



Academic and Administrative Audit Report
of

Heritage Institute of Technology, Kolkata

**(An Autonomous Institution Affiliated to Maulana Abul Kalam
Azad University of Technology, West Bengal and accredited
with "A" grade by NAAC)**

For the Academic Session: 2022-23

Audit Conducted by:

Dr. Alope Kumar Sen
Former Professor and Director
School of Management Science
Bengal Engineering and Science University
(Currently known as IEST Shibpur)
Howrah-711103
West Bengal, India

Dr. Sanat Kumar Mahato
Professor & Head
Department of Mathematics
Sidho-Kanho-Birsha University
Purulia, West Bengal, India
PIN-723104

CRITERIA-I: CURRICULAR ASPECTS

A. Curriculum Design and Development

1. Number of Programmes where syllabus revision was carried out during the year - 9
2. Number of courses focusing on employability/entrepreneurship/ skill development offered by the Institution during the year - 796

Prog. Code	Programme Name	Year of introduction	Year of revision, if any	Percentage of content added or replaced
001	B.Tech in Computer Science & Engineering	2001	2022	10%
002	B.Tech in Information Technology	2001	2022	10%
003	B.Tech in Electronics & Communication Engineering	2001	2022	10%
004	B.Tech in Biotechnology	2002	2022	10%
006	B.Tech in Chemical Engineering	2002	2022	10%
007	B.Tech in Mechanical Engineering	2011	2022	10%
013	B.Tech in Civil Engineering	2011	2022	10%
016	B.Tech in Electrical Engineering	2012	2022	10%
055	B.Tech in Applied Electronics & Instrumentation Engineering	2001	2022	10%
305	B.Tech in Computer Science & Engineering (Data Science)	2021		
308	B.Tech in Computer Science & Engineering (Artificial Intelligence and Machine Learning)	2021		
309	B.Tech in Computer Science & Engineering (IoT & Cyber Security including Block Chain Technology)	2022		
311	B.Tech in Computer Science & Business Systems	2020		
102	M.Tech. in VLSI	2011		
103	M.Tech in Applied Electronics & Instrumentation Engineering	2006		
105	M.Tech in Electronics & Communication Engineering	2009		
110	M.Tech in Biotechnology	2007		
112	M.Tech in Computer Science & Engineering	2006		
999	M.Tech. in Renewable Energy	2016		
710	Masters in Computer Applications (2Year Program)	2020		

B. Academic Flexibility

1. Number of new courses introduced across all programmes offered during the year - 29
2. Number of Programmes offered through Choice Based Credit System (CBCS)/Elective Course System - 20

C. Curriculum Enrichment

1. Number of value-added courses for imparting transferable and life skills offered during the year - **211**
2. Number of students enrolled in those courses - **963**
3. Number of students undertaking field work/projects/ internships / student projects - **964**

D. Feedback System

1. Structured feedback and review of the syllabus (semester-wise) is obtained from Students, Teachers, Employers and Alumni
2. The feedback is collected and analyzed by IQAC and the same is made available on the website of the Institute.

CRITERIA-II: TEACHING-LEARNING AND EVALUATION

A. Student Enrollment and Profile

1. Number of students admitted (year-wise) during the year- **1010**
2. Number of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc.) as per the reservation policy during the year (exclusive of supernumerary seats)- **17**

B. Catering to Student Diversity

1. The institution assesses students' learning levels and organizes special programmes for both slow and advanced learners
 - 1.1. For slow learners
 - 1.1.1. Remedial Class
 - 1.1.2. Bridge course
 - 1.1.3. Soft skill class
 - 1.2. For advanced learners
 - 1.2.1. Value-added courses offered by NPTEL-SWAYAM
 - 1.2.2. Short-term training programs (STTP)
 - 1.2.3. Internships
2. Student - Teacher (full-time) ratio-
 - 2.1. Number of students - **4,131**
 - 2.2. Number of Teachers - **220**

C. Teaching- Learning Process

1. The Institute is following Outcome Based Education (OBE) as the teaching-learning pedagogy. Student-centric methods such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences.
2. Teachers use ICT-enabled tools including online resources for effective teaching and learning
 - 2.1. All the computer laboratories are equipped with a 1:1 student-to-computer ratio during classes, with computers having state-of-the-art configuration and LAN connectivity
 - 2.2. Classrooms with LCD projectors, Wi-Fi connectivity
 - 2.3. Faculty members use conventional methods and other methods that are interactive, collaborative and ICT-enabled such as Microsoft Teams, Google Classroom.
3. The Principal of the Institute, in consultation with the Deans, IQAC Coordinator, Registrar, Controller of Examinations, and Heads of Departments, prepares an academic calendar for every academic session in accordance with the guidelines notified by UGC, AICTE, and the affiliating university, namely, MAKAUT
4. Number of mentors - **220**
5. The teaching plan, in accordance with the syllabus, is prepared by each one of the faculty members.
6. Number of full-time teachers against sanctioned posts during the year - **220**

