

# College of Engineering & Management, Kolaghat

## ANNUAL REPORT FOR THE ACADEMIC YEAR 2025-2026

**Presented by:** Prof. (Dr.) Dilip Kumar Gayen, Director

**Date:** 23rd September 2026

**Venue:** Balaka Mancha, KTPP Township, Kolaghat

**Occasion:** 29th Foundation Day Ceremony

### Distinguished Guests

The 29th Foundation Day Ceremony was graced by the presence of distinguished guests, including:

- Shri Bamdev Guchait, Zilla Parishad Sabhadhipati, Purba Medinipur
- Shri Subrata Maity, MLA, Panskura Purba
- Shri Debes Kumar Deb, General Manager, KTPS
- Mr. Hemanta Ghosh, alumnus of the College
- Mr. Kaustav Chakraborty, alumnus and Founder Director, Galaxias Lab
- Mr. Tapomoy Koley, Program Manager – Data Scientist, Capgemini, Kolkata

The celebration was attended by other distinguished dignitaries, students, parents, faculty members, alumni, and staff members.

### 1. Director's Foreword

This Annual Report captures a year of dedication, progress, and collective achievement at the College of Engineering & Management, Kolaghat during 2025–26. It reflects our continued commitment to excellence and growth in technical education.

The year was marked by

Our mission continues with resolve—to secure a distinguished place among the leading engineering institutions of the state and to achieve national recognition. The accomplishments outlined in this report reflect our determined steps toward that goal.

### 2. Institute Profile & Vision

- **Programs Offered:**
  - o **B.Tech:** Computer Science & Engg. (CSE) [Intake: 240], Electronics & Comm. Engg. (ECE) [60], Electrical Engg. (EE) [60], Mechanical Engg. (ME) [30], CSE (Artificial Intelligence & Machine Learning) [120].
- **Institute Vision:** Pursuing Excellence in Teaching-Learning Process to Produce High Quality Engineering Professionals.
- **Institute Mission:**
  - o To enhance the employability of our students by imparting high quality technical and professional education with continuous improvement in monitoring of students' performance as per the expectation of various stakeholders.
  - o To continuously upgrade, as well as broaden the knowledge base, along with promoting a culture of research for achieving excellence.

## Departmental Achievements

### Department of Computer Science & Engineering (HOD: Dr. Jaydev Mishra)

#### 1.1.1 Department Profile

- **Faculty Strength:** 26 (including 7 PhDs, 1 Ad-hoc, 1 Visiting)
- **Technical Staff:** 9
- **Vision:** Pursuing excellence in state-of-the-art teaching and dynamic learning in thrust technical domains ensuring production of technically high-quality Engineering Professionals.
- **Mission:** To produce globally equipped, high quality computer professionals in ever-changing technologies and to inculcate morally and socially committed resources for future generations.

#### 1.1.2 Program Objectives & Outcomes

- **Program Educational Objectives (PEOs):**
  - Provide a strong foundation in engineering fundamentals to formulate, analyze and solve problems related to computer hardware and software.
  - Provide adequate training on cutting edge technologies and soft skills to work as a team on global projects with leadership quality.
  - Promote students to be entrepreneurs having sound social values and ethics.
- **Program Specific Outcomes (PSOs):**
  - Empower students to analyse and appreciate evolving technologies to realize computer-based systems.
  - Enhance skills to adopt ever-changing technologies in solving challenging problems of societal significance.

