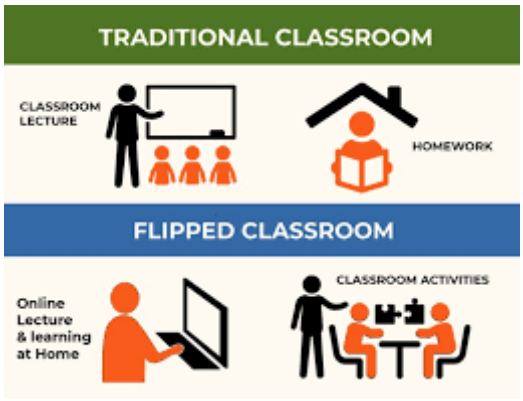
INNOVATIVE TEACHING PRACTICES

FLIPPED CLASSROOM

The flipped classroom is an instructional strategy that inverts the traditional learning environment by delivering instructional content, online, outside of the classroom. In this method, students review lecture materials such as videos or notes at home, while in-class time is reserved for exercises, projects, discussions and collaborative work. This approach is intended to foster deeper engagement with the content and allow more personalized learning experiences.

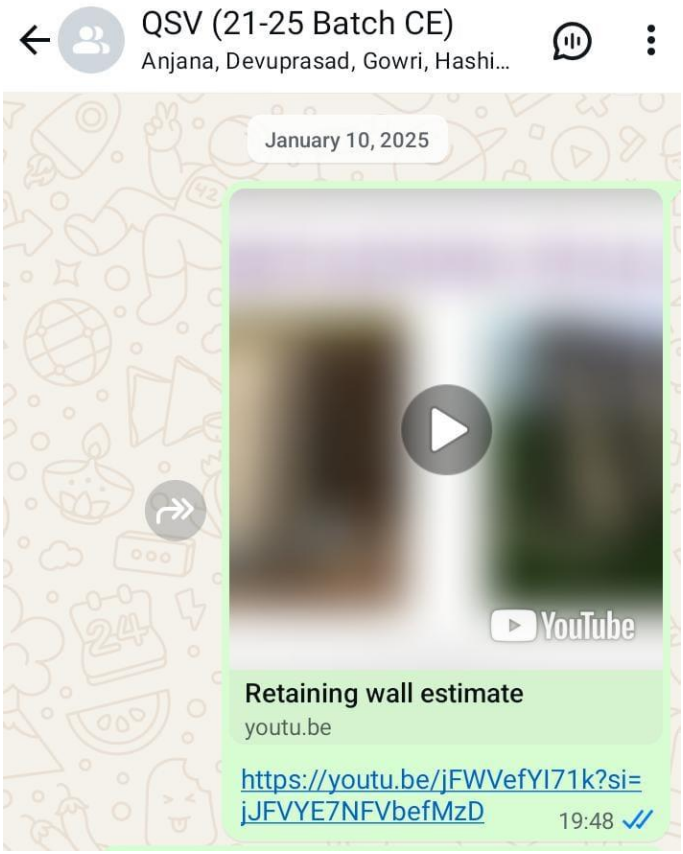
The faculty members of Civil Engineering department frequently use the flipped classroom method of teaching. The faculty members usually provide their video lectures prior to the classes. This enables them to get used to the process of self-study and allows them to learn at their own pace. With the flipped classroom model, students attend each class with the basic information and this allows more time to be dedicated for interactive learning.



CET402 QUANTITY SURVEYING AND VALUATION

The syllabus of the course CET402 enables students to calculate estimates for Civil Engineering structures and prepare the Bar Bending Schedule (BBS) for structural members. It includes the preparation of a detailed estimate of a retaining wall, which involves both estimation and bar bending schedule preparation. The faculty member shared a video lecture (https://youtu.be/jFWVefYI71k) on the detailed estimation of a retaining wall with the students. Ample time was provided for students to take notes and become familiar with the estimation process. Subsequently, a group assignment was given, requiring students to prepare an estimate for a retaining wall with different structural details. The groups were composed of bright students, average learners and slow learners to encourage collaborative learning. This

interactive session helped students grasp the concepts more effectively through peer group learning. The students provided positive feedback regarding this teaching method.

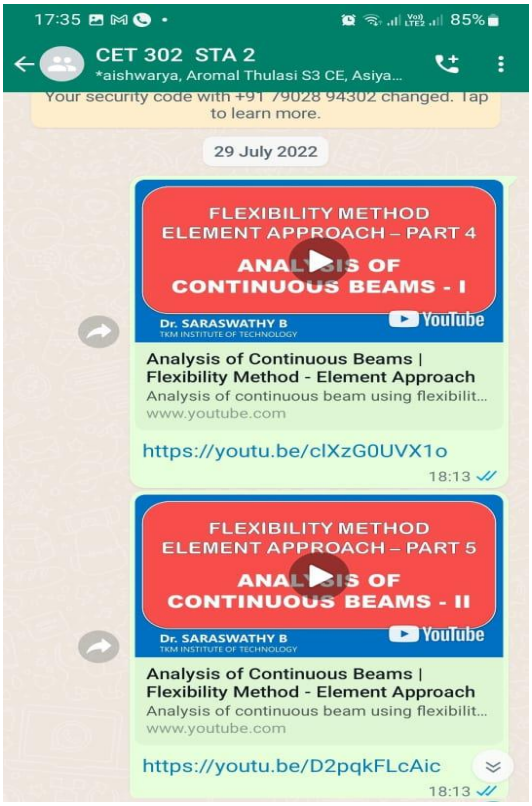


Faculty member sharing video lecture of retaining wall

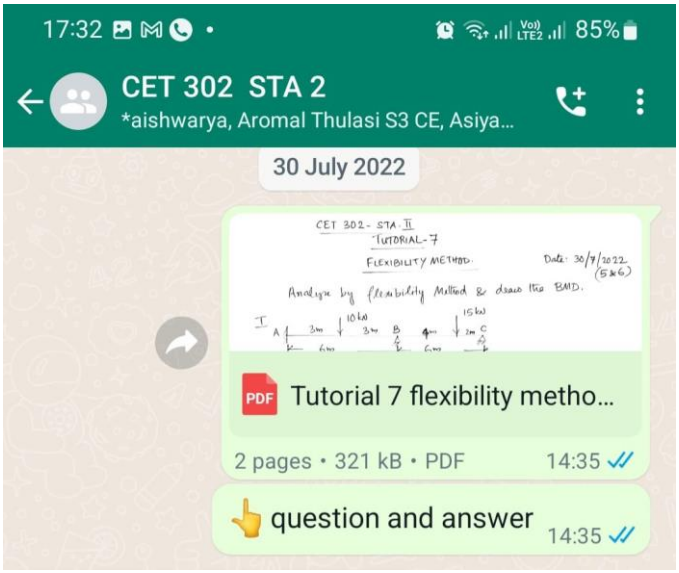
The video lecture was shared with the students on January 10, 2025. The effectiveness of this method was tested through a group assignment given on January 23, 2025.

CET302 STRUCTURAL ANALYSIS II

By implementing the flipped classroom approach, students independently acquired the initial course content at home through videos shared on the faculty member's public YouTube channel (https://bsatkm.wordpress.com/).



Video link sharing prior to tutorial class



Sharing solution of the tutorial session

The video lectures were shared prior to the tutorial session on 29th July 2022. The tutorial class was conducted on 30th July 2022, during which students actively participated in problem-solving activities and clarified their doubts. After the tutorial class, the faculty member shared the solutions to the questions discussed.