



MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)
UGC Autonomous Institution, Approved by AICTE, New Delhi & Affiliated to JNTUH,
Hyderabad). Accredited 2nd time by NAAC with 'A' Grade,
Maisammaguda (H), Medchal-Malkajgiri District, Secunderabad,
Telangana State – 500100, www.mrec.ac.in

Ref /MREC/CE/VCA/2015/02

Department of Civil Engineering

CIRCULAR

Date: 05/06/2015

All the students are hereby informed that Value Added Courses on “SURVEYING USING TOTAL STATION” on date 10th JUNE to 21st JULY, is being organized by the Civil engineering department . The resource person for the course is Dr.P.Jayabalan.


Students are advised to register their names to the programme coordinator Mr.B.Vamshi Krishna, Assistant Professor, on or before June 9th and utilize this opportunity to hence their skills by attending the programme.

The detailed schedule of the programme will be displayed in the notice board.


HOD/CE

Copy to

- 1) Circulation in student classroom
- 2) All HOD'S
- 3) Notice boards
- 4) PA to Principal for filling


PRINCIPAL
Malla Reddy Engineering College
(Autonomous)
Maisammaguda, Dhulapally,
(Post Via Kompally), Sec'bad-500 100



Advisory Committee:

Chief Patrons: Sri. Ch. Malla Reddy,
Founder Chairman
Malla Reddy Group of Institutions

Patrons: Sri.Ch. Mahender Reddy
Secretary, MRGI
Dr.Ch.Bhadra Reddy
President, MRGI

Co-Patrons: Dr. Sudhakar Reddy
Principal, MREC (A)

Convener: Dr.P.Rajashekar
HOD CIVIL

Coordinator: B.Vamshi Krishna
Assistant Professor, CIVIL

Organizing Committee:

Dr. M. Kameswara Rao, Professor, Civil
Dr.C.Srinivas Gupta, Professor, Civil
Dr.P.Saritha, Associate Professor, Civil
Dr.T.N.Vamsi Krishna, Assoc.Prof., Civil
Dr.G.Suresh, Associate Professor, Civil
E.Rakesh Reddy, Assistant Professor, Civil
A. Naga Saibaba, Assistant Professor, Civil
R. Sumathi, Assistant Professor, Civil
K. Harshada, Assistant Professor, Civil
B. Vamsi Krishna, Assistant Professor, Civil
K. Naga Sujatha, Assistant Professor, Civil
Ch. Sanjeeva Sagar, Assistant Professor, Civil
C.Naga Chaitanya, Assistant Professor, Civil
A. Vinod Reddy, Assistant Professor, Civil

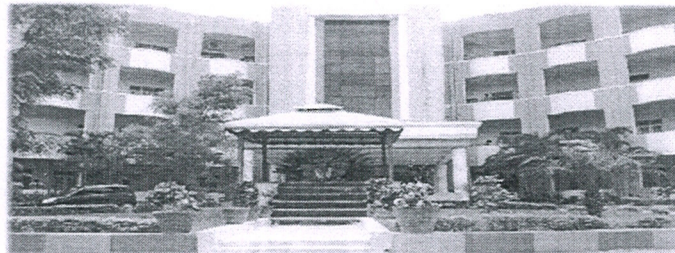


*A Thirty Two Hour Skill development Course
(Value added Course)*

On

*“Surveying Using Total Station”
(10th June to 21st July, 2015)*

In Association with



Organized by

Department of Civil Engineering

MALLA REDDY ENGINEERING COLLEGE

(AUTONOMOUS) MAIN CAMPUS

An UGC Autonomous Institution, Approved by

AICTE & Affiliated to JNTUH-Hyderabad

Reaccredited by NAAC with ‘A’ Grade,

Maisammaguda(H), Gundlapochampally (V),

Medchal (M), Medchal - Malkajgiri District

Telangana - 500100, India.

