1. Dissemination of POs-PSOs-COs on Website:

CLICK HERE

https://mite.ac.in/electronics-comm-engineering/

2. Academic Record

ACADEMIC RECORD

Name of the Faculty : SUSHMITHA.G.S

Department : Civil Engineering

Course Name : Fluid Mechanics

Course Code : 18CV33

Semester : III

Section : 3CV

ODD / EVEN : ODD

MITE

Invent Solutions

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

An ISO 9001:2015 Certified Institution, Accredited by NAAC

Badaga Mijar, Moodabidri -574225

COURSE DETAILS

Pre requisites: Basic knowledge of mechanics, physics and Mathematics

Relevance of the Course: Students will

- Get a insight knowledge of Fluid Mechanics & Hydraulic Machines
- Understand concept of Hydraulic structures & Irrigation design drawing

Application Areas: Water Supply system. Drainage system. Irrigation canals and dams

Articulation Matrix (Mapping of COs to POs & PSOs)

Mapping of COs to POs & PSOs																
	POs												PSOs			
Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
CO1: Understand fundamental properties of fluid & fluid continuum	3	3											1			
CO2: Analyse & solve problems on hydrostatics, including practical applications.	3	3	1	2									1			
CO3: Apply principles of mathematics to represent kinematic concepts related to Fluid flow. Enumerate fundamental laws of fluid mechanics	3	3	1	1									1			
CO4: Evaluate the discharge through the weirs, notches orifices and mouthpiece.	3	3		2									2			
CO5: Analyze the major and minore losses in Pipes.	2	3	2	2									1			

3. Course File

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING
(ISO 9001:2015 Certified Institution)
(A unit of Rajalaxmi Education Trust®, Mangalore-576001)
Affiliated to VTU, Belagavi, Approved by AICTE, New Delhi

Department of Civil Engineering

COURSE FILE

Course Name	**APPLIED GEOTECHNICAL ENGINEERING**
Course Code/Course Index	**15CV53 / C-303**
Academic Year	**CAY: 2018-19**
Course Co-ordinator	**Ashwini N Shetty**

CONTENTS	
1. Course Details	1.1 Preliminary Information
	1.2 Course Contents
	1.3 Text Books
	1.4 Reference Books
2. Course Plan	2.1 Course outcomes (COs)
	2.2 Validation of Course Outcomes
	2.3 Mapping of COs with POs
	2.4 Mapping of COs with PSOs
	2.5 Methodology for CO Assessment
	2.5.1 Direct method of assessment
	2.5.2 Indirect method of assessment
3. Course Execution (Do Process)	Course Execution (Do Process)
4. Attainment Calculation (Checking Process)	4.1 Assessment Tools defined (Used)
	4.2 Assessment Data
	4.3 Attainment in SEE
	4.4 CO Attainment
	4.5 Gap Identification
	4.6 CO Attainment Level Report
	4.7 PO Attainment-Direct
	4.8 PO Attainment-Indirect
	4.8 Overall PO Attainment
5. Action	5.1 Observations from Course Instructors (Direct)

1. COURSE DETAILS

1.1 Preliminary Information

Course Name	**Applied Geotechnical Engineering**
Course Code/Course Index	15CV53 / C-303
Academic Year	2018-19
Semester	V
Course Co-ordinator	Ashwini N Shetty

1.1.1 Course Objectives

1. Appreciate basic concepts of soil mechanics as an integral part in the knowledge of Civil Engineering. Also to become familiar with foundation engineering terminology and understand how the principles of Geotechnology are applied in the design of foundations
2. Learn introductory concepts of Geotechnical investigations required for civil engineering projects emphasizing in situ investigations
3. Conceptually learn various theories related to bearing capacity of soil and their application in the design of shallow foundations and estimation of load carrying capacity of pile foundation
4. Estimate internal stresses in the soil mass and application of this knowledge in proportioning of shallow and deep foundation fulfilling settlement criteria
5. Study about assessing stability of slopes and earth pressure on rigid retaining structures

Note: These objectives facilitate a method to achieve Program Outcomes [1, 2, 3 and 12]

1.1.2 Prerequisites Basic knowledge of Engineering mechanics, Engineering Physics, Mathematics, Application skills, Basic knowledge about soil.

1.1.3 Relevance of the course This subject is relevant Exploration of soil, Bore logging, stress distribution in soils, Earth pressure, slope stability.

1.1.4 Application areas

- Design and capacity of foundations
- Bore logging
- Determination of permeability characteristics
- Dams
- Earth retaining walls,

1.1.5 Internal assessment (IA) marks

1. There shall be a maximum of 20 for CIE marks.
2. The internal assessment marks shall be based on two tests generally conducted at the end of 6^{th}, 10^{th} and 14^{th} weeks of the semester.
3. Average of better marks secured from any two internal assessment tests plus the assignment mark (Max. 5 marks) shall be the internal assessment marks.

1.1.6 Eligibility for passing

1. For a pass in the subject, the candidate shall secure minimum of 35% of the maximum marks prescribed in the university examination and 40% of marks in the aggregate inclusive of the internal assessment mark.

2. The candidates who do not satisfy the above condition shall be deemed to have failed in the subject and may reappear for the university examination in the subsequent examinations. However, the internal assessment marks awarded to the candidates at first attempt in the subject will be carried forward.

1.1.7 The Program Educational Objectives (PEOs)

PEO1	Able to apply the knowledge of Engineering to solve construction related problems and involve in research activities.
PEO2	Able to Plan, design and execute the societal applications of Civil engineering.
PEO3	To Involve effectively as a member or as a leader towards achieving goals in Civil engineering projects.
PEO4	To Engage in professional consultancy and continuous learning to accomplish professional growth.

