

Department of Computer Science and Engineering
Harcourt Butler Technical University, Kanpur

Minutes of meeting of the Board of Studies (BOS) of Computer Science & Engineering
Department held on 07.08.2026

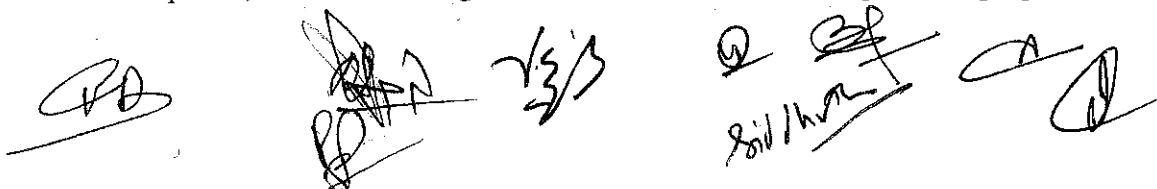
A meeting of the Board of Studies (BOS) of the Computer Science & Engineering Department, HBTU, Kanpur was held on 07/08/2026 at 11.00 am in the hybrid mode. Following faculty members of the department alongwith the external expert members were present in the meeting.

1. Mr. Atul Singhal (Founder & CEO, Kloudrac Group)
2. Mr. Madhup Agarwal (Head Technology, IndiaMart.com)
3. Prof. Anita Yadav, HOD CSE Department, HBTU Kanpur
4. Dr. Raghuraj Singh, Professor
5. Dr. Prabhat Verma, Professor
6. Dr. Vandana Dixit Kaushik, Professor
7. Dr. Vivek Singh Verma, Assoc. Professor
8. Dr. Bharat Bhusan Sagar, Assoc. Professor
9. Dr. Siddharth Srivastava, Asstt. Professor
10. All Asstt. Professors (Contract)

The course structure of the B.Tech. Computer Science and Engineering, B.Tech. Information Technology, and B.Tech. CSE (AI/ML) prepared in view of the NEP-2020 guidelines was presented. The detailed course content of the courses "Python Programming" and "Programming for Problem Solving" offered in the Ist year was also presented. After thorough discussion on the proposed course structure considering the emerging requirements of academia and industry, the BOS observed the following points.

(A). Observation/Suggestions on the Curriculum

1. Certain courses should be restructured to ensure a better progression of concepts in various semesters. For example, Software Engineering course should be offered in the third semester, Object-Oriented Systems and Operating Systems should be introduced in the fourth semester, while Database Management Systems and Web Technology should be offered in the fifth semester.
2. Courses on Generative Artificial Intelligence (GenAI), Agentic AI, and Large Language Models (LLMs) should be included in the B.Tech. CSE, B. Tech. IT, and B. Tech. CSE (AI & ML) curriculum.
3. Reduce the proportion of purely theoretical courses by replacing them with application-oriented and laboratory-intensive course. Considering the increasing industrial demand for software development, Artificial Intelligence, and data-driven technologies, it is proposed to



include a course on Advanced Python Programming, along with extensive laboratory practice by replacing the Digital Logic Design course.

4. The newly introduced B. Tech. in CSE (AI/ML) programme should be strengthened by including Advanced Mathematics course relevant to AI, Machine Learning, Additional AI-oriented subjects covering emerging technologies, comprehensive courses on Machine Learning fundamentals, and practical AI applications. The curriculum should be periodically updated in accordance with current technological developments and industry requirements to ensure that graduates remain competitive in the rapidly evolving field of Artificial Intelligence.
5. More emphasis should be placed on laboratory work, practical implementation, coding proficiency, software development, and real-world problem-solving rather than on theoretical knowledge alone. Alongwith the fundamentals of various courses, curriculum should be focused on developing analytical thinking and problem-solving ability in students.
6. To enhance students' confidence, leadership qualities, innovation capabilities, and overall industry readiness, the Department should organize regular workshops, coding boot camps, hackathons, industrial training programmes, expert lectures, personality development sessions, and other technical and professional activities.
7. Curriculum should emphasize the holistic development of students by strengthening communication skills, interpersonal skills, logical and analytical thinking, algorithm design, computational thinking, and problem-solving abilities.