Registration Form:

*A Thirty Two Hour Skill development Course
(Value added Course)*

On

*“Surveying Using Total Station”
(10th June to 21st July, 2015)*

1.Name.....

2.Roll No.....

3.Department.....

4.Mailing address.....

5.Mobile.....

6.Email.....

Signature of the Applicant

Date:

Place:

This is to certify that

Mr/Ms.....of.....

Is sponsored to attend the Value Added
Course

Signature of the Institution with Seal

Date:

Place:



About the Institution

Malla Reddy Engineering College (Autonomous) is one of the reputed engineering colleges in Hyderabad, Telangana. **MREC (A)** is part of Malla Reddy Group of Institutions (MRGI), founded by Sri. Ch.Malla Reddy. The college is situated in a serene lush green environment in Maisammaguda, Gundlapochampally, Medchal(M), Mechal-Malkajgiri District, Telangana-500100.

The college was established in 2002 and is an autonomous institution approved by UGC and affiliated to JNTUH. The college is re-accredited by NAAC with 'A' Grade (II Cycle) and was conferred autonomous status by JNTUH in 2011 and by UGC in 2014 for a period of 6 years. Our eligible UG and PG programs received NBA accreditation and some of them received reaccreditation too. Along with programs in various streams of Engineering & Technology and Management. It boasts of world-class infrastructure and well-equipped laboratories in all departments and is skillfully and smartly guided by Dr. Sudhakar Reddy, Principal, MREC(A) who have a rich teaching and industrial experience.

About the Department:

The Department of Civil Engineering at MREC has been producing high quality technical manpower needed by industry, R&D organizations, and academic institutions since 2004 with an Intake of 60. The intake has been increased to 120 in the year 2009 and 180 in the year 2014. The Department started offering

M.Tech with two courses at P.G level-geotechnical engineering and transportation engineering are being offered from the academic year 2013-2014 with an intake of 24 each. The department was accredited by NBA in the year 2014.

Overview of the Programme:

The primary responsibility of student is not only to study towards a higher vision but also create a strong sense of bonding between the institution and the students to nurture a stress-free holistic environment. To enhance the quality of life for the students enabling them to introspect and learn techniques that imbibe ethics & morals in their teaching and help pre-prepare students for active and successful participation in a modern society, producing individuals of high character, probity and honor.

Proposed VAC is helping to imbibe the skills and competencies required to achieve goals directed by values, to maintain and enhance faculty effectiveness by inculcating dynamism and leadership qualities and to develop commitment and ethical approach towards work, and instill a sense of responsibility towards the institution. Also to enhance communication and soft skills, by introducing innovative teaching methodologies and developing an inter-personal connection with students. To achieve this goal, Art of Living foundation is conducting this workshop through ATAL.

Objectives of the Programme:

- To imbibe the skills and competencies required to achieve goals directed by values.
- To maintain and enhance student effectiveness by inculcating dynamism and leadership qualities.
- To develop commitment and ethical approach towards work, and instill a sense of responsibility towards the companies.
- To enhance communication and soft skills of the students by introducing innovative methodologies and developing an interpersonal connection.

Topics to be covered:

- ❖ Average of multiple angles measured
- ❖ Average of multiple distances measured.
- ❖ Horizontal distance
- ❖ Distance between any two points

Test and Certificate:

A test will be conducted at the end of the program and the certificates shall be issued to those participants

Outcome of the Program:

- After completing the Course, the student will itself feel the difference in terms of:
- Enhanced Potential, Fair-mindedness
 - Empathetic behavior & Optimistic attitude
 - Dynamism, Commitment and Confidence
 - Ethical Leadership & Risk taking ability.



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SYLLABUS

“SURVEYING USING TOTAL STATION”

Total station is a surveying equipment combination of **Electromagnetic Distance Measuring Instrument** and electronic theodolite. It is also integrated with microprocessor, electronic data collector and storage system. The instrument can be used to measure horizontal and vertical angles as well as sloping distance of object to the instrument.