D. Evaluation Process and Reforms

1. Number of days from the date of last semester-end/ year- end examination till the declaration of results during the year - **31**
2. Number of students' complaints/grievances against evaluation against the total number who appeared in the examinations during the year - **805**

3. IT integration and reforms in the examination procedures and processes including Continuous Internal Assessment (CIA) have brought in considerable improvement in the Examination Management System (EMS) of the Institution

3.1. Key reforms implemented

3.1.1. Enhanced E-Governance - Filling examination forms, paying examination fees, issuing appointment letters for paper setters and examiners, marks submission, result processing and publication.

3.1.2. Focus on Continuous Evaluation

3.1.3. Special Supplementary Examinations

E. Student Performance and Learning Outcomes

1. Programme Outcomes, Course Outcomes and Program Specific Outcomes for all Programmes offered by the institution are stated and displayed through a wide range of platforms
 - 1.1. Website
 - 1.2. Classroom
 - 1.3. Laboratory
 - 1.4. Corridor Notice Board
2. The Institute has developed an indigenous automated attainment calculation sheet to track the students' attainment of programme outcomes and course outcomes.
3. Total number of final year students who passed in the examinations conducted by Institution
- 1049

CRITERIA-III: Research, Innovation and Extension

A. Promotion of Research and Facilities

Every quarterly meeting of the Board of Governors makes an assessment of the R&D activities of the institute and publications made in the quarter are placed before the BOG. When the members of the faculty complete Ph.D., their salaries are enhanced through increments in accordance with the University Grants Commission regulations. On the Foundation Day of the institute, members of the faculty making substantial contributions in research are identified and rewarded through Certificates and Cash Prizes.

B. Resource Mobilization for Research

1. Grants received from Government and Non-Governmental agencies for research projects, endowments, Chairs during the year (INR in Lakhs) - **206.48**
2. Number of teachers having research projects during the year - **2**
3. Number of teachers recognised as research guides - **28**
4. Number of departments having research projects funded by Government and Non-Government agencies during the year - **2**

C. Innovative Ecosystem

Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR), Entrepreneurship and Skill Development during the year - **23**

D. Research Publication

1. The Institution ensures implementation of its Code of Ethics for Research uploaded in the website through the following: Research Advisory Committee, Ethics Committee, and Plagiarism check through authenticated software
2. Number of research papers per teacher in CARE Journals notified on UGC website during the year - **0.35**
3. Number of books and chapters in edited volumes / books published per teacher during the year - **0.24**
4. Total number of Citations in Scopus during the year - **71**
5. h-index of Scopus during the year - **4**

E. Consultancy

Revenue generated from consultancy and corporate training during the year (INR in lakhs) - **34.414**

F. Extension Activities

1. Number of extension and outreach programmes conducted by the institution through NSS/NCC/Red Cross/YRC, etc. during the year (including Government-initiated programmes such as Swachh Bharat, AIDS Awareness, and Gender Sensitization and those organised in collaboration with industry, community and NGOs) - **42**
2. Number of students participating in extension activities during the year - **1128**

G. Collaboration

1. Number of collaborative activities during the year for research/ faculty exchange/ student exchange/ internship/ on-the-job training/ project work - **23**
2. Number of functional MoUs with institutions of national and/or international importance, other universities, industries, corporate houses, etc. during the year - **13**

CRITERIA-IV: INFRASTRUCTURE AND LEARNING RESOURCES

The Institute is located on 8.03 Acres of land on a lush green campus with huge physical infrastructure to accommodate all departments properly. All the buildings are aesthetically designed and the campus contains a fully air conditioned indoor auditorium having 500 seating capacity with all modern facilities. A beautiful playground also constitutes a part of the campus.

