# INNOVATIVE TEACHING PRACTICES

## INTEGRATED LAB-BASED LEARNING

This method integrates theoretical instruction with hands-on experiments, allowing students to immediately apply concepts in a practical setting. This focusses on student engagement and participation. This is also known as Demonstration-Based Learning.

For the basic engineering courses like Basics of Civil Engineering, the students have to learn some material testing procedures of cement, brick, aggregate etc. In order to get a clear idea about the apparatus and test procedure, the students were brought to the Material Testing Lab at Civil Engineering department. Small groups were formed and the experiments were performed under the guidance of the faculty members.

Faculty explaining the test procedure

The syllabi of some courses include the study of various test procedures for construction materials such as soil, aggregates, bitumen etc. According to the curriculum, students are introduced to laboratory sessions only at a later stage. To bridge the gap and ease the learning of these test procedures, particularly those based on Indian Standards (IS), faculty members organize special laboratory sessions. These sessions are designed to help students become familiar with the procedures and gain hands-on experience early in the course.

The course CET206 Transportation Engineering includes the study of pavement materials in its second module. The figures show Prof. Ansarsha A explaining the test procedures for aggregates and bitumen, based on IRC specifications, to the S4 Civil Engineering students.

Students learn about the properties of mild steel and related terminology in the course Mechanics of Solids. Prof. Jisha B. S. organized a laboratory session to demonstrate the tension test on mild steel bars, explaining the various stages involved in the test and the associated technical terms with the aid of this visual demonstration.