Capability of a Total Station

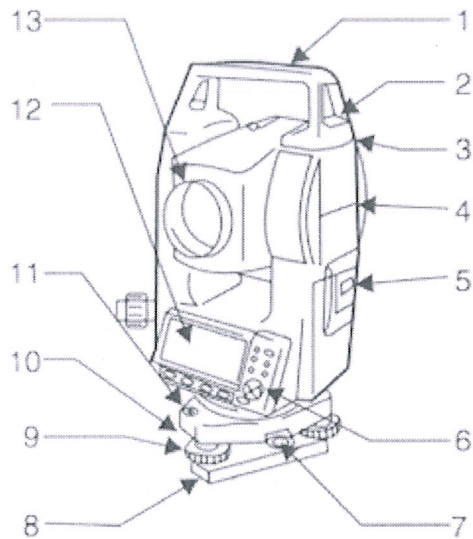
Microprocessor unit in total station processes the data collected to compute:

1. Average of multiple angles measured.
2. Average of multiple distance measured.
3. Horizontal distance.
4. Distance between any two points.
5. Elevation of objects and
6. All the three coordinates of the observed points.

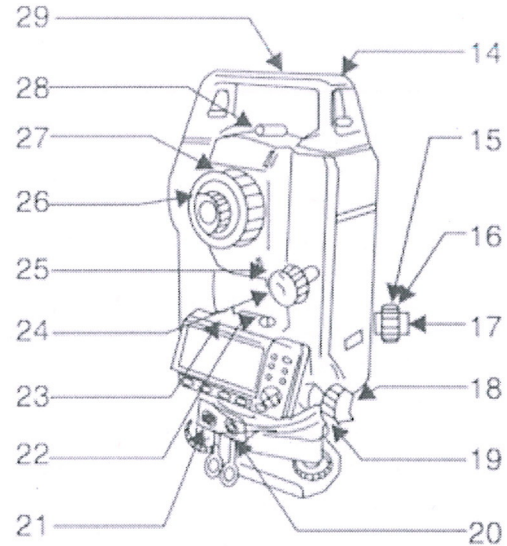
Data collected and processed in a Total Station can be downloaded to computers for further processing.

Total station is a compact instrument and weighs 50 to 55 N. A person can easily carry it to the field. Total stations with different accuracy, in angle measurement and different range of measurements are available in the market. Figure below shows one such instrument manufactured by SOKKIA Co. Ltd. Tokyo, Japan.





1. Handle
2. Handle securing screw
3. Data input/output terminal
(Remove handle to view)
4. Instrument height mark
5. Battery cover
6. Operation panel
7. Tribrach clamp
(SET300S/500S/600S: Shifting clamp)
8. Base plate
9. Levelling foot screw
10. Circular level adjusting screws
11. Circular level
12. Display
13. Objective lens



14. Tubular compass slot
15. Optical plummet focussing ring
16. Optical plummet reticle cover
17. Optical plummet eyepiece
18. Horizontal clamp
19. Horizontal fine motion screw
20. Data input/output connector (Besides
the operation panel on SET600/600S)
21. External power source connector
(Not included on SET600/600S)
22. Plate level
23. Plate level adjusting screw
24. Vertical clamp
25. Vertical fine motion screw
26. Telescope eyepiece
27. Telescope focussing ring
28. Peep sight
29. Instrument center mark

Important Operations of Total Station

Distance Measurement

Electronic distance measuring (EDM) instrument is a major part of total station. Its range varies from 2.8 km to 4.2 km. The accuracy of measurement varies from 5 mm to 10 mm per km measurement. They are used with automatic target recognizer. The distance measured is always sloping distance from instrument to the object.



Angle Measurements

The electronic theodolite part of total station is used for measuring vertical and horizontal angle. For measurement of horizontal angles any convenient direction may be taken as reference direction. For vertical angle measurement vertical upward (zenith) direction is taken as reference direction. The accuracy of angle measurement varies from 2 to 6 seconds.

