

HALDIA INSTITUTE OF TECHNOLOGY

INTERNAL QUALITY ASSURANCE CELL

Academic Audit 2023-2024

Evaluation Sheet

Department Name: Computer Science and Engineering (AI & ML)
Programme Name: B.Tech
Academic Year: 2023-2024

I. PEO's, PO's and Curriculum		
SI No	Criterion	Observations
1	PEO's and PO's attainment	All the PEOs have been attained. The values of PO7 and PO8 partially reached the target values.
2	Revision in curriculum and validation date (provide details)	The inputs of all the subjects of the B.Tech. curriculum were submitted to the BOS for revision/modification. Final validation of the curriculum was done on 21.01.2022, through BOS meeting.
3	Extent of its satisfaction with curriculum revision	The gaps of the previous curriculum have been mitigated to some extent through the revised curriculum. Besides, many emerging subjects/ technologies are introduced.

II. Faculty information and their contribution		
SI No	Criterion	Observations
1	Teacher-Student Ratio	15.2:1
2	Faculty Cadre Ratio	(Professor: Associate Professor: Assistant Professor) 1: 1: 12
3	Faculty Qualification	PhD: 2, M.Tech: 12
4	Average Experience of Faculty	7 Years
5	Faculty Contribution in Writing	13

	Book Chapters	
6	Members in Editorial Boards	NIL
7	Faculty in Professional Organizations	4
8	Awards/ Rewards received	NIL
9	Industry Collaborative Projects	1
10	Faculty as resource persons in workshops/ training activities	NIL
11	National Level Events organized	
	Conference	NIL
	Workshops/ Seminars	NIL
	FDPs	1
	International Level Events organized	
	Conferences	NIL
	Workshops Seminars	NIL
12	Number of conferences /seminars workshops/ FDPs any exclusive programs attended for enrichment of teaching learning process	86

III. Teaching-Learning Process and Evaluation		
SI No	Criterion	Observations
1	Curricular aspect as per NCeF Value added Courses	The curriculum and syllabus were developed and modified which were submitted before the Board of Studies (BOS) for their kind approval under autonomy.
2	Mechanism and activities for slow learners for their improvement outcomes	(i) Remedial/Extra classes were conducted with an appropriate focus on the subjects/topics in which the students were found to be slow learners. Also, extra classes had been arranged for the lateral entry students of 3 rd semester. (ii) Individual academic counseling was done by the concerned subject teachers and mentors.

		<p>(iii) Student helpdesk.</p> <p>(iv) Students' study groups were formed for peer-to-peer learning and research-oriented learning.</p> <p>(v) Personal counseling was done through a mentoring scheme (where a teacher acts as a guardian) that took care of the students. This scheme maintains the entire academic record of the student, which is also conveyed to the parents from time to time by the Mentors. Slow learners are counseled and motivated by the Mentors.</p>
3	Student counseling monitoring mechanism	<p>The student monitoring programme includes faculty members' assistance as "Mentors" to all the students. Each student shall be assigned to a "Mentor" to overcome his/her hurdles to achieve his/her academic goals.</p> <p>With the appointment of Active Student Advisors or Counselors, one counseling class per week is arranged from 2nd year onwards to identify individual's problems and to solve them by expert counselors. Counselors give special attention to the weaker students who are facing difficulties in academic attainments.</p> <p>The target of the Mentoring Programme is to identify fundamental goals as:</p> <ol style="list-style-type: none"> 1. To develop healthy relationships among students and teachers. 2. To supervise academic and professional performance of the students. 3. To inculcate human values and ethics among the students. 4. To acclimatize the new students to the college campus. 5. To provide academic counseling. 6. To enlighten the students on professional ethics and conduct. 7. Providing emotional support to the students on an individual basis. 8. Helping students to overcome homesickness. 9. Establishing bridges among teachers, students and parents. 10. Monitoring attendance and behavioral aspects of every student. 11. Identifying weak areas and working out

