

## HALDIA INSTITUTE OF TECHNOLOGY

### Department of Computer Science & Engineering

#### Innovations in Teaching and Learning

An overview of the teaching and learning innovations implemented by the faculty will be provided in the subsequent description. Activities that contribute to the enhancement of pupil learning are referred to as "contributions to teaching and learning." Innovations in instruction delivery, instructional methodologies, assessment, evaluation, and inclusive classrooms, among others, which result in effective, efficient, and engaging instruction, may be incorporated into these activities. In order to be considered for learning and teaching, contributions must meet the following criteria:

- The work must be made available on the Institute's website
- The work must be available for peer review and critique
- The work must be reproducible and developed further by other scholars

The Department or Institution may establish suitable procedures for public disclosure, evaluation, and compensation of the contributions. Typical elements encompass a well-defined statement of objectives, sufficient pre-planning, application of suitable methodologies, significance of findings, proficient delivery, and reflective evaluation.

Significant emphasis is placed within the Department of Computer Science and Engineering on the integration of cutting-edge teaching methodologies. Each collegiate semester commences with the implementation of a faculty development programme aimed at fostering the creation and dissemination of innovative techniques. Each classroom within the department is furnished with a projector, whiteboard, and blackboard. In every classroom, an LCD projector is installed. The LCD Projectors are utilized by the faculty for their presentations. Faculty members utilise smart displays, which are present in the majority of classrooms, to enhance the teaching and learning experience. In addition to this, faculty members actively promote student engagement in group discussions, team-oriented activities, and presentations, among other things.

**Table 5.12 Summary of Innovative Teaching techniques in Teaching Learning Process**

Sl. No.	Item	Description
1.	Usage of Smart Boards	Few class rooms are equipped with smartboards which faculty members can use to take TLP process to a higher Level.
2.	Usage of online platforms	Faculty members use WhatsApp, google drive, Google classroom etc. for discussions as well as sharing of course materials.
3.	Usage of Modern Tools	SMART BOARD, LCD Projectors Document Camera, Wireless Keyboard and mouse, PowerPoint Laser Presenter, Wireless Presenter, USB wireless pen mouse, Slide Changer, Wi-Fi enabled laptops are usually employed in classrooms and other student learning environments.
4.	Academic reinforcement based on project-based model	Higher semester student has to complete projects as a part of their curriculum and these are evaluated for on spot programming skills by mini project reviewers based on the rubrics.
5.	Semester break Internship	Every semester break, students are advised to go for Internship activities.
6.	Innovative practices during regular TLP process	During the lecture sessions, various innovative strategies like inquiry-based learning, Role Play, brain storming methods are also used.

7.	Usage of animated videos, models, charts in TLP process	During the lecture sessions animated videos, models, charts in TLP process.
8.	Availability of course materials in Institution website.	The videos of the Courses and Labs are available in the college website.
9.	Usage of visual library, digital library and other Open Source platforms	Faculty members use visual library, digital library and other Open Source platforms to make the subject easy to understand. A copy of e – learning material is kept in individual departmental website.
10.	Train the trainer using short term courses, MOOC courses, staff development programs, Conferences and workshops	The faculty members are encouraged to participate in webinars, short term courses, faculty development programs, Conferences and workshops on advanced topics to keep pace with the advanced level of knowledge and skills.
11.	Availability of immense resources at institution	The students and faculty members are encouraged to make use of the various resources available in the institute which enables research-based learning. Some of the resources which are available in institution are given below.

**Other resources available on the institute/department to promote teaching and learning**

- Idea Lab and MSME incubation centre.
- The syllabi, previous semester question papers and Lesson Material of CSE department are all uploaded in the Institute website.
- To meet their academic needs, book banks are offered to all students.
- There is printing and reprography equipment on the college premises and department.
- Subject- and department-specific book arrangements are made, and each user's needs about the library receive individual attention.
- The library has separate areas for reference, periodicals, circulation, digital libraries, and reading rooms.
- To make it easier for faculty, students, and research scholars to access resources, each department has a Departmental Library in addition to the central library.
- There are 1893 volumes, 720 titles, 23 journals, and 41 magazines in the department library.