(B). General Observation/Suggestions

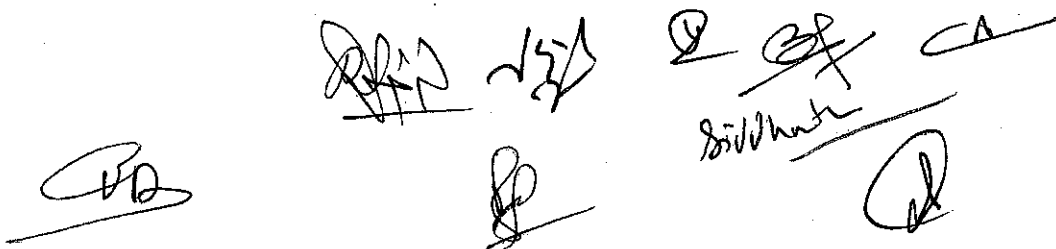
8. Students should be familiarized with the state-of-the-art AI tools and technologies such as ChatGPT, Claude, and other AI-based workflow automation tools to make them effectively understand, analyze, and solve real-world problems using these technologies.
9. Students should be given practical exposure of AI applications including Voice Agents, Data Agents, AI-powered automation systems, and ethical, responsible, and effective use of Artificial Intelligence tools.
10. To develop a problem-solving practice in the students, project-based learning should be inculcated by promoting minor/mini projects based on various courses taught in every semester.
11. Students should be encouraged to use modern AI-based development tools, including Large Language Models such as ChatGPT and Claude, for project development while maintaining academic integrity.
12. Python should be adopted as the primary programming language for Artificial Intelligence, Machine Learning, Data Science, and software development projects to enhance technical proficiency of the students and improve their placement opportunities.
13. Practical exposure to AI model development, model training using real-world datasets, and implementation of AI applications should be incorporated into the curriculum. Students should be encouraged to maintain an active GitHub repository to document programming

assignments, software projects, and technical contributions, thereby improving their practical exposure, coding proficiency, and employability.

14. There is a need to focus on the students' placement preparedness and industry readiness by regularly organizing mock interviews, group discussions, technical presentations, and personality development programmes for improving technical knowledge, communication skills, personal and interpersonal skills, and presentation abilities. Small groups of 2-3 students, under the guidance of the faculty mentors should be constituted to give presentations on technical topics to improve their communication and presentation skills.
15. Students should also be encouraged to actively participate in technical seminars, research paper presentations, conferences, hackathons, coding competitions, and other technical events to improve their professional competence.
16. Student participation in technical clubs, coding activities, innovation competitions, and project-based learning initiatives be encouraged to strengthen the academia and industry interaction.
17. To strengthen the students' analytical and problem-solving abilities, the number of laboratory courses, practical sessions, and hands-on learning activities across the curriculum should be increased and more emphasis should be placed on experiential learning through programming assignments, laboratory experiments, case studies, and project-based activities.
18. Students should be encouraged to undertake industrial training and internships after the completion of sixth semester to enhance their practical exposure and industry readiness. Also, the Department should strengthen industry-academia collaboration through internships, expert lectures, industrial visits, collaborative projects, and interaction with industry professionals. It was proposed to observe the feasibility of introducing a one-year internship during future curriculum revisions.

The BOS unanimously approved the following items.

1. Proposed course structures for the B.Tech. CSE, B. Tech. IT, and B. Tech. CSE (AI/ML) after incorporating the above suggestions to a maximum possible extent (Attached as Annexure-II to IV).
2. The detailed course content of the courses "Python Programming" and "Programming for Problem Solving" offered in the 1st year. (Attached as Annexure-V).

The block contains several handwritten signatures in black ink. There are approximately eight distinct signatures scattered across the bottom of the page, some appearing to be initials and others more full names or stylized marks.

