**Department of Civil Engineering**
**Academic Year 2024– 2025 (Odd Semester)**
**Degree, Semester & Branch: III semester B.E Civil Engineering**
**Course Code & Title: CE3301 & Fluid Mechanics**
**Name of the Faculty member (s): Mrs. B.BHARANI BAANU**

**Innovative Practice Description**

- **Unit / Topic: Unit II / Practical applications of Bernoulli's theorem**
- **Course Outcome:** CO2
- **Topic Learning Outcome:** TLO8
- **Activity Chosen: Theory to Practical**
- **Justification:**
  - Theory to practice (T2P) is one of the best methods to all students for better understanding this topic.
  - The connection between practice and theory is important as it demonstrates the ability to use evidence to increase the understanding of key concepts, justify the decision making, and inform future practice.
  - Boosts Problem-Solving Skills
  - Practical applications of Bernoulli's theorem are a topic that has the working principle of venturimeter, orifice meter and Pitot tube.

  **Time Allotted for the Activity:** 15 minutes
- **Details of the Implementation:**
  Theoretical and practical knowledge are interconnected and complement each other. Theory provides the foundation, but practice allows students to apply their knowledge to real-world scenarios.

  CO – PO / PSO mapping:

| CO | PO1 | PO2 | PO9 | PSO3 |
|---|---|---|---|---|
| CO2 | 3 | 3 | 1 | 3 |

**(1 – Low 2 – Moderate 3 – High)**

- **PO / PSO mapped:**

| Innovative practice | PO1 | PO2 | PO9 | PSO3 |
|---|---|---|---|---|
| | 3 | 3 | 1 | 3 |

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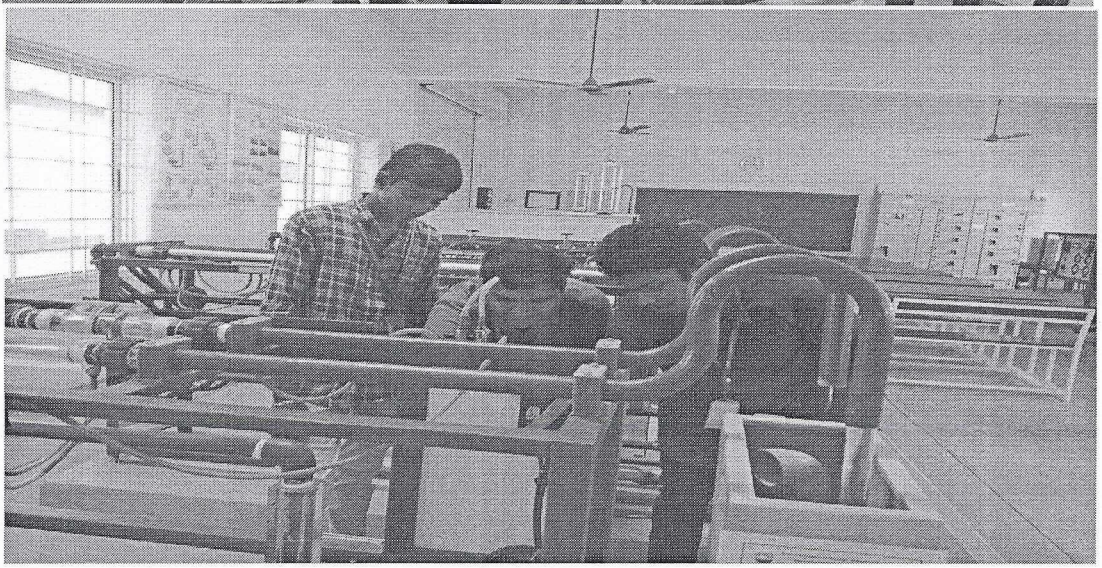
|---|---|---|---|---|
| **Justificatio nfor correlation** | Apply their Knowledge of mathematics, science and engineering fundamentals to understand the concept of fluid kinematics and dynamics | By analyzing the data the students shouldbe able to find out the velocityand acceleration of fluids | The tutorial problems are provided to enhance the student's individual and teamwork; also enables problem solving skills and also provides deeper understanding of a concept through personal experience | Calculate the discharge and velocity of fluid through flow metering devices |

- **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 a venturimeter, orifice meter and pitot tube
  - ❖ ***Benefit of the practice:*** (E.g.: Outcome attainment would have increased due to innovative practice over conventional practice)
    i. This activity help the students to identify the bridge the gap between oral learning and hands-on experience and also sparks Curiosity and Innovation; when theory is put into practice, it ignites curiosity and encourages exploration. Students begin to question, experiment, and come up with creative solutions.
    ii. The students will be to identifying the components and working principle of venturimeter, orifice meter and pitot tube

  - ❖ ***Challenges faced in implementation:***
    Initially, the activity has been planned for the duration of 15 minutes but had extended more than 20 minutes to explain the working principle of venturimeter and orifice meter

**References:**


- Modi P.N and Seth "Hydraulics and Fluid Mechanics including Hydraulic Machines",Standard Book House New Delhi, 2009.
- https://mathematicalmysteries.org/theoretical-knowledge-vs-practical-application/


Faculty Coordinator

HoD/Civil