#### 1.1.3 Key Academic & Research Achievements:

##### 1.1.3.1 Publications

- **Journal Publications (Total:11) :**
  1. T. Chattopadhyay and **D. K. Gayen**, “Binary increment operation using CRSOA-MZI switches”, Optics Communications, 584, 131800, July (2025). (SCI).
  2. **D. K. Gayen** and T. Chattopadhyay, “All-optical data authentication using carrier reservoir semiconductor optical amplifiers assisted Mach–Zehnder interferometers”, Optical and Quantum Electronics, 57, 641, November (2025). (SCI)
  3. **L. Datta**, S. Ghosh, S. Chakraborty, S. Nandi, “Deadline Constrained Modified Min-Min algorithm for Cloudlet Scheduling”, Research Digest on Engineering Management and Social Innovations, Volume: 02 Issue: 05, May, 2026, pp: 345 – 353
  4. **K. Sinha and D. Sinha Jana**, “Detection of synthetic or cloned voices using deep learning and acoustic feature analysis”, International Journal of Computer Applications, vol. 187, no. 17, pp. 47–52, July 2025.
  5. **K. Sinha and D. Sinha Jana**, “An intelligent flood monitoring framework using deep convolutional neural networks”, Journal of New Sciences and Computer Networks (JONSCN), vol. 11, no. 2, pp. 20–28, Aug. 2025.
  6. **K. Sinha and D. Sinha Jana**, “Adversarially robust mask generator: A secure encoder network for deep learning-based steganography”, International Journal of Technology & Emerging Research (IJTER), vol. 2, no. 4, pp. 78–87, Apr. 2026.

7. **K. Sinha and D. Sinha Jana**, “Rarity-aware spatiotemporal attention mechanisms for extreme rainfall prediction in the Indian subcontinent,” International Journal of Versatile Research and Analysis (IJVRA), vol. 4, no. 4, pp. 144–156, Apr. 2026.
8. P. Das, R. Mondal, S. De, **S. Chatterjee**, S. Mukherjee, “A Multimodal Predictive Framework for Early Detection of Anxiety Instability and Panic Attacks”, International Journal of Applied Resilience and Sustainability, Volume 2, Issue 2, pp. 631-644, August 2025, ISSN:3108-1622.
9. P Das, W Akram, A Ghosh, S Biswas, **S Chatterjee**, “Enhancing Diagnostic Accuracy: Leveraging Continuous pH Surveillance for Immediate Health Evaluation”, International Journal of Innovative Science and Research Technology, Volume: 10 Issue: 04, July, 2025, pp.7-12
10. **Puja Chowdhury**, Bidisha Maiti, Lab Kumar Modi, Siddhartha Chatterjee, “Artificial Intelligence for Sustainable Agriculture: A Review of Machine Learning and Deep Learning Techniques for Crop Growth and Yield Prediction”, International Journal of Applied Resilience and Sustainability, vol. 2, Issue. 3, pp. 176-207, May 2026. ISSN:3108-1622
11. P. Das, S. Roy, I. Pathak, S. Bhanja, **S. Chatterjee**, “Reinforcement Learning Driven Self-Evolving Trust Framework for Secure and Scalable Internet of Vehicles using Blockchain, IJISRT, Volume: 02, Issue: 03, pp: 1-15, May 2026.

● **Conference Papers (Total:10) :**

1. **L. Datta**, “A Novel Hybrid Scheduling Algorithm for Load Balancing in Cloud Computing”, 6th International Conference on Electronics and Sustainable Communication systems (IEEE), **2025**.
2. Acharya, D., Ganguly, R., Debnath, B., Hazra, **S., Chatterjee**, S., & Bhattacharyya, A. (2025, July). Class topper optimization algorithm based optimal cryptographic technique. In 2025 International Conference on Computing, Intelligence, and Application (CIACON) (pp. 1-6). IEEE.
3. Khanra, A. K., Kumar, M., Mandal, A., & **Chatterjee**, S. (2025, August). EfficientNetB0 vs. VGG16 vs. ResNet-50: Classification of Various Skin Diseases Using Deep Learning. In 2025 International Conference on Next Generation of Green Information and Emerging Technologies (GIET) (pp. 1-5). IEEE.
4. Das, S., Acharya, **S., Chatterjee**, S., Ghosh, R., & Naskar, A. (2025, July). Early Diagnosis: Alzheimer’s and Parkinson’s Disease Detection Using Machine Learning Techniques. In International Conference on Data Analytics and Insights (pp. 189-197). Singapore: Springer Nature Singapore.
5. Guha, S. K., Bhadra, S., Hazra, **S., Chatterjee**, S., & Bhattacharyya, A. (2025, April). Classical Optimization Problem Solution using Nature Inspired Algorithm. In 2025 International Conference on Recent Advances in Electrical, Electronics, Ubiquitous Communication, and Computational Intelligence (RAEEUCCI) (pp. 1-5). IEEE.
6. **Rupsa Sarkar and Jaydev Mishra**, “Dependency of Sentiment on its aspect using Large Language Model”, 4th World Conference on Information Systems for Business Management (**ISBM 2025**), September 24-26, **2025, Springer**.
7. Suman Kumar Mandal, Wendrila Biswas, Samuel Biswas and **Jaydev Mishra**, “Early Glaucoma Stage Diagnosis Using Novel Hybrid Deep Learning Framework”, 5th International