1.1.8 Program Outcomes (PO's)

The graduates of the Civil Engineering department will have the ability

1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex

engineering activities with an understanding of the limitations.

6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multi disciplinary environments.
12. **Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

1.1.9 Program Specific Outcomes (PSO's)

By the completion of Civil engineering program, graduates are able to

PSO1	Utilize the Civil engineering knowledge and problem analysis skills to conceptualize, develop, and execute the civil engineering projects
PSO2	Deploying quality Civil Engineers to work towards societal needs to achieve environmental and sustainable development

1.2 Course Contents

APPLIED GEOTECHNICAL ENGINEERING			
Subject Code	**15CV53**	**I.A. Marks**	**20**

Hours / Week	04	Exam Hours	03
Total Hours	50	Exam Marks	80

CREDITS 04

Module No.	Contents	Teaching Hour
1	**Soil Exploration:** Introduction, Objectives and Importance, Stages and Methods of exploration- Test pits, Borings, Geophysical methods, stabilization of boreholes, Sampling techniques, Undisturbed, disturbed and representative samples, Geophysical exploration and Bore hole log. Drainage and Dewatering methods, estimation of depth of GWT (Hvorslev's method).	10
2	**Stress in Soils:** Introduction, Boussinesq's and Westergaard's theory concentrated load, circular and rectangular load, equivalent point load method, pressure distribution diagrams and contact pressure, Newmark's chart Foundation Settlement - Approximate method for stress distribution on a horizontal plane, Types of settlements and importance, Computation of immediate and consolidation settlement	10
3	**Lateral Earth Pressure:** Active, Passive and earth pressure at rest, Rankine's theory for cohesionless and cohesive soils, Coulomb's theory, Rebhann's and Culmann's graphical construction. **Stability of Slopes:** Assumptions, infinite and finite slopes, factor of safety, use of Taylor's stability charts, Swedish slip circle method for C and C-ϕ(Method of slices) soils, Fellineous method for critical slip circle	10
4	**Bearing Capacity of Shallow Foundation:** Types of foundations, determination of bearing capacity by Terzaghi's and BIS method (IS: 6403), Effect of water table and eccentricity, field methods - plate load test and SPT Proportioning of shallow foundations-isolated and combined footings (only two columns).	10
5	**Pile Foundations:** Types and classification of piles, single loaded pile capacity in cohesionless and cohesive soils by static formula, efficiency of file group, group capacity of piles in cohesionless and cohesive soils, negative skin friction, pile load tests, Settlement of piles, under reamed piles (only introductory concepts – no derivation).	10

1.3 Text Books:

1. Gopal Ranjan and Rao A.S.R., Basic and Applied Soil Mechanics- (2000), New Age International (P) Ltd., New Delhi.

2. Punmia B C, Soil Mechanics and Foundation Engineering- (2012) ,Laxmi Pulications.
3. Murthy V.N.S., Principles of Soil Mechanics and Foundation Engineering- (1996), 4th Edition, UBS Publishers and Distributors, New Delhi.
4. Braja, M. Das, Geotechnical Engineering; (2002), Fifth Edition, Thomson Business
5. Information India (P) Ltd., India

1.4 Reference Books:

1. T.W. Lambe and R.V. Whitman, Soil Mechanics, John Wiley & Sons, 1969.
2. Donold P Coduto, Geotechnical Engineering- Phi Learning Private Limited, New Delhi
3. Shashi K. Gulathi &Manoj Datta, Geotechnical Engineering-. (2009), "Tata Mc Graw Hill.
4. Debashis Moitra, "Geotechnical Engineering" ,Universities Press.,
5. Malcolm D Bolton, " A Guide to soil mechanics", Universities Press.,
6. Bowles J E , Foundation analysis and design, McGraw- Hill Publications

2. COURSE PLAN

Class: 5th Semester
Course Name: Applied Geotechnical Engineering
Course Code/Course Index: 15CV53/C-303
Academic Year: 2018-19

2.1 Course outcomes (COs)

C303.1	Plan and execute geotechnical site investigation program for different civil engineering projects.
C303.2	Analyze the stress distribution and compute settlement in various types of soils.
C303.3	Estimate factor of safety against failure of slopes and to compute lateral pressure distribution behind earth retaining structures.
C303.4	Determine bearing capacity of soil and to achieve proficiency in proportioning various types of footing.
C303.5	Estimating load carrying capacity of single and group of piles

2.2 Validation of Course Outcomes

COs	Cognitive Level	Class Sessions	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2
C303.1	L3	10	4	2	1							1			2	
C303.2	L4	10	1	6	1										2	

C303.3	L5	10	1	4	4										1	
C303.4	L5	10	1	2	6										1	
C303.5	L5	10	2	2	5										1	

Note:
If ≥30% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3

If 15 to 30% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2

If ≤15% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1

2.3 Mapping of COs with POs

CO-PO matrices:
Correlation Levels: 1: Low 2: Medium 3: High

Course Outcomes	Engineering Knowledge	Problem Analysis	Design Development	Investigations	Modern Tools Usage	Engineer and Society	Environment and Sustainability	Ethics	Individual and Team work	Communication	Project Management	Life Long Learning
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**P012**
C303.1	3	2	1							1		
C303.2	1	3	1									
C303.3	1	3	3									
C303.4	1	2	3									
C303.5	2	2	3									
Target (AVG)	**1.6**	**2.4**	**2.2**							**1**		

