

Vidyavardhini's College of Engineering & Technology

First Year Engineering

Academic year 2024-25 Innovation in Teaching and Learning

Date: 25/11/2024

Title of Activity: Flipped Classroom

Semester: I

Subject: Applied Physics **Course Code:** BSC102

Division/ Branch: E, F (CSE(DS)), G (IT) and I (EXTC)

Date: 11 to 15 /11/2024 & 18 to 22 /11/2024 **Conducted by:** Asst. Prof. Dr. Vivek Singh

Objective of Activity:

- To promote active and self-directed learning by enabling students to engage with core theoretical content prior to classroom sessions.
- To develop analytical and problem-solving skills through collaborative discussions and numerical exercises during hands-on laboratory sessions.

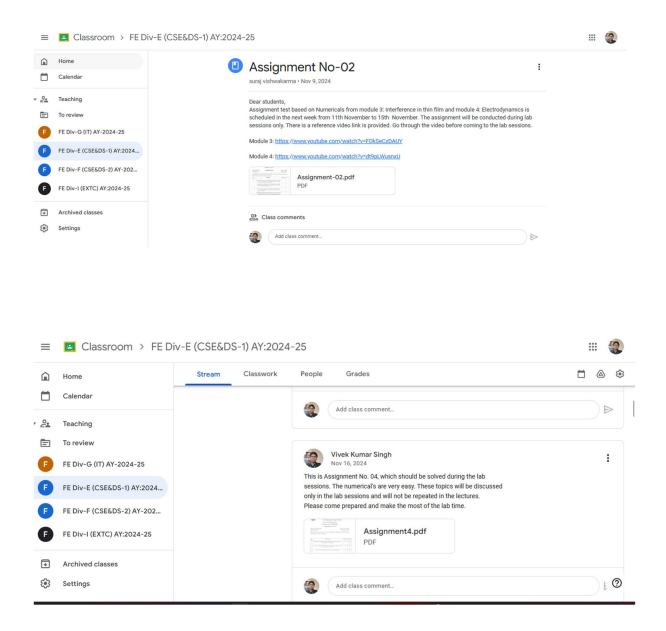
Method of Activity: The flipped classroom is an innovative teaching and learning method where the traditional teaching strategy is reversed, leveraging technology to enhance learning. Video lectures on topics such as *Interference in Thin Films*, *Gradient*, *Divergence*, *Curl*, and *Heisenberg's Uncertainty Principle* were shared with students prior to the class. Students were instructed to watch the videos and come prepared. During laboratory sessions, students worked on numerical problems related to these topics. At the end of each session, solutions and the underlying physics concepts were discussed collaboratively, fostering a deeper understanding.

Resources of Activity:

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

2. https://www.youtube.com/watch?v=dt9pLWusnxU

Evidence of Activity:



Screenshot of the announcement on Google Classroom for the session



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Photographs of students solving problems on the board and participating in discussions

Outcome of Activity: This method enhanced students' problem-solving skills and their grasp of theoretical concepts. It encouraged collaborative learning and active participation, leading to increased interaction in the classroom. Flipped learning thrives on three main pillars:

- 1. Flexible Environment
- 2. Learning Culture
- 3. Intentional Content

Signature of Faculty

Dr. Vivek Singh

(Asst. Professor)