conference on Communication, Devices and Computing (ICCDC 2025), November 6-7, 2025, Springer.

8. Suman Kumar Mandal, **Jaydev Mishra** et al., “Autism Spectrum Disorder Detection from Facial Image Using Hybrid Model”, 2nd International conference on Artificial Intelligence and Sustainable Computing (AISC 2025), July 24-26, 2025, Springer.

9. **Soumitra De** and **Jaydev Mishra**, “Process of Imprecise Data using New Methods of Neutrosophic Set”, 10th International conference on ICT for Sustainable Development (ICT4SD 2025), July 17-19, 2025, Springer.

10. **Arunava Hatial**, “A Hybrid PSO-ANN Framework for Nonlinear Modeling of Urban Sprawl from Land Use and Socioeconomic Data: A Case Study of Jhargram, West Bengal”, 8th Regional Science & Technology Congress 2025-26, January, 2026

- **Books/Book Chapters (Total:1) :**

- Dey, S., **Chatterjee, S.**, Gupta, S., & Das, S. (2026). Adversarial Attacks and Defences in Security. Tiny Machine Learning: Fundamentals, Applications, and Security, 367-388 (Wiley Scrinever, USA).

- **Patents (Total:3) :**

- **D. K. Gayen** & Others, “Photonic Logic Circuit for Parallel XOR and XNOR Operations Using TOAD Tree Network”, PATENT APPLICATION PUBLICATION, INDIA, Application No.202531078395 A, The Patent Office Journal No. 35/2025 Dated 29/08/2025.
- **D. K. Gayen** & Others, “AI-Enabled Crop Yield Estimation Model”, PATENT APPLICATION PUBLICATION, INDIA, Application No.202531102573 A, The Patent Office Journal No. 44/2025 Dated 31/10/2025.
- **D. K. Gayen** & Others, ” An Artificial Intelligence Based System for Comment Sentiment Analysis”, PATENT APPLICATION PUBLICATION, INDIA, (21) Application No.202631062953 A; The Patent Office Journal No. 22/2026 Dated 29/05/2026.

#### **1.1.3.2 R&D Project:**

##### **1.1.3.3 Authored Book (Total: 2) :**

1. Foundations to Algorithmic Time Complexity Analysis: Mathematical Solutions and understanding by **Siddhartha Chatterjee** and Nayana Manna (S.K Kataria & Sons Publication, New Delhi). ISBN 13: 978-9349499775, ISBN 10: 9349499770.
2. Demystifying AI & Machine Learning: A Step-by-Step Question & Answer Guide by **Siddhartha Chatterjee** and Poushali Das (Techno World Publication, Kolkata), ISBN 13: 978-93-89314-79-3, ISBN 10: 978-9389314793.

##### **1.1.3.4 Indian Copyright**

#### **1.1.4 Faculty Achievements**

##### **1.1.4.1 Ph.D. Awarded:**

##### **1.1.4.2 FDP Participation: (Total: 55)**

FDPs attended by faculty across different domains.

