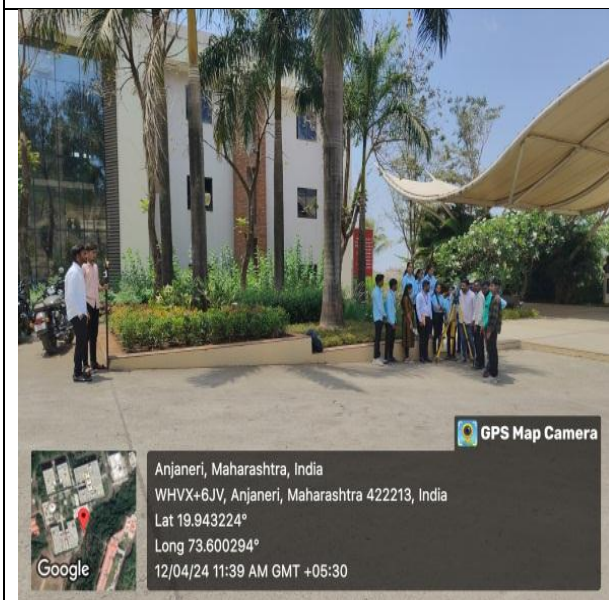


Students while preparing maps using coordinates and interpretation of data



Expert while explaining Various projects on total station, process of data transfer from total station to PC, process of converting data to Autocad file and process of area calculation from Autocad file to the students.

Students while performing task of Stakeout, Area, and Volume Calculations and Demarcation of Points



Students taking reading to prepare Cross & Longitudinal section sheets of Road work



Students while measuring Distance and finding measurement errors



Participants students with Trainer

Conclusion

Students were very satisfied with this workshop and got theoretical and practical exposure of total station. They also learned to operate the total station by individually having hand operations on total station.

This workshop was very fruitful and satisfactory to student's curiosity.