NETAJI SUBHASH ENGINEERING COLLEGE

Techno City, Garia, Kolkata – 700 152

IQAC Annual Report 2023-2024

The year 2023-2024 has been a momentous one for the Institute, marked by numerous milestones in academics, research, industry collaborations, student engagement, and faculty development. The Institute has made significant strides toward enhancing its academic and operational excellence, further establishing itself as a leading institution in the region.

Accreditation and National Recognition

The Institute received notable recognitions in 2023-2024, with four of its B. Tech programs (Biomedical Engineering, Computer Science & Engineering, Electronics & Communication Engineering and Electrical Engineering) successfully obtaining NBA (National Board of Accreditation) accreditation. This accomplishment underscores the Institute's commitment to providing high-quality education and meeting national standards for technical education.

Additionally, the Institute submitted the Self-Study Report (SSR) for the 2nd Cycle NAAC (National Assessment and Accreditation Council) Accreditation and qualified for the Peer Team Visit. This marks a significant step in furthering the Institute's academic credibility and aligning its quality practices with national benchmarks.

Furthering its commitment to academic excellence, the Institute registered for the NIRF-2025 (National Institutional Ranking Framework) rankings in both the Engineering and Innovation categories. This registration sets the stage for national recognition in these prestigious categories, emphasizing the Institute's commitment to continuous improvement and global competitiveness.

Industry Partnerships and Collaborations

The Institute continued to build and strengthen its industry ties through multiple Memoranda of Understanding (MOUs) signed with key organizations to enhance skill development, internships, and collaborative research projects. These collaborations play an instrumental role in bridging the gap between academic learning and industry practices.

SwitchoN Foundation was engaged for skill development initiatives, helping students develop practical, industry-ready competencies. Tata Community Initiative Trust was instrumental in providing the Microsoft Cyber Security Scholarship, fostering students' expertise in the highly sought-after domain of cybersecurity. Giby Technologies collaborated with the Institute to boost employability and R&D activities, ensuring students gain exposure to real-world industry challenges.

An MOU with the IC Design and Fabrication Centre, Jadavpur University facilitated training and certification in "VLSI Design and Microelectronics Technology" and "Embedded Systems and IoT," enhancing the technical skills of students in cutting-edge areas.

These industry tie-ups fostered an environment of academic and industry integration, enhancing the relevance and applicability of the Institute's educational programs.

Student Engagement and Holistic Development

The Institute prioritized holistic student development, recognizing the importance of comprehensive training beyond academic knowledge. Orientation programs and effective induction sessions were organized, covering essential topics such as Indian polity and society, anti-ragging, and mandatory requirements for academic success. Students were also introduced to Massive Online Open Courses (MOOCs), which offered honours credit points, value-added training, internships, and innovation opportunities.

Several initiatives were taken to promote entrepreneurship and innovation among students. Sessions on start-ups, prototyping, intellectual property rights, psychological counselling, hackathons, and yoga & meditation were organized. These initiatives aimed at fostering creativity, mental well-being, and entrepreneurial skills, nurturing students to become well-rounded professionals.

The Institute made strides in enhancing student employability by facilitating internships, industry visits, and training programs. A total of 85 internships, 26 fieldwork experiences, and 146 industry visits were arranged for students, providing hands-on exposure to real-world challenges. In addition, 125 students received Blockchain certifications from NIELIT, 275 students earned cloud computing certifications from Google Asia, and 35 students enrolled in a Japanese language program with Accenture. These initiatives contributed to the 237 successful placements, highlighting the Institute's commitment to improving career prospects for its students.

Research Excellence and Innovation

The Institute has placed a strong emphasis on research, which has resulted in significant achievements during the year. Five faculty members were awarded Ph.D. degrees, and 34 research papers were published in UGC-notified journals, with nine in international peer-reviewed journals. Additionally, 36 book chapters and 19 conference publications were completed, indicating the Institute's growing research output.

