

Content within and beyond curriculum through virtual expertise

The institute offers quality teaching through a dedicated team of highly qualified teachers who are concerned with not only the curricular aspect, but also the holistic development of students. Teachers use PPTs, e-notes, video and other ICT tools for teaching. Add-on courses are also offered for skill-development, foreign language and communication-skill development for enhancing employability. A number of case studies, seminars, conferences, workshops, guest lectures by eminent scholars and leading personality from different fields are conducted and a practical based approach adopted to enhance the knowledge and overall development which are very helpful to advanced learning opportunities to the students.

Institute undertakes various activities under NPTEL, Spoken tutorial IIT Bombay for overall development of students. Also institute have, Virtual Lab, C Deep center.

National Programme on Technology Enhanced Learning - NPTEL

In order to educate and prepare students for technical and professional excellence and enable them to have better employment we include NPTEL Courses. NPTEL is associated with industries they design the courses which are helpful to everyone to get relevant knowledge and development of relevant skills of their domain in industry. As there is huge gap between education system and industry requirements many of the students fail to get employment due to lack of skills and practicality which are demanding in industries. Our institute is active SPOC and awarded with Active local chapter. Approximately 300 students per year benefited from the NPTEL course.

Spoken Tutorial:

College is associated with Spoken tutorial IIT BOMBAY which is an NMEICT, MHRD. Govt. Of India initiative to enhance IT/Software skill of students. These courses are skill oriented and most of the courses mapped with academics. The training focuses on providing computer/software training to the students associated with the institute.

The spoken tutorial project is about teaching and learning a particular FOSS (Free Open Source Software) like C/C++ , Java, Linux, Scilab, LaTeX, PHP & MYSQL Libre Office ,Front Accounting etc. with easy video tool spoken tutorial.

Our courses are simple and easy to follow even for beginner but they also meet the growing needs of learner. Our engaging digital content ensures that learning happens at all level – Basic, Intermediate and advanced. Our mandates side-by-side practice thereby ensuring that learners are actively learning. The method is active learning on computer systems and very suited for Remote/Distance Education. Teachers and students can master the software courses as per their convenience in the institute and get certificates. UG, PG or Research scholar students even teacher can learn any of the FOSS. The complete training is well organized. Faculties of institute organize their batch of students into groups,

who will learn a particular software course for entire semester. Spoken tutorial courses can be mapped with lab courses. Forum help is also provided by Spoken tutorial IIT Bombay

A single student can learn upto 3 different spoken tutorial courses during one semester, end of course online tests and certificates are available for those who wish to test their expertise in particular software. These certificates give an edge to students during placement by increasing their employability potential.

Virtual Labs

Virtual Labs is an initiative of Ministry of Education (MoE), Govt. of India, under the National Mission on Education through ICT. Virtual Lab is a huge milestone activity of the Nodal Centre that is followed as one of the best practices in interactive teaching-learning and e-content development.

To provide a complete Learning Management System around the Virtual Labs where the students can perform laboratory experiments online in an interactive and engaging manner on a simulator, and seek an improved insight of the fundamentals through simulations, animated demonstrations, lab manual and self-evaluation-pre-test and post-test type of formative assessment. The main Objectives of virtual lab is to enthuse students to conduct experiments by arousing their curiosity. This would help them in learning basic and advanced concepts through remote experimentation and to provide a complete Learning Management System around the Virtual Labs where the students/ teachers can avail the various tools for learning, including additional web-resources, video-lectures, animated demonstrations and self-evaluation.

Virtual lab provides following advantages to students:

- Virtual labs enable students to perform many experiments that are difficult to perform in real laboratories because of the risks.
- Virtual labs help teachers and students save time and effort because they don't need to adhere to certain times to enter the lab, or to move from one place to another.
- Virtual Labs help users keep up with the technological development of the digital age.
- Virtual labs allow students to perform the practical experiments related to the theoretical courses, which helps them absorb the courses.
- Virtual labs help students perform the experiment more than once.
- Virtual labs protect students and teachers from hazards, given there is no direct contact with toxic or radioactive chemicals and there is no handling of explosive devices or electricity.

- Virtual labs provide the convenience of changing the inputs and transactions used in the experiment without worrying about any dangerous effects of these changes.
- Virtual labs allow students to stay in touch with the Internet, which helps them search and gather information during the experiment.
- Virtual labs provide a complete Learning Management System (LMS) around the virtual labs where students can avail the various tools for learning including additional web-resources, videos, animated demonstrations and self-evaluation.

CDEEP Center

College is recognized as one of the nodal remote centre by IIT Bombay where the summer and winter workshops live through Center for Distance Engineering Education Program (CDEEP). The centre is equipped with modern infrastructure and sitting capacity is 60 students. To conduct online seminar by expert faculty member from IIT Bombay and other eminent institute. Around 50 FDPs are conducted by IIT BOMBAY and IIT Kharagpur till date. CDEEP centre is also utilized by different department during pandemic time to offer online internship where student getting knowledge of industrial process and interact with them through skype, Google meet or Zoom. Till date about 500 faculty members and students have benefitted from various workshops and FDP