2.4 Mapping of COs with PSOs

Course Outcomes	Utilize the Civil engineering knowledge and problem analysis skills to conceptualize, develop, and execute the civil engineering projects	Deploying quality Civil Engineers to work towards societal needs to achieve environmental and sustainable development
	PSO1	**PSO2**
C303.1	2	

C303.2	2	
C303.3	1	
C303.4	1	
C303.5	1	
Target (AVG)	**1.4**	

2.5 Methodology for CO Assessment

The course outcome assessments are carried out by two methods:

A. Direct method

B. Indirect method

2.5.1 Direct method of assessment

Sl No	Assessment method	Weightage	Justification
1	Formative assessment	0.4	Continuous Internal Evaluation (CIE)
2	Summative assessment	0.6	Semester End Examination (SEE) conducted by affiliated University

- **Formative Assessment**

The Formative assessment tools to be used are as follows

SI. No.	Assessment Tools	Frequency	Weightage
1	Internal assessment (IA) Test	3	0.75
2	Assignment	5	0.25

- **Summative Assessment**

Measuring Course Outcomes attained through performance in University Semester End Examination (SEE)

Sl No	Tool	Frequency	Details of Measurement
1	SEE	At the end of each semester	Performance in SEE measured using attainment level

2.5.2 Indirect method of assessment

Indirect attainment of COs is determined from Course Exit Survey of the respective courses. The course exit survey from more than 60% of students is taken for the individual COs at the end of the respective semester. This survey is used to assess the effectiveness of our engineering program.

- **Course Exit Survey (CES) Questionnaire**

Q.NO	Questions	COs	Good	Fair	Average	Poor
			3	2	1	0
1	Give your confidence level in Planning and executing geotechnical site investigation program for different civil engineering projects.	C303.1				
2	How good are you in analyzing the stress distribution and compute settlement in various types of soils.	C303.2				
3	Rate yourself in estimating factor of safety against failure of slopes and to compute lateral pressure distribution behind earth retaining structures.	C303.3				
4	Give your confidence level in the concepts of determine bearing capacity of soil and to achieve proficiency in proportioning various types of footing.	C303.4				
5	What is your understanding level in concepts of solving practical problems related to Estimating load carrying capacity of single and group of piles.	C303.5				

3. COURSE EXECUTION (DO PROCESS)

1. Teaching Learning Materials [PPT- Hard Copy of Notes]
2. Academic record
3. Attendance Register
4. Question Papers of IA tests, SEE Question Paper etc.
5. Scheme and solution of IA etc.

4. ATTAINMENT CALCULATION (CHECKING PROCESS)

4.1 Assessment Tools defined (Used)

- Continuous Internal Evaluation (CIE)
- Semester End Examination (SEE)

4.2 Assessment Data

Academic Year:	2018-2019
Total number of students in the course:	106
Subject Title and Code	APPLIEDGEOTECHNICAL ENGINEERING - 15CV53
Semester	V Semester

Sl No.	USN	Name of the Students	T1	T2	T3	Avrg. (15)	Assain. (5)	CIA (Max Marks 20)	SEE (Max Marks 80)
1	4MT16CV001	Abharan H K	12	2	8	10	5	15	30
2	4MT16CV002	Abhishek	12	8	8	10	5	15	30
3	4MT16CV006	Akash T	14	15	11	15	5	20	58
4	4MT16CV008	Allan Robin Pereira	10	7	Ab	9	5	14	40
5	4MT16CV010	Ankita Jaiwant Naik	13	11	Ab	12	5	17	46
6	4MT16CV017	Balaji A S	15	10	Ab	13	5	18	44
7	4MT16CV020	Bharath K C	13	10	1	12	5	17	54
8	4MT16CV021	Calvin Monteiro	12	8	8	10	5	15	31
9	4MT16CV023	Chethan	9	8	AB	9	5	14	32
10	4MT16CV024	Chethana T N	14	9	AB	12	5	17	55
11	4MT16CV028	Deviprasanna	14	10	8	12	5	17	45
12	4MT16CV031	Dileep Kumar G	8	AB	6	7	5	12	30
13	4MT16CV033	Farha E K	12	11	AB	12	5	17	44
14	4MT16CV034	Fathimathu Shahla K T	13	7	7	10	5	15	31
15	4MT16CV037	Hiba Mohammad Usman Pakerabba	9	7	7	8	5	13	35
16	4MT16CV053	Muhammed Azeez K	9	5	8	9	5	14	42
17	4MT16CV056	Naveena D S	AB	5	9	7	5	12	28
18	4MT16CV057	Neha A Shetty	10	3	8	9	5	14	38
19	4MT16CV061	Nivedan K B	12	AB	5	8	5	13	40
20	4MT16CV062	Niveditha	10	4	6	8	5	13	43
21	4MT16CV063	P H Hisham	AB	4	12	8	5	13	28
22	4MT16CV065	Pavan H N	12	7	10	11	5	16	40