Data Processing

This instrument is provided with an inbuilt microprocessor. The microprocessor averages multiple observations. With the help of slope distance and vertical and horizontal angles measured, when height of axis of instrument and targets are supplied, the microprocessor computes the horizontal distance and X, Y, Z coordinates.

The processor is capable of applying temperature and pressure corrections to the measurements, if atmospheric temperature and pressures are supplied.

Display

Electronic display unit is capable of displaying various values when respective keys are pressed. The system is capable of displaying horizontal distance, vertical distance, horizontal and vertical angles, difference in elevations of two observed points and all the three coordinates of the observed points.

Electronic Book

Each point data can be stored in an electronic note book (like compact disc). The capacity of electronic note book varies from 2000 points to 4000 points data. Surveyor can unload the data stored in note book to computer and reuse the note book.



A handwritten signature in green ink, appearing to be "Jee".

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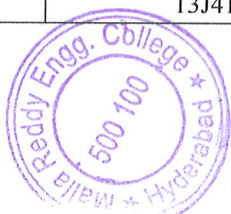


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Maisammaguda (H), Medchal-Malkajgiri District, Telangana State – 500100

REGISTRED LIST OF STUDENTS

Sl.No	Roll No	Name
1	13J41A0101	ARJA RAM CHARAN
2	13J41A0102	A SURESHGOUD
3	13J41A0103	ABDUL AZAD MOHAMMED
4	13J41A0104	ANJALI KANODIA
5	13J41A0105	ANKANNAGARI ANIL GOUD
6	13J41A0107	BHUKYA PRAVEEN KUMAR
7	13J41A0135	DUBBAKA KARTHIK
8	13J41A0136	EDLA PRASHANTH
9	13J41A0137	GANGARAPU TEJESWARI
10	13J41A0138	GARIPALLY SAIRAM
11	13J41A0139	GOPISHETTY ROHITH
12	13J41A0120	GUGLAVATH SHIVA NAIK
13	13J41A0121	GUNTAKANDLA RAKSHITHA
14	13J41A0122	JANGAM YASWANTH KUMAR
15	13J41A0123	KODIMELA ABHIRAM
16	13J41A0124	KUNAPAREDDY VINESH
17	13J41A0125	KAALUVA SRAVYASRI
18	13J41A0126	KAMINENI ANISH KUMAR
19	13J41A0127	KERADI ANUSHA
20	13J41A0128	KOMMIDI RAGHUVVEERA REDDY
21	13J41A0152	RAVIPATI VENKATA VENU GOPAL REDDY
22	13J41A0153	SABBI VAMSI KRISHNA
23	13J41A0154	SANABOYI NARENDRA KUMAR
24	13J41A0155	SUDDALA SRAVAN KUMAR
25	13J41A0156	SURABHI SAITEJA
26	13J41A0157	V PRATHYUSHA
27	13J41A0158	VARALA RAKSHITH VENKATA SUHAS
28	13J41A0163	A PRADEEP KUMAR
29	13J41A0164	AGGU SURESH
30	13J41A0165	AKASH
31	13J41A0166	ALIJALA SWETHA
32	13J41A0167	BADE PRANAV
33	13J41A0168	BACHANABOINA MANJULA
34	13J41A0169	BANOTH MURALI
35	13J41A0170	BONAGIRI ASHRITHA SANTHOSHINI
36	13J41A0171	BONDUGULA ANVESH