		<p>remedies that help students, thereby taking their complete care.</p> <p>12. Parents-Teachers meeting is organized on bi-annual basis to get their individual challenges.</p>
4	Tutorial classes	<p>In tutorial classes, students are engaged in group discussions, problem solving, quizzes, class tests, and assignments under the guidance of the faculty members. These steps enhance subjective understanding and effective work planning for accomplishing the academic goal.</p> <p>For the same purpose, the department also organizes workshops under the banner of "CSI" and the student chapter of "AIML Club".</p>
5	<p>Monitoring of teaching-learning process</p> <p>(a) E-learning models:</p> <p>(b) Assessment of teaching process in classrooms</p> <p>(c) Innovative teaching process in presented if any</p> <p>(d) Verification of course files:</p>	<p>Process adopted; lectures, case studies, classroom participation, assignments, debates among teams on specific subjects, student presentations on specific topics, etc, are arranged frequently. We adopted a smart classroom to make a change in the teaching learning environment. E-resources like NDL, e-Pathshala, etc., are used for sharing information and knowledge.</p>
6	Training/Skill Development Programs conducted for students	Industrial vocational training and internships at various industries are offered.
7	Students feedback & steps taken	<p>The following students' feedback was taken during each semester:</p> <ol style="list-style-type: none"> 1. Students' feedback on teaching assessment. 2. Students' feedback on the syllabus. 3. Students' satisfaction survey.
8	Scope for Self-learning certified course (Online Courses)	Students are advised to enroll in online courses through NPTEL, SWAYAM, EDX, COURSERA, etc to gain knowledge and get certified with different recent and emerging technologies.
9	Results Analysis	Semester wise result analysis for individual subjects are carried out by the respective subject teachers.
10	Parents meeting on evaluations of student's progress	Each semester, the department organizes a meeting with parents to review the students' progress.
11	Student involvements in extracurricular	The students participate in numerous

	& co-curricular activities:	extracurricular activities, like, <ol style="list-style-type: none"> 1. Blood Donation Camp 2. Campus Cleaning 3. Tree plantation programme 4. Institutes' annual sports meet and cultural programme 5. Floor painting 6. Wall magazine
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IV. Research, Consultancy and Extension		
Sl No	Criterion	Observations
1	Faculty publications in Journals National International	1 1
2	Publications in conference National International	NIL 15
3	PhDs-Registered Awarded Pursuing	2 2 2
4	Funded R&D projects Applied Sanctioned Ongoing Completed	1 NIL NIL NIL
5	Patent applied Patent awarded	9 3
6	In-house R&D grants & projects	1
7	New research facilities/ laboratory facilities provided	NIL
8	MOU's with industries/ R&D/ Premier	NIL

	institutes	
9	Research centers of excellence established	NIL

V. Infrastructure and Learning Resources		
Sl. No	Criterion	Observations
1	Adequacy of infrastructural facilities to improve the teaching learning process Classrooms: Laboratories: ICT/e-class rooms: Seminar halls:	 2 3 2 NIL
2	Internet facilities for Faculty and Students	Yes
3	Modern/ new equipment added in laboratories	Yes
4	Details of computing facilities and improvements	The department of CSE (AI & ML) has the following laboratories: 1. Artificial Intelligence Laboratory. 2. Machine Learning Laboratory 3. Data Structure and Algorithm Laboratory
5	Department level library resources	Yes

VI. Student information, Support and Progression		
Sl. No	Criterion	Observations
1	Department students clubs	Artificial Intelligence and Machine Learning (AIML Club)
2	Details of coaching provided for GATE/ GRE/ any other competitive exams for higher studies	Since the department is young enough, we do not provide such coaching. However, we have a plan to provide such coaching in the near future.