A. Physical Facilities

1. Number of classrooms and seminar halls with ICT-enabled facilities – **50**
2. Expenditure for infrastructure augmentation, excluding salary, during the year (INR in Lakhs) - **159.79**

B. Library (Departmental and Central)

1. Institutional Repository
 - 1.1. Question papers of all departments (all semesters) under autonomous HITK.
 - 1.2. Bibliographical data of the publications of the Academics and others of HITK have been uploaded.
 - 1.3. All online journals/ databases subscribed by HITK are listed with its respective URLs
 - 1.4. Course materials (National /International)
 - 1.5. Career Guidance
 - 1.6. List of CD/DVD
 - 1.7. NDLI services
 - 1.8. Alerting of new arrival of books
 - 1.9. Current content of journals
2. Library is automated using Integrated Library Management System (ILMS) – **Libsys**
3. Circulation of books handled using RFID-based cards and standard barcode-based cards.
4. Expenditure on purchase of books/ e-books and subscription to journals/e-journals during the year (INR in lakhs) - **16.17**
5. Number of teachers and students using the library per day during the year - **480**

C. IT Infrastructure

1. Student - Computer ratio
 - 1.1. Number of Students – **4131**
 - 1.2. Number of Computers – **1340**
2. Bandwidth of internet connection in the Institution - > **50 Mbps**

D. Maintenance of Infrastructure

Expenditure incurred on maintenance of physical and academic support facilities, excluding salary component, during the year (INR in lakhs) - **607.36**

CRITERIA-V: STUDENT SUPPORT AND PROGRESSION

A. Student Support

1. Number of students benefitted by scholarships and freeships provided by the Government during the year – **557**
2. Number of students benefitted by scholarships and freeships provided by the institution and non-government agencies during the year – **173**
3. The following Capacity Development and Skill Enhancement activities are organised for improving students' capabilities - Soft Skills, Language and Communication, Skills Life Skills (Yoga, Physical fitness, Health and Hygiene), Awareness of Trends in Technology
4. Number of students benefitted from guidance/coaching for competitive examinations and career counselling offered by the institution during the year - **356**

B. Student Progression

1. Number of outgoing students who got placement during the year – **776**
2. Number of outgoing students progressing to higher education – **53**
3. Number of students who qualified in state/ national/ international examinations (e.g.: IIT-JAM/NET/SET/JRF/ GATE /GMAT /CAT/ GRE/ TOEFL/Civil Services/State government examinations) during the year - **45**

C. Student Participation and Activities

1. Number of awards/medals for outstanding performance in sports and/or cultural activities at inter-university / state /national / international events (award for a team event should be counted as one) during the year – **25**
2. Representation of students in academic and administrative bodies/committees of the institution - The students, under the mentorship of faculty members manages the activities of 23 active student clubs or cells at the Institute
3. Number of sports and cultural events / competitions organised by the institution - **32**

D. Alumni Engagement

The Alumni Association of Heritage Institute of Technology, registered in the year 2007, is closely associated with various activities of the Institute.

CRITERIA-VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

A. Vision and Mission of the Institute

1. Vision

To prepare dynamic and caring citizens to meet the challenges of global society while retaining their traditional values

2. Mission

2.1. To prepare students with strong foundation in their disciplines and other areas of learning

2.2. To provide an environment for critical and innovative thinking, and to encourage life-long learning.

2.3. To develop entrepreneurial and professional skills.

2.4. To promote research and developmental activities and interaction with industry

2.5. To inculcate leadership qualities for serving the society

B. Strategy Development and Deployment

Implementation of e-governance in areas of operation - Administration Finance and Accounts, Student Admission and Support, Examination

C. Faculty and Staff Empowerment Strategies

1. Welfare measures for teaching and non-teaching staff and avenues for their career development/ progression -

1.1. Implementing QIP scheme of Govt. of India

1.2. Encouraging faculty members to complete their Ph.D. by granting special leave after registration for Ph.D.

1.3. Three additional increments in salary of the faculty members after completion of their Ph.D.

1.4. Promotion through the Career Advancement Scheme

1.5. Award of Excellence to the members of faculty and staff every year in different categories

1.6. Employees' Provident Fund

1.7. Gratuity

1.8. Group Accidental Insurance Policy

1.9. Transport facility from nearby bus stop

1.10. Psychological Counselling for the members of faculty and staff members

2. Number of teachers provided with financial support to attend conferences / workshops and towards payment of membership fee of professional bodies during the year - **38**

3. Number of professional development / administrative training programmes organized by the Institution for its teaching and non-teaching staff during the year - **15**

4. Number of teachers who have undergone online/ face-to-face Faculty Development Programmes during the year: (Professional Development Programmes, Orientation / Induction Programmes, Refresher Courses, Short-Term Course, etc.) - **68**

D. Financial Management and Resource Mobilization

1. Institution conducts internal and external financial audits regularly

2. Funds / Grants received from non-government bodies, individuals, and philanthropists during the year (INR in lakhs) - **22.78**

