



# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

An Autonomous Institute | Affiliated to Osmania University  
Kokapet Village, Gandipet Mandal, Hyderabad, Telangana-500075, www.cbti.ac.in



The following innovative techniques are being adopted by the department of Civil Engineering to foster the understanding and deep subject theoretical knowledge for application to field real problems in civil engineering construction.

## 1. Classroom discussion

The students are encouraged to carry out time bound discussions during class hours focussing on the course contents. An innovative classroom discussion for graduate civil engineering students could explore the various concepts of focusing on civil engineering subjects. Students were engaged in a hypothetical project where they collaborated to design a sustainable urban infrastructure system.



Fig 1: Classroom discussion by the students about water conservation

## 2. Group discussion

Students are made into several groups and are instructed to choose the topics for group discussions. These topics range from optimizing civil infrastructure design, execution and maintenance for minimal environmental impact. This approach not only enhances students' understanding of their own specialization but also emphasizes the importance of holistic thinking in civil engineering projects.



Fig 2: A group discussion on latest technologies for civil engineering during the Structural Analysis course

### 3. Course end seminars

Students present seminars for some subjects Hydraulic Engineering, Green Building Technology etc at the end of the course work. These are designed to challenge students' understanding of theoretical concepts and encourage them to apply their knowledge to real-world scenarios. They should also emphasize teamwork, communication skills, and project management, which are essential skills for civil engineers.



Fig 3: Course end seminar by student on the topic “Software Applications in Civil Engineering”

4. Short presentation

Short presentations and guest lectures by civil engineering experts offer invaluable insights into the latest trends and advancements in the field. They provide students with direct access to real-world expertise, fostering a deeper understanding of complex topics and inspiring innovation.



Fig 4: Mr. Srinivas Gunna, Senior Engineer, WSP Consultants, USA, alumni of 1992 batch delivering guest lecture titled “Challenges in Bridge Construction - Career Opportunities in USA” to the BE(Civil) Final year students

5. Using ICT tools for teaching and learning

The department employs several ICT tools for the teaching-learning process. The tools used are ERP for student’s attendance, CAMU for attendance and CIE, Google forms for conducting course end feedback, and LMS for course exit survey, feedback are undertaken. Also there is smart board located in A203 for classes.

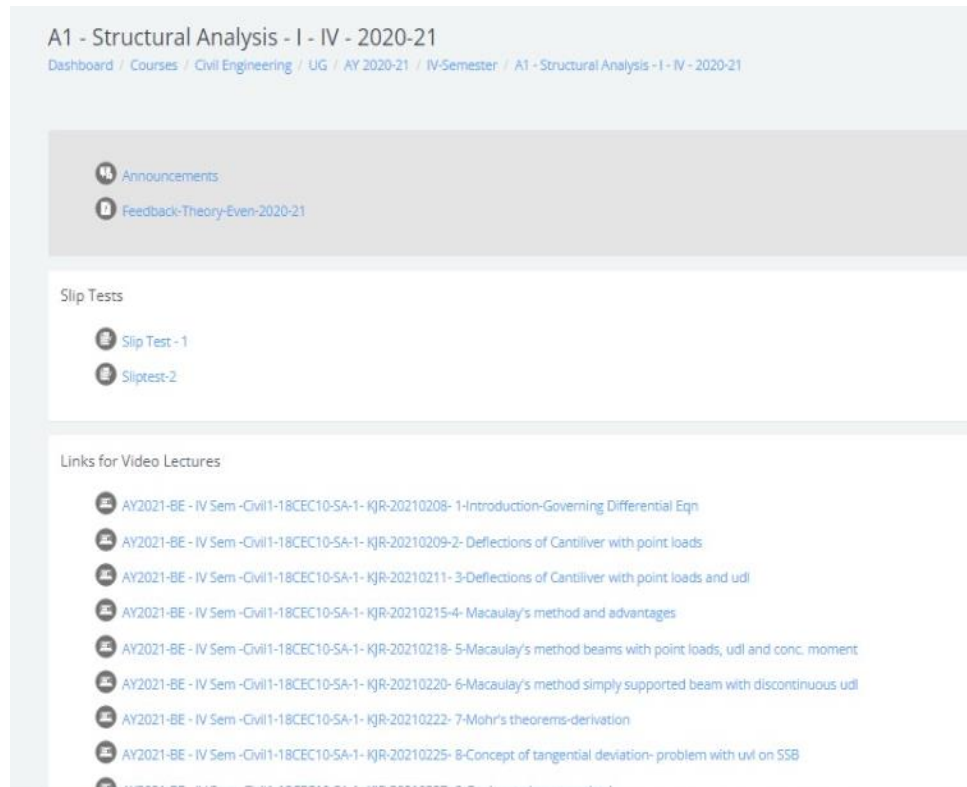


Fig 5: Screenshot of LMS being used for conducting the slip tests

## 6. Model demonstration

In this method, the students are exposed to scale down models of civil engineering infrastructure for better understanding.



Fig 5: Working model of bridge being demonstrated

## 7. Project based learning

For civil engineering graduate students, project-based learning (PBL) can be particularly valuable due to its ability to provide hands-on, practical experience that complements theoretical knowledge.





Fig 6 Student doing project work as a part of the course work

#### 8. Study tour to construction sites

Study tours can enrich education, broaden perspectives, and enhance skills, making them an important component of a well-rounded educational experience. In this regard several study tours were organized for civil engineering students to several sites like HMWSSB (Hyderabad Metropolitan Water Supply and Sewerage Board) Sewage treatment plant, Attapur Hyderabad and National Institute of Rural Development and Panchayat Raj (NIRDPR), Rajendranagar, Hyderabad.



Fig 7 Student taken on construction site visit to My HOME Riverview apartment project



Fig 8 Study tour for the BE (Civil) VI semester students to HMWSSB Sewage Treatment Plant, Attapur, Hyderabad



Fig 9 Study tour for the BE (Civil) I semester students to NIRD-PR, Rajendranagar, Hyderabad