23	4MT16CV067	Prakrithi B N	8	7	AB	8	5	13	49
24	4MT16CV068	Pundaleeka Vittala Chavan	9	3	9	9	5	14	40
25	4MT16CV075	Sharan Acharya	12	8	AB	10	5	15	37
26	4MT16CV077	Shiivakumar Ganeshappa Doddagoudar	9	5	10	10	5	15	48
27	4MT16CV081	Shuhaib T K	12	8	AB	10	5	15	50
28	4MT16CV088	Vedanth Dr	14	10	6	12	5	17	51
29	4MT16CV089	Vinooth Christon Pinto	13	11	8	12	5	17	34
30	4MT16CV090	Vishwas S	10	4	7	9	5	14	28
31	4MT16CV092	Yashoda C Lamani	13	AB	13	13	5	18	48
32	4MT17CV400	Abhishek Angadi	8	3	5	7	5	12	38
33	4MT17CV401	Abhisheks J	11	2	10	11	5	16	32
34	4MT17CV402	Bhoomika S	AB	7	8	8	5	13	28
35	4MT17CV403	Chandanrs	10	11	AB	11	5	16	32
36	4MT17CV404	Deepak	10	11	8	11	5	16	28
37	4MT17CV405	Jahnavi	11	3	12	12	5	17	28
38	4MT17CV406	Jeevan V	10	4	13	12	5	17	28
39	4MT17CV407	Jyothi	8	8	8	8	5	13	40
40	4MT17CV408	Lingarajs	8	8	1	8	5	13	28
41	4MT17CV409	Mandar R Shetty	3	8	7	8	5	13	20
42	4MT17CV410	Manikanta K B	13	7	8	11	5	16	33
43	4MT17CV411	Mayur Naik	10	9	AB	10	5	15	34
44	4MT17CV412	Mythrilp	11	8	AB	10	5	15	33
45	4MT17CV414	Narayana K Mirajkar	AB	5	8	7	5	12	28
46	4MT17CV415	Nithin	13	12	6	13	5	18	50
47	4MT17CV416	Prabhakarb Chakrasali	12	5	7	10	5	15	44
48	4MT17CV417	Pravinkumar Magadi	6	AB	7	7	5	12	28
49	4MT17CV419	Rakshith	8	7	4	8	5	13	28
50	4MT17CV420	Sharath U R	7	8	1	8	5	13	39
51	4MT17CV421	Sunil Rathod	6	2	9	8	5	13	36
52	4MT17CV422	Surabhi K	13	7	AB	10	5	15	32
53	4MT17CV423	Sushanth Devadiga	9	7	AB	8	5	13	35

54	4MT17CV424	Thejakumar	10	3	7	9	5	14	33
55	4MT17CV425	Vinay L J	13	3	5	9	5	14	21
56	4MT17CV426	Vishalranjan Rai G	12	5	AB	9	5	14	33
57	4MT17CV427	Vishukumar	12	6	9	11	5	16	43
58	4MT17CV428	Yogesh Mahesh Nagmule	11	3	9	10	5	15	49
59	4MT15CV058	Mohammed Shareef	15	10	11	13	5	18	28
60	4MT15CV078	Sanath Kumark B	11	5	6	9	5	14	28
61	4MT15CV087	Shrirag S K	15	11	11	13	5	18	20
62	4MT15CV101	Ullas K	14	3	1	9	5	14	56
63	4MT15CV113	Shreesha	13	6	AB	10	4	14	29
64	4MT15CV038	Jaber K P	11	13	9	12	5	17	10
65	4MT16CV005	Akash M A	12	9	AB	11	5	16	30
66	4MT16CV011	Anupama J	10	5	9	10	5	15	50
67	4MT16CV012	Arbaz Mohammed	11	9	AB	10	5	15	30
68	4MT16CV014	Arun Kumar R	15	AB	13	14	5	19	28
69	4MT16CV015	Ashika T	10	7	AB	9	5	14	33
70	4MT16CV018	Balaji N K	12	6	8	10	5	15	48
71	4MT16CV019	Basavaraj H Herakal	9	4	7	8	5	13	34
72	4MT16CV022	Charankumar I L	9	6	6	8	5	13	57
73	4MT16CV026	Deepak S	13	12	AB	13	5	18	62
74	4MT16CV027	Devaraj T S	14	AB	9	12	5	17	37
75	4MT16CV032	Fahim Ibrahim	AB	15	14	15	5	20	35
76	4MT16CV035	Fuhaim Farook	15	8	11	13	5	18	28
77	4MT16CV036	Hansie Castelino	11	2	7	9	5	14	29
78	4MT16CV041	Jyothipriya G S	13	3	5	9	5	14	37
79	4MT16CV042	Kalappa U P	10	8	AB	9	5	14	53
80	4MT16CV045	Kiran B Magadum	4	0	9	7	5	12	32
81	4MT16CV046	Laxman S Avanta Karigar	10	AB	8	9	5	14	58
82	4MT16CV047	M Lokesha	11	8	10	11	5	16	28
83	4MT16CV048	Manohar B V	14	AB	12	13	5	18	13
84	4MT16CV049	Mohammed Aslah A C	14	6	8	11	5	16	31

85	4MT16CV050	Mohammed Raqeeb Khan	14	11	13	14	5	19	30
86	4MT16CV051	Mohiyuddin Mohisin	13	13	14	14	5	19	30
87	4MT16CV052	Monisha B	13	9	12	13	5	18	28
88	4MT16CV054	Murali Krishna Reddy	11	9	5	10	5	15	35
89	4MT16CV055	Naveen H N	11	9	8	10	5	15	36
90	4MT16CV058	Netravathi R	7	3	7	7	5	12	42
91	4MT16CV059	Nischitha K B	13	13	4	13	5	18	61
92	4MT16CV060	Nithu N V	8	4	6	7	5	12	36
93	4MT16CV066	Pragathi A P	13	0	11	12	5	17	28
94	4MT16CV069	Radhika N P	9	3	10	10	5	15	43
95	4MT16CV071	Ravi	11	AB	8	10	4	14	44
96	4MT16CV072	Sagar	9	6	8	9	4	13	61
97	4MT16CV074	Sayooj K	12	13	AB	13	5	18	32
98	4MT16CV076	Sharath B S	11	13	9	10	5	15	46
99	4MT16CV078	Shrajan Kumar Shetty K	4	AB	9	7	5	12	37
100	4MT16CV079	Shridhar	8	AB	5	7	5	12	37
101	4MT16CV080	Shrujana	12	AB	10	11	5	16	28
102	4MT16CV082	Sreelakshmi S P	9	5	7	8	5	13	44
103	4MT16CV084	Thanzeer Ahmed	6	5	9	8	5	13	55
104	4MT16CV085	Thomas Shaji0	3	7	7	7	5	12	28
105	4MT16CV086	Umar Mohammed Nousheen	10	3	9	10	5	15	28
106	4MT16CV091	Vivekananda R	9	AB	9	9	5	14	29