Ramiah
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37	13J41A0172	CHALLA NARASIMHA REDDY
38	13J41A0173	CHENNARAM SAIKRISHNA
39	13J41A0174	DWARAMPUDI RAJA SHEKAR REDDY
40	13J41A0175	DASARI SAI SWETHA
41	13J41A01B0	SABBANI VINAY
42	13J41A01B1	SADDI HIMABINDU
43	13J41A01B2	SAI SWAPNIL
44	13J41A01B3	SIRANGI SRIKANTH
45	13J41A01B4	SRIRAMULA SRINATH
46	13J41A01B5	THANNERU AYYAPPA
47	13J41A01B6	THORRIKONDA VENKATESH
48	13J41A01B7	THOTA GOPI CHAND
49	13J41A01B8	PHANENDAR REDDY V
50	13J41A01B9	VEMULA RAVI
51	13J41A01C0	VINODH KUMAR KENCHU
52	13J41A01C1	ARJA SAI RAKESH
53	13J41A01C3	ADEPU RAMYAKRISHNA
54	13J41A01C4	ADLA ANVESH
55	13J41A01C6	ANUJ KUMAR JANGID
56	13J41A01C7	ANUSHA MATYADA
57	13J41A01C9	BOLLA RAJA SEKHAR REDDY
58	13J41A01D0	BANDARI CHANDRAHAS
59	13J41A01D1	BHUKYA PRAVEEN KUMAR
60	13J41A01D2	BODDEPALLY NAGABHUSHANAM



Ravi
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Maisammaguda (H), Medchal-Malkajgiri District, Telangana State – 500100

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR: 2015-16

SUMMARY REPORT

Value Added course name: Surveying using Total Station

Value Added course Instructor: Dr.P.Jayabalan.

A total station (TS) or total station theodolite (TST) is an electronic/optical instrument used for surveying and building construction. It is an electronic transit theodolite integrated with electronic distance measurement (EDM) to measure both vertical and horizontal angles and the slope distance from the instrument to a particular point, and an on-board computer to collect data and perform triangulation calculations.

Robotic or motorized total stations allow the operator to control the instrument from a distance via remote control. This eliminates the need for an assistant staff member as the operator holds the retro-reflector and controls the total station from the observed point. These motorized total stations can also be used in automated setups known as Automated Motorized Total Station (AMTS).



B.V.

Co-Ordinator



Jay

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Rahul
HOD

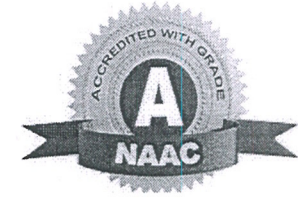


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CERTIFICATE OF COMPLETION

This is to certify that Mr./Ms. EDLA PRASHANTH bearing
Roll No. 13J41A0136 has successfully completed Certificate / Value Added
Course / Workshop in Surveying Using Total Station conducted
by the Department of Civil Engineering from 10/06/2015 to 21/07/2015

COORDINATOR

HOD



Rawat
Principal
Malla Reddy Engineering College
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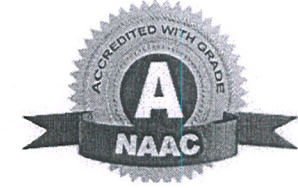


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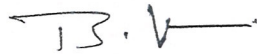
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This is to certify that Mr./Ms. G.TEJASWARI bearing
Roll No. 13J41A0137 has successfully completed Certificate / Value Added
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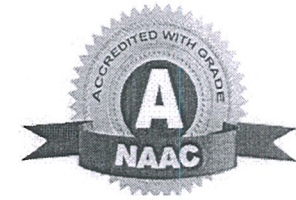


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This is to certify that Mr./Ms. S.VAMSHI KRISHNA bearing
Roll No. 13J41A0153 has successfully completed Certificate / Value Added
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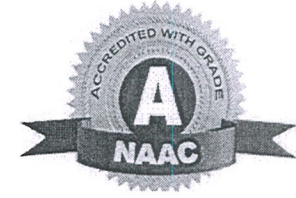


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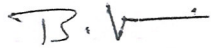
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CERTIFICATE OF COMPLETION

This is to certify that Mr./Ms. V.PRATYUSHA bearing
Roll No. 13J41A0157 has successfully completed Certificate / Value Added
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CERTIFICATE OF COMPLETION

This is to certify that Mr./Ms. A.SURESH bearing
Roll No. 13J41A0164 has successfully completed Certificate / Value Added
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