(Highlights: Dr. Dilip Kr. Gayen - 4, Dr. Lipika Datta - 4, Prof. Kaushik Sinha - 4, Prof. Soumitra De - 3, Prof. Debalina Jana - 3, Prof. Siddhartha Chatterjee - 2, Prof. Arijita Ghosh - 5, Prof. Rupsa Sarkar - 5, Prof. Arunava Hatial - 3, Prof. Bidisha Maiti - 6, Prof. Puja Chowdhury - 5, Prof. Suity Roy – 5, Dr. Jaydev Mishra - 1, Dr. Tapas Kr. Maiti - 2, Dr. Chinmay Maiti - 2, Prof. Pallab Mandal - 1)

### 1.1.5 Student Achievements

#### **GATE Qualified:** 3 students

1. Shreya Bag - 2026 CSE - AIR: 21,411 Percentile: 90%
2. Subhayan Mishra - 2026 CSE - AIR: 23,082 Percentile: 89%
3. Mohammad Ahmed - 2026 CSE - AIR: 14,386 Percentile: 93.18%

#### 2. **Higher Studies:**

#### 3. **Publications with faculty:** Authored Book-1, Conference - 1.

### 1.1.6 Student Activities

#### 1. **Career-Upgrading Courses/Internships:**

#### 2. **Department Tech Magazine:** *Binary* (Odd Semester)

#### 3. **Wall Magazine:** *A-Yantrik* (Even Semester)

#### 4. **Hackathon V3.0:**

#### 5. **Coding Club:**

#### 6. **Departmental Innovation Council:** Entrepreneurial talks, project synopsis, and idea presentations.

### 1.1.7 Extension, Outreach & Collaborations

#### 1. **FDP Organized:**

#### 2. **Invited Talks:**

#### 3. **Outreach Deliberative Session: (Total: 2)**

- Invited Talk Title: “*Computational Complexity Analysis of Fast Matrix Multiplication: Discussion & Open Research Issues*” in an Online 5 Days FDP organized by Faculty of Engineering and Technology, Sharda University, Uzbekistan on 27th February 2026.

- Invited Talk Title: “*FMM: 56 Years of Math, Foundation, Open Challenge and AI Possibilities*” in the Short-Term Course on Applications of Agentic AI in Computation and Mathematical Society, Kolkata, India 30 June – 15 July, 2026.

## **Department of CSE(AIML) (HOD: Dr. Apurba Roy)**

### **1.1.1 Department Profile**

- Faculty Strength: 11 (including 2 PhDs)
- Technical Staff: 4

#### **Vision**

To be a Centre of Excellence in Computer Science, Artificial Intelligence, and Machine Learning through quality education, innovative and impactful research, strong industry–academia collaboration, and the development of competent, ethical, and socially responsible professionals equipped to address emerging global challenges through intelligent technologies.

#### **Mission**

**M1-** To provide quality education in Computer Science, Artificial Intelligence, Machine Learning, and emerging technologies through a robust curriculum, modern teaching practices,

and state-of-the-art laboratories, fostering strong theoretical knowledge and practical skills among students to keep pace with today's world of machine intelligence.

**M2-** To foster innovation, research, critical thinking, and lifelong learning through experiential and project-based education, interdisciplinary collaboration, and industry engagement, enhancing employability, entrepreneurship, and technological advancement.

**M3-** To develop competent, ethical, and socially responsible professionals with leadership, communication, and problem-solving skills, committed to sustainable development and meaningful contributions to industry, academia, and society.

### 1.1.2 Program Objectives & Outcomes

**PEO1:** Establish successful careers in industry, academia, entrepreneurship, or public service by applying strong foundations in Computer Science, Artificial Intelligence, Machine learning, and emerging computing technologies to solve complex engineering problems.

**PEO2:** Design, develop, and deploy innovative, reliable, and sustainable intelligent computing solutions through critical thinking, research, multidisciplinary collaboration, and the effective use of modern engineering tools.

**PEO3:** Demonstrate professionalism, ethical values, effective communication, leadership, teamwork, and a commitment to lifelong learning, enabling them to adapt to technological advancements and contribute responsibly to society.

### Programme Specific Outcomes (PSOs)

Upon successful completion of the **B.Tech. Programme in Computer Science & Engineering (Artificial Intelligence & Machine Learning)**, graduates will be able to:

**PSO1:** Apply the fundamental principles of **Computer Science, Artificial Intelligence, Machine Learning, Data Science, and Software Engineering** to analyze, design, develop, and optimize intelligent computing systems for solving complex real-world engineering problems.