Percentage of Students scored above Class average in SEE = 36.91

4.3 Attainment in SEE

Subject Name	No of students appeared for SEE	Class Average Marks in SEE	Number of Students scoring above class average in SEE	Percentage of students scored above class average in SEE	Attainment level (AL)
Applied Geotechnical Engineering (15CV53)	**106**	**36.91**	**46**	**43.40**	**1**

If percentage of students scored above class Average in SEE>=60% Attainment level is 3
Else if <60% but >=50% Attainment level is 2
Else if <50% but >=40% Attainment level is 1
Else Attainment level is 0

4.4 CO Attainment

Total number of students in the course: 106

COs	% of students scored >=60% IA	Attainment level through IA	Percentage of students scored above Class Average	Attainment level Through SEE	Direct CO = 0.6*SEE+0.4* CIE	Direct CO Attainment level (DAL)
C303.1	86.64	3	43.40	1	60.69	3
C303.2	70.00	3	43.40	1	54.04	2
C303.3	57.72	2	43.40	1	49.12	1
C303.4	86.29	3	43.40	1	60.55	3
C303.5	76.45	3	43.40	1	56.62	2

4.5 Gap Identification

COs	Direct CO attainment = 0.8*SEE +0.2*CIA	Target %	Observation
C303.1	60.69	60	0.69
C303.2	54.04	60	-5.96
C303.3	49.12	60	-10.88
C303.4	60.55	60	0.55
C303.5	56.62	60	-3.38

4.5 CO Attainment Level Report

Target Level (60% assumed)	CO Attainment Level	Observation in %
3	2.2	26.67% difference

4.7 PO-PSO Attainment-Direct

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12	PSO1	PSO2
Target	1.6	2.4	2.2							1			1.4	
PO/PSO Attainment	**0.92**	**1.33**	**1.23**							**0.61**			**0.79**	
Normalized Value	0.57	0.55	0.56							0.61			0.57	

4.8 PO-PSO Attainment-Indirect

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12	PSO1	PSO2
Target	1.6	2.4	2.2							1			1.4	
PO/PSO Attainment	**1.43**	**2.11**	**1.93**							**0.93**			**1.24**	
Normalized Value	0.89	0.88	0.88							0.93			0.88	

4.9 Overall PO-PSO Attainment

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12	PSO1	PSO2
Target	1.6	2.4	2.2							1			1.4	
PO/PSO Attainment	**1.03**	**1.50**	**1.39**							**0.67**			**0.89**	
Normalized Value	0.65	0.62	0.63							0.67			0.63	

5. ACTION

5.1 Observations by the Course Instructors (Direct)

	Course Outcomes	Target	Attainment	Action Proposed to bridge the Gap
1	CO1	3	3	Higher target is to be set
2	CO2	3	2	Extra classes must be taken and extra problems to be solved
3	CO3	3	2	Extra classes must be taken and extra problems to be solved
4	CO4	3	2	Extra classes must be taken and extra problems to be solved
5	CO5	3	3	Higher target is to be set

4. Lab Record

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

An ISO 9001:2015 Certified Institution, Accredited by NAAC
A Unit of Rajalaxmi Education Trust ®, Mangalore
(Affiliated to the Visvesvaraya Technological University (VTU), Belagavi, Karnataka)
(Approved by the All India Council for Technical Education (AICTE), New Delhi)
Badaga Mijar, Moodabidri, Karnataka – 574225 Ph. 08258-262695 to 99

Web: http://www.mite.ac.in

MITEedu

MITE

Invent Solutions

LAB RECORD

Name: CHAITRA. TARANATH

USN/Roll No.: 4MT16CV014 Year: 2019 - 20 Semester: 5th

Section: 5CV1 Batch No.: B1

Course Name: BIOTECHNICAL & MINERALS LAB

Course Code: 18CVL57

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

An ISO 9001:2015 Certified Institution, Accredited by NAAC

Badaga Mijar, Moodabidri – 574225, Karnataka

MITE

Invent Solutions

DEPARTMENT OF CIVIL ENGINEERING

LAB RECORD

Name: CHAITRA TARANATH

USN/Roll No.: 4MT17CV024 Year: 2019 - 2020 Semester: V th

Section: 5CV1 Batch No.: B1

Course Name: GEOTECHNICAL ENGINEERING LAB.

Course Code: 17CVL57

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

An ISO 9001:2015 Certified Institution, Accredited by NAAC

Badaga Mijar, Moodabidri – 574225, Karnataka

DEPARTMENT OF ...CIVIL ENGINEERING.....

CERTIFICATE

This is to certify that Miss / ~~Mr.~~ ...CHAITRA. TARANATH.....