3	Industrial visits and academic visits	The training and placement cell of the institute has been organizing industrial visits and internships.
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VII. SWOC Analysis of the Department

Sl. No	Criterion	Observations
1	Strength:	<ol style="list-style-type: none"> 1. Strong Curriculum 2. Organizing workshops and seminars. 3. Faculties and staff are working as a team. 4. Quality of faculty 5. Research growth and collaborative research among faculties with other reputed organizations. 6. A supportive working environment among departmental members. 7. Well defined program assessment (including program objectives, course learning outcomes, and instruction assessments). 8. Adequate lab facilities.
2	Weakness:	<ol style="list-style-type: none"> 1. Sponsored projects, consultancy, and entrepreneurship. 2. Industry sponsored laboratory 3. Increase collaborative research/ projects among the faculty members. 4. Need to involve more graduate students in research.
3	Opportunities:	<ol style="list-style-type: none"> 1. Workshops, seminars, FDPs, internships, and industrial training in computing and informatics. 2. Aspiring students and faculty members. 3. New industry demands on Machine Learning, Artificial Intelligence, Data Science, Business and Data Analytics, etc. 4. Opportunities to find research grants from industries and government agencies.
4	Best Practice/ Innovative:	<ol style="list-style-type: none"> 1. Course material - supplied to the students for "self-study" in a time saving manner and discussed within the class. 2. The demands of employers/industries are kept in mind while designing the curriculum. 3. Participatory learning methods employed. 4. Knowledge sharing among the faculties 5. Transparent performance-evaluation system during the coursework.
5	Future plans:	<ol style="list-style-type: none"> 1. To establish collaboration and exchange programs for faculty members with reputed institutes like IITs and NITs. 2. To submit proposals to the funding agencies for research

		<p>and modernization of laboratories (MORDROB).</p> <ol style="list-style-type: none"> 3. To sign MOU with industries to get Industry Sponsored Projects and to provide Internship Training to the students. 4. To motivate faculty members for Industry Interaction with an objective to get sponsored projects and placement of students. 5. To convert the department into a leading research center in the country in the specialized domain of Information Technology like Artificial Intelligence and Machine Learning, Internet of Things, Cyber Security, Cloud computing, Web Technology etc. 6. To prepare the students to overcome the challenges of modern methods for Personality Tests and Interviews. 7. To Organize National/ International level Conferences, Paper Presentations & project competition. 8. To Organize various short term courses, workshops, seminars from experts under various departments.
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Academic Audit Report 2023-24

1. Name of Department: Computer Science and Engineering (AI & ML)
2. No of full time permanent faculty: 14
3. No of part time Visiting temporary contractual faculty: 0
4. No of PG/UG courses: 1
5. Curriculum Revisions during the year: No
6. Research: Publications in journals: 2
7. PhD Awarded: 2
8. Faculty guiding PhD: 1
9. Number of Conferences/Lectures Organized: 15
10. Ongoing Sponsored projects & amount: 1 amount: Rs. 40,000/-
11. No of Faculty using: ICT & PPT:14
12. New Equipment and Infrastructure added: Data Structure & Algorithms Lab
13. Student feedback on Curriculum (Yes/ No): Yes
14. Strengths: Well defined program assessment (including program objectives, course learning outcomes, and instruction assessments). Faculty members are young, energetic and working as a team to support organising workshops, seminars and FDPs. Strengthened with well equipped infrastructure.

15. Weaknesses: Inadequacy in enough sponsored projects, consultancy, entrepreneurship and collaborative research. It is needed to involve more graduate students in research activities.

16. Suggestions for improvement:

Workshops, seminars, FDPs, internships, and industrial training in computing and informatics may be organised in collaborative approaches with the corporate. New industry demands on Machine Learning, Artificial Intelligence, Data Science, Business and Data Analytics, etc. may be incorporated in the syllabus such that next generation graduates become employable. We need to explore more opportunities to have research grants from industries and government agencies.

17. Departmental Coordinator:

Abhishek

18. Academic Auditors:

Aparna

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