Department of Civil Engineering

Academic Year 2023– 2024 (Even Semester)

Degree, Semester & Branch: IV semester B.E Civil Engineering

Course Code & Title: CE3404 & Soil Mechanics

Name of the Faculty member (s): Mr.V.Ragavan

Innovative Practice Description

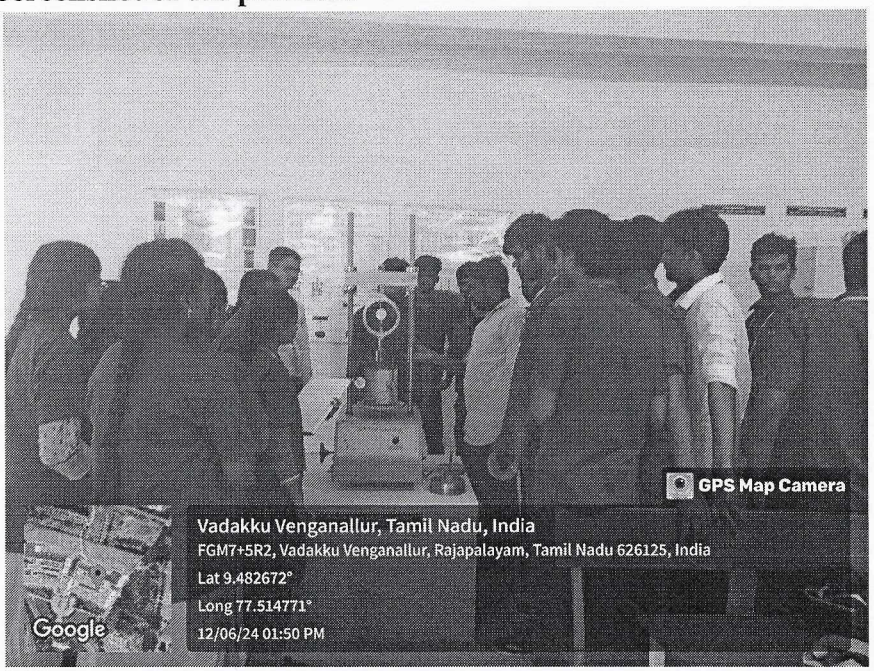
- **Unit / Topic: Unit IV / Shear Strength of Soil**
- **Course Outcome:** CO4
- **Topic Learning Outcome:** TLO18
- **Activity Chosen: Theory to Practical**
- **Justification:**
  The calculation of Shear strength parameters value for cohesive soil as learnt as their theory subjects. So in order to give a practical exposure to students are taken to soil mechanics laboratory to show the experimental setup.
- **Time Allotted for the Activity:** 15 minutes
- **Details of the Implementation:**
  Theoretical and practical knowledge are interconnected and complement each other — if one knows exactly HOW to do something, one must be able to apply these skills and therefore succeed in practical knowledge.
- **CO – PO / PSO mapping:**

CO	PO1	PO2	PO12	PSO4
CO1	3	2	2	2

- **PO / PSO mapped:**

Innovative practice	PO1	PO2	PO12	PSO4
Justification for correlation	Learn the Basic principles and engineering properties of soil with the knowledge of mathematics fundamentals.	They can understand the fundamental properties of soil, such as cohesion and internal friction angle. to solve complex engineering problems in soil mechanics.	Through laboratory and field Testing Students can accurately assess and utilize soil shear strength to create safe, stable, and efficient Structures.	Students can act as a design consultant in Geotechnical Related Project.

- **Images / Screenshot of the practice:**



- **Reflective Critique:**
  - ***Feedback of practice from students and other stakeholders:***
    From this activity, the students have given the feedback as made to see lively the how to determine the shear strength parameters of cohesive soil.
  - ***Benefit of the practice:*** (E.g.: Outcome attainment would have increased due to innovative practice over conventional practice)
    i. This activity was important to help the students to identify the bridge the gap between oral learning and hands-on experience.
    ii. The students will be to identifying the types of soil and to calculate the shear strength parameters cohesion and angle of internal friction of cohesive soil.
  - ***Challenges faced in implementation:***
    Initially, I have planned the activity for 15 minute but this activity extended more than 20 minutes to determine the deflection value of simply supported steel beam.

References:

- Murthy, V.N.S., "Soil Mechanics and Foundation Engineering", CBS Publishers Distribution Ltd., New Delhi. 2015
- Punmia, B.C., "Soil Mechanics and Foundations", Laxmi Publications Pvt. Ltd. New Delhi, 2005..

Signature of Faculty Member **HOD**