..... *has satisfactorily*

completed all the Experiments in ..GEOTECHNICAL ENGINEERING LAB.....

laboratory as prescribed by the VTU for .....V^th..... *Semester B.E.* .....CIVIL.....

Engineering branch for the academic year 20....19.... *20*...20....

USN of Candidate :

4	M	T	1	7	C	V	0	2	4

Lab. Assessment Marks : (in figures)

39/40

Signature of the Faculty

Date : 07/11/19

Signature of HoD with seal

Head of the Department of
Civil Engineering
Mangalore Institute of Technology & Engg.
P.O Mijar, Moodabidri - 574225
Mangalore, Karnataka

CONTENTS

C R V

Max. CRE Marks: Max. IA Marks: 10 15 05 (30)

Sl. No.	Date	Name of the Experiment	Page No.	CRE Marks
1a.	8/8/19	visual soil classification	12-13	10+15+4=29
1b.	8/8/19	water content Determination by oven drying method	14-15	10+15+4=29
1c.	8/8/19	specific gravity test	16-19	10+15+5=30
2.	22/8/19	liquid limit test	20-23	10+15+4=29
3.	22/8/19	plastic limit test	24-27	10+14+4=28
4.	29/8/19	In-Site density by Core Cutter method	28-33	10+14+4=28
5.	12/9/19	grain Size analysis of soil	34-41	10+15+5=30
6.	12/9/19	In-Site Density by sand replacement method.	42-47	10+15+5=30
7.	26/9/19	Standard and modified proctor compaction test	48-53	10+15+5=30
8.	3/10/19	unconfined compression test	54-57	10+15+5=30
9.	10/10/19	Direct Shear test	58-63	10+15+5=30
10.	10/10/19	Triaxial compression test	64-69	10+15+05=30
				295

Average of Continuous Record Evaluation Marks: (30) 20

Test Marks (10) : 09

Total Marks (40) : 39

Sagar.S

Name & Signature of the Faculty

Date ...29/7/19

Expt. No. ..... Page No. 1

INSTITUTION VISION AND MISSION

INSTITUTE VISION :

To attain Perfection in Providing globally competative quality education to all our students & also benefit the global community by using our Strength in Research & Development.

INSTITUTE MISSION :

Our mission is to establish world class educational institutions in thier respective domains, which shall be centr-es of Excellence in their Stated & Implied Sense. To achieve this objectives we dedicate ourselves to meet the challenges of becoming Visionary & Realistic, Sensitive & Demanding. Innovative & Practical & Theoritical & Pragmatic ALL AT THE SAME TIME.

DEPARTMENT VISION AND MISSION

DEPARTMENT VISION :

To produce competent & professional civil engineers with academic excellence & ethics to meet Societal Challenge at global level.

DEPARTMENT MISSION :

- To provide quality technical education through student centric teaching - learning Process.
- To enable Student with practical knowledge inno-vation & research to find Solutions for societal Problems.

- To impart professional skills & ethics to involve in consultancy & civil engineering projects.

PROGRAM SPECFIC OUTCOMES (PSO's):

By the completion of civil engineering program graduates are able to:

1. utilize the civil engineering knowledge & problem analysis skill to conceptualize, develop & execute the civil engineering Projects.
2. Deploying quality civil engineering to work towards societal needs to achieve environment & sustainable development.

PROGRAM EDUCATIONAL OBJECTIVES (PEO'S):

PEO.1: Able to apply the knowledge of engineering to solve construction related problems & involve in research activities

PEO.2: Able to plan, design & execute the societal application of civil engineering.

PEO.3: To involve effectively as a member & a leader towards achieving goals in civil engineering projects.

PEO.4: To engage in professional consultancy & continuous learning to accomplish professional growth.

PROGRAM OUTCOMES (PO'S):

1. Engineering knowledge:

Apply the knowledge of mathematics, science, engineering fundamentals & an engineering specialization to the solution of complex engineering problems.

2. Problem analysis:

Identify, formulate, research literature & analyze complex engineering problems, reaching substained conclusions using first principles of mathematics, natural sciences & engineering sciences.

3. Design / Development of solution:

Design the solutions for complex engineering problems & design system components or processes that meet the specified needs with appropriate consideration for the public health & safety & the cultural, societal & environmental considerations.

4. Conduct investigations of complex problems:

use research based knowledge & research methods including design of experiments, analysis & interpretation of data, & synthesis of the information to provide valid conclusions.

5. Modern tool usage:

create, select & apply appropriate technique, resources & modern engineering & IT tools including Prediction & modeling to complex engineering activities with an understanding of the limitations.

6. The engineer society:

Apply reasoning informed by the contextual knowledge to assess societal health, safety legal & cultural issues the consequent responsibilities relevant.

7. Environment & Society:

understand the improve of the professional engineering solutions in societal & environment contexts & demonstrate the knowledge of and need for sustainable development.

8. Ethics:

Apply the ethical principles & commit to professional ethics & responsibilities & norms of the engineering practice

9. Individual & team work:

Function effectively as an individual as a member & leader in diverse teams, & in multidisciplinary settings.

10. Communication:

Communication effectively on complex engineering activities with the engineering community with society at large, such as being able to comprehend & write effective reports & design documentation make effective presentations & give & receive & clear instructions.

11. Project management & finance:

Demonstrate knowledge & understanding of the engineering & management principles & apply these to one's own work, as a member & leader in a team, to manage projects & in multidisciplinary environment.

12. Life long learning: Recognize the need for and have the preparation & ability to engage in independent & life long learning in the broadest context of technological change.

