Department of Civil Engineering

Academic Year 2021– 2022 (Even Semester)

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

Course Code & Title: CE8602 & Structural Analysis II

Name of the Faculty member (s): Dr.M. Indhumathi

Innovative Practice Description

- **Unit / Topic: Unit I to V / Analysis of Structure using STAAD pro**
- **Course Outcome:** CO1 to CO6
- **Topic Learning Outcome:** TLO1 to TLO18
- **Activity Chosen: Simulation Tool**
- **Justification:**
  Structural Analysis subject is mainly involves the process of analysis of structures in a various methods manually.Whether the results may justified using any softwares.Here STADD pro is used to analyse the structural elements and further the results are compared with manual calculation.
- **Time Allotted for the Activity:** 50 minutes
- **Details of the Implementation:**
  1. After Completing all the units theoretically, individual elements are analyzed in a structure step by step then the whole structure has been analysed (Upto two-story framed structures)
  2. I asked all students to take any residential plan and practice with STAAD pro to analyze the structure completely.
- **CO – PO / PSO mapping:**

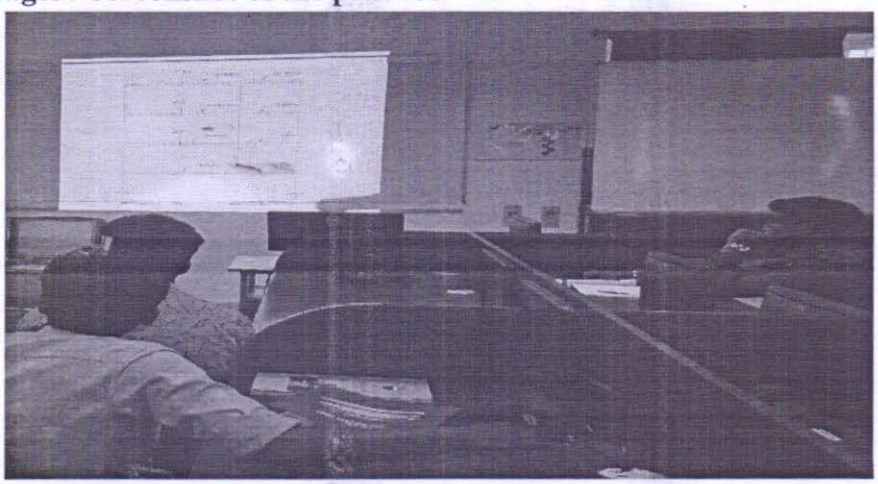
CO	PO1	PO2	PO3	PO4	PO5	PSO2	PSO4
CO1	3	3	2	1	3	2	3
CO2	3	3	2	1	3	2	3
CO3	3	3	2	1	3	2	3
CO4	3	3	2	1	3	2	3
CO5	3	3	2	1	3	2	3
CO6	3	3	2	1	3	2	3

(1 – Low 2 – Moderate 3 – High)

- **PO / PSO mapped:**

Innovative practice	PO1	PO2	PO3	PO4	PO5	PSO2	PSO4
Justification for correlation	Helps to applying the knowledge of mathematics, engineering fundamentals and an engineering specialization to the solution of complex engineering problems	Used to Identify, formulate, and analyze complex engineering problems	Giving design solutions for complex engineering problems and also it meets the public safety	Used to provide valid conclusions,utilising the design of experiments and analysis	Utilising the modern tool like STADD pro,Ansys etc..	Utilizing the modern tool for civil engineering practice	Enhancing the skill to act as design consultant in construction industry

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



- **Reflective Critique:**
  - ❖ ***Feedback of practice from students and other stakeholders:***
    The students felt very easy to analyse the structure using STAAD pro tool than manually.they said ot is very useful tool to become a structural Engineer
  - ❖ ***Benefit of the practice:*** (E.g.: Outcome attainment would have increased due to innovative practice over conventional practice)
    i. Simulation tool is an effective way of involving all students in class simultaneously.
    ii. It prompts students to reflect on the day's lesson and provides the instructor with useful feedback.

  - ❖ ***Challenges faced in implementation:***
    Initially, I have planned the activity for 50 minutes but students have taken more than 50 minutes to understand well.

References:

1. https://www.youtube.com/watch?v=3XxHHzIGC_M

Signature of Faculty Member

HOD