E. Internal Quality Assurance System

1. The IQAC is actively engaged in planning, guiding and monitoring on daily basis
 - 1.1. Policy Framing and Monitoring
 - 1.2. Curriculum Designing and Revision
 - 1.3. Support the Teaching-learning and research
 - 1.4. Stakeholder's feedback
 - 1.5. Collaborative quality initiatives with other institution(s)
 - 1.6. Development and maintenance of institutional database
 - 1.7. Documentation of various activities leading to quality improvement
 - 1.8. Preparation and submission of Annual Quality Assurance Report (AQAR) as per guidelines of NAAC
 - 1.9. Participation in NIRF
 - 1.10. Dissemination of information on various quality information to all stakeholders

CRITERIA-VII: INSTITUTIONAL VALUES AND BEST PRACTICES

A. Institutional Values and Social Responsibilities

1. Measures initiated by the Institution for the promotion of gender equity during the year –
 - 1.1. Ensuring that educational materials are free from gender stereotypes.
 - 1.2. Avoiding segregating boys and girls into separate lines, separating sports activities and mixing seating up in the classroom.
 - 1.3. Mixing boys and girls to work on projects together.
 - 1.4. Exploring gender concepts and roles from different communities.
 - 1.5. Helping students identify instances of gender bias, through awareness activities or historical events, laws and cultural changes.
 - 1.6. Internal Complaints Committee (ICC) for addressing any grievance related to gender issues and also conducting events to promote gender equality.
 - 1.7. Celebration of International Women's Day.
 - 1.8. Many of the academic departments are being headed by women members of the faculty.
Many of the student activity clubs are led by the girl students.
2. The Institution has facilities for alternate sources of energy and energy conservation - Solar energy, Biogas plant, Wheeling to the Grid Sensor-based energy conservation, Use of LED bulbs/ power-efficient equipment.
3. Solid Waste Management, Liquid Waste Management, Biomedical Waste Management, E-Waste Management, Waste Recycling, Hazardous Chemical Waste Management are in place.
4. Water conservation facilities available in the Institution - Rain water harvesting, Construction of tanks, Waste water recycling, Maintenance of water bodies and distribution system in the campus.
5. Green campus initiatives - Restricted entry of automobiles, Use of bicycles/ Battery-powered vehicles, Pedestrian-friendly pathways, Ban on use of plastic, Landscaping.
6. Quality audits on environment and energy undertaken by the institution - Green audit, Energy audit, Environment audit, Clean and green campus recognitions/awards, Beyond the campus environmental promotional activities.
7. The Institution has a disabled-friendly and barrier-free environment - Ramps/lifts for easy access to classrooms and centres, Disabled-friendly washrooms, Signage including tactile path lights, display boards and signposts.

B. Best Practices

1. Award of Excellence to the Members of faculty of the Institute.
2. A full-time Psychological Counselor has been appointed for regular interaction with the students, and members of faculty and staff.
3. Reform in Institutional Examination System through Full Proof Moderation of Question Papers by External Academicians.

Recommendations

- ① The institute should have a dedicated Innovation and Incubation centre.
- ② Faculty members are encouraged to publish more in ISI/SCIE journals.
- ③ Consultancy activities need to be increased.
- ④ There may be provision for the students to carry out internships for a full semester.
- ⑤ Efforts in entrepreneurship activities should be increased.
- ⑥ Efforts should be made to have industry-supported laboratories.

Date: 08/12/2023

Place: Kolkata





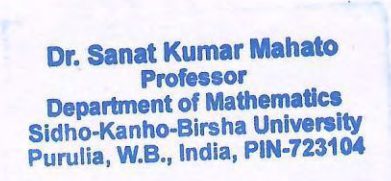
(Dr. Alope Kumar Sen)




(Dr. Sanat Kumar Mahato)

Dr. Sanat Kumar Mahato
Professor
Department of Mathematics
Sidho-Kanho-Birsha University
Purulia, W.B., India, PIN-723104

Signature of Audit team members:

External Auditors	Signature
<p>Dr. Alope Kumar Sen Former Professor and Director School of Management Science Bengal Engineering and Science University (Currently known as IEST Shibpur) Howrah-711103 West Bengal, India</p>	
<p>Dr. Sanat Kumar Mahato Professor & Head Department of Mathematics Sidho-Kanho-Birsha University Purulia, West Bengal, India PIN-723104</p>	  <p>Dr. Sanat Kumar Mahato Professor Department of Mathematics Sidho-Kanho-Birsha University Purulia, W.B., India, PIN-723104</p>




Principal
Heritage Institute of Technology