Date 29/7/19

Expt. No. .....

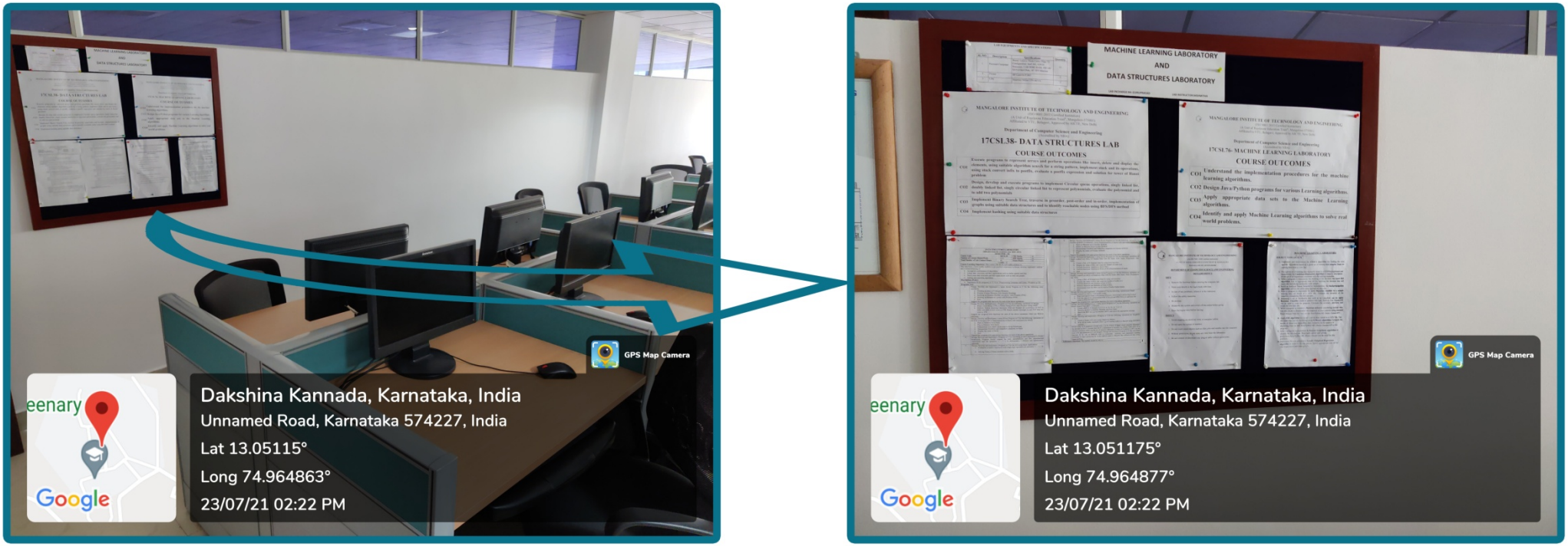
COURSE OUTCOMES (COs):

CO 1 : Experiment with laboratory tests & to identify soil as per IS code Procedures & to determine index properties of soil.

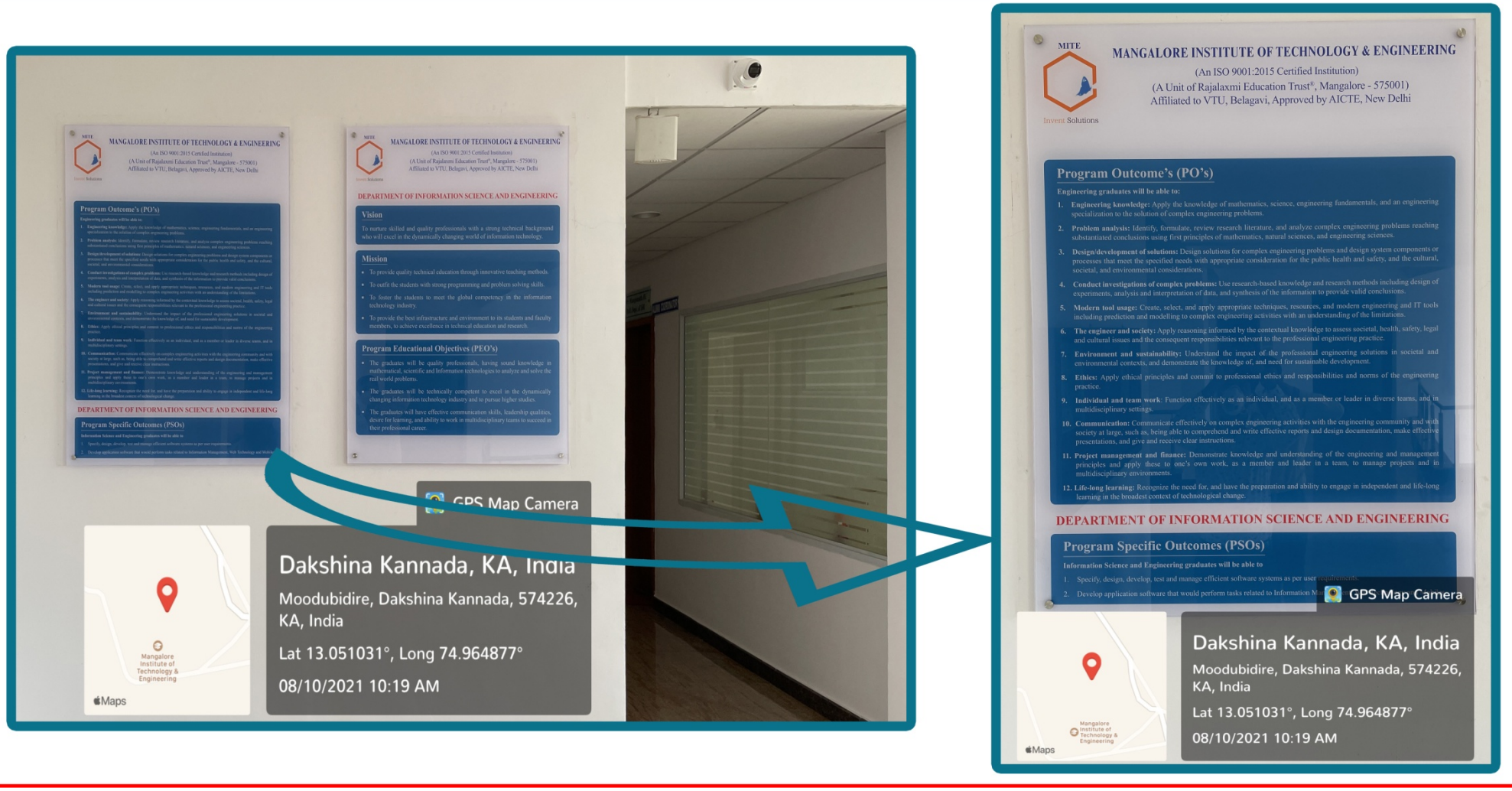
CO 2 : Classify the soil & determine its permeability