The Institute's commitment to innovation is also reflected in the receipt of two patents, further establishing its reputation as a centre of cutting-edge research and technological advancements. A major highlight was the ₹47.93 Lakhs research grant received from ANRF for the project titled "High-gain and wideband electronic beam-switching antennas for millimetre-wave 5G applications," showcasing the Institute's leadership in emerging technologies.

In addition to its research output, the Institute also focused on enhancing faculty knowledge through various professional development programs. Several faculty members participated in the AI & ML FDP, while four completed certification courses via the SWAYAM-NPTEL platform, contributing to their technical expertise. Additionally, the IEEE Branch chapter & IIC engaged in activities cantered around VLSI, high-frequency engineering, and AI/ML, further fostering academic excellence.

Faculty Development and Engagement

The Institute has made significant strides in faculty development, with 56 faculty members completing 116 Faculty Development Programs (FDPs) across various themes and platforms. These programs covered topics ranging from advanced technical subjects to human values in technical education. Notably, a 6-day FDP on Advanced Machine Learning was organized, with 48 faculty participants.

The Institute also provided opportunities for faculty members to interact with industry experts through 8 invited talks and 6 webinars on diverse topics. Additionally, a one-day workshop on Intellectual Property Rights (IPR) was conducted, highlighting the importance of intellectual property in academia and industry.

Infrastructure and Campus Development

In line with its commitment to providing a conducive learning environment, the Institute continued to upgrade its infrastructure. The campus saw enhancements in ICT-enabled classrooms, which were equipped with LCD projectors, and internet bandwidth was increased to 1 Gbps to support advanced learning and research activities. Computer labs were also upgraded with projector facilities, ensuring that students have access to modern learning tools.

The entire campus, including classrooms and laboratories, is now fully monitored by CCTV cameras, ensuring a safe and secure learning environment for students and faculty alike. The Institute also established an IPR Cell to encourage and manage intellectual property activities on campus, and relevant policies were revised to cater to the evolving needs of students, including the categorization of learners into slow and advanced learners.

Student-Industry Collaboration and Innovation Events

The Institute continued its efforts to bridge the gap between academia and industry by organizing numerous industry-oriented value-added training programs, internships, and fieldwork experiences. A total of 36 value-added training programs, 147 industrial training sessions, and 62 internships were provided, equipping students with practical knowledge and skills aligned with industry needs.

Under the aegis of the IIC & EDC, the Institute organized several impactful events, such as the Smart India Hackathon (SIH 2023), Hult Prize on Campus, and a Roadshow on Digital India RISC-V - VEGA Processors. Workshops on IT career success, blockchain, Lean Start-up, and MSME hackathons for women further promoted innovation and entrepreneurship among students.

Industry Visits and Collaborative Outreach

The Institute organized several industrial visits, such as an educational excursion to IIT Kharagpur and an industrial visit to Doordarshan Kendra, Kolkata, exposing students to real-world applications of their academic learning. The Google Cloud Community Day (GCCD) Extended Event and sessions on Lean Start-up and business development provided students with valuable insights into the latest industry trends.

The IEEE Student Branch Chapters organized various technical events, including the IEEE APS Distinguished Lecturer Talk, IEEE lectures, and membership development meetings. These activities promoted technical knowledge and collaboration with institutions like SAMEER, JU, MAKAUT, SNU, and CU, enhancing outreach programs and fostering knowledge exchange.

Conclusion

The Institute's continued focus on enhancing academic quality, fostering industry collaboration, supporting research excellence, and prioritizing student well-being and development has yielded significant progress in 2023-2024. Through accreditation, research achievements, industry partnerships, and holistic student development programs, the Institute has made substantial strides toward becoming a leading academic and research hub, contributing to both national and global advancements in technology and innovation.

NETAJI SUBHASH ENGG. C KOL-152

Roy
20/12/2024
Prof. (Dr.) SUKUMAR ROY
Co-ordinator-IQAC
Netaji Subhas Engineering College
Techno City, Garia
Kolkata-700 152