CO 3 : To determine OMC & density to assess field compaction.

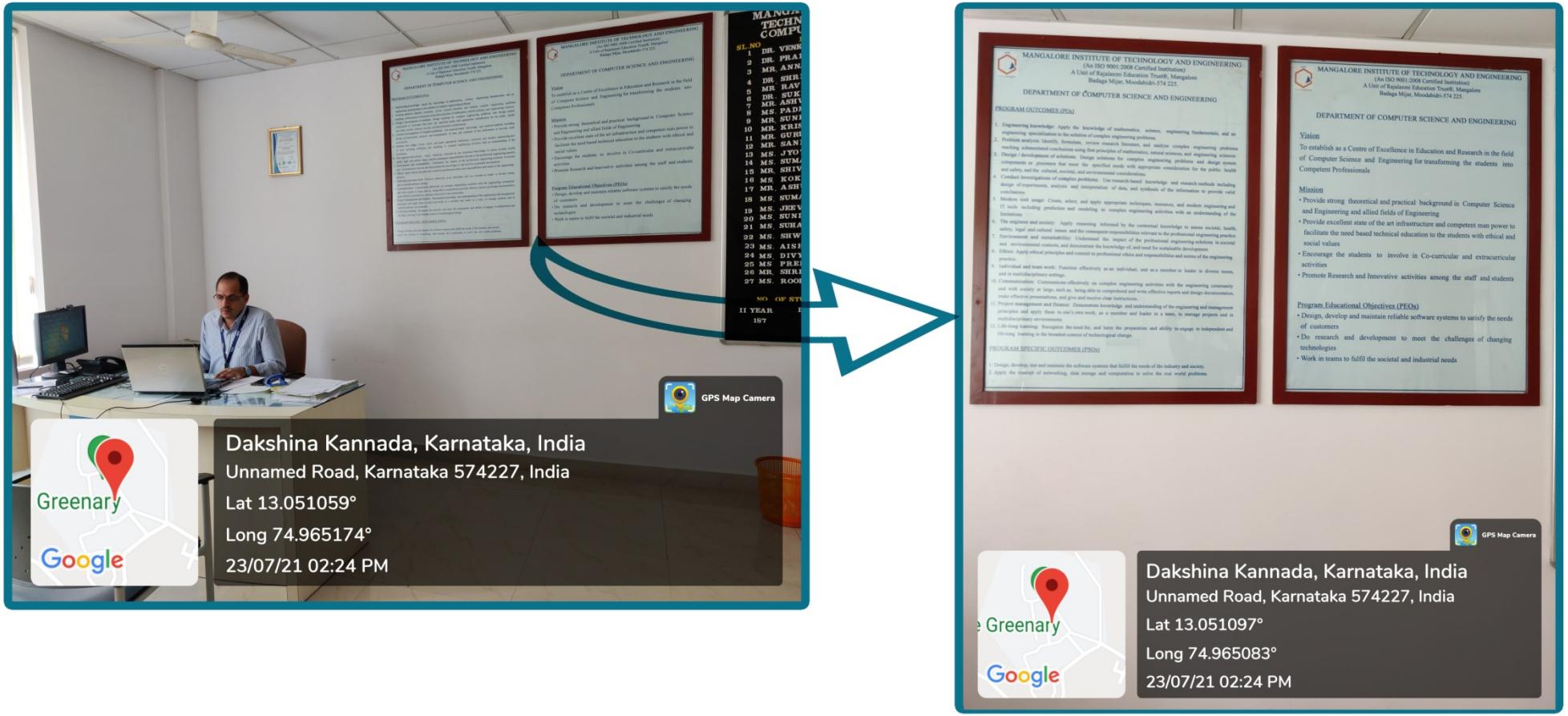
CO 4 : Determine Shear strength & consolidation parameters to assess strength & deformation characteristics.



COs Disseminated in the Laboratory Notice Board



POs & PSOs Disseminated in the Common Movement Area



POs & PSOs Disseminated in the HOD Cabin

5. Short Video Showing the Dissemination of COs and POs:

CLICK HERE

https://mite.ac.in/wp-content/uploads/2021/08/MITE_2.mp4