**PSO2:** Design, implement, evaluate, and deploy **AI-driven and data-centric applications** using modern programming languages, development frameworks, cloud platforms, and advanced computational tools while adhering to professional ethics, cybersecurity practices, sustainability, and societal responsibilities.

### 1.1.3 Key Academic & Research Achievements:

#### Publications

#### Journal Publications Total: 7

(**Sushovan Das: 3, Lab Kumar Mudi:1, Suman Biswas: 2, Subhajit Ojha:1**)

1. **Sushovan Das** and U. K. Mondal, "Blockchain-implied Architecture for Secure and Energy Efficient Processing of IoT Data in Pervasive WSNs", JTIT, vol. 102, no. 4, pp. 50–60, Dec. 2025, doi: 10.26636/jtit.2025.4.2194.
2. Roy, B.B., Debnath, A., **Sushovan Das** et al. Advanced lossless audio codec utilizing adaptive clustering and delta addition techniques. Int. j. inf. tecnol. 18, 55–62 (2026). doi: 10.1007/s41870-025-02781-w
3. B. B. . Roy, **Sushova Das**, and U. K. Mondal, "TinyML-driven Sensor Nodes for Energy-efficient Acoustic Event Detection in Pervasive Acoustic WSNs", JTIT, vol. 100, no. 2, pp. 69–77, Jul. 2025, doi: 10.26636/jtit.2025.2.2084.

4. P. Chowdhury, B. Maiti, **L. K. Mudi**, and S. Chatterjee “Artificial Intelligence for Sustainable Agriculture: A Review of Machine Learning and Deep Learning Techniques for Crop Growth and Yield Prediction”, Deep Science Publishing, Vol. 02, Issue 3, pp. 176–207
5. S. Chatterjee, R. Ghosh, A. Das, J. Deuri, and **S. Biswas**, Analysis of blow-up situation in finite automata in Analysis of blow-up situation in finite automata, Deep Science Publishing, Vol. 2, No. 2, PP 599–617, March 2026
6. Monojit Manna, Debraj Roy, Lina Mondal, **Suman Biswas**, and Anwesa Naskar, The Role of Artificial Intelligence IoT and Smart Drones to Enhance Organ Preservation and Transportation in Healthcare Innovation, Journal of Research and Innovation in Technology, Commerce and Management (JRITM), Volume 2, Issue 6, PP 2608–2621, 2025
7. P. Das, **S. Ojha**, A. Bhattacharyya, R. Ghosh, A. Naha, R. Bhattacharyya, T. Chakraborty, A. Chakraborty, C. Karmakar, and S. Chatterjee, “Bhabanipur Assembly Election Digital Twin: A GEO-Spatial Multimodal Artificial Intelligence Structure”, International Journal of Creative and Open Research in Engineering and Management, Vol. 02, pp. 1–13, 2026

#### **Book Chapter : [Total:2]**

1. **Sushova Das.**, Mondal, U.K., Roy, B.B. (2025). Energy Efficient Lossless Audio Encoder for IoT Enable Devices. In: Majumder, M., Zaman, J.S.U., Ghosh, M., Chakraborty, S. (eds) Computational Technologies and Electronics. ICCTE 2023. Communications in Computer and Information Science, vol 2377. Springer, Cham. [https://doi.org/10.1007/978-3-031-81981-0\\_10](https://doi.org/10.1007/978-3-031-81981-0_10)
2. **Sushova Das** Roy, B.B., Debnath, A., Mondal, U.K. (2026). Efficient Audio CODEC for IoT Devices - Leveraging GANs, Adaptive Quantization and Arithmetic Coding. In: Chandra Mondal, K., Bhattacharya, M., Bhaumik, P., Mukhopadhyay, S., Mandal, J.K., Dutta, P. (eds) Computational Intelligence in Communications and Business Analytics. CICBA 2025. Communications in Computer and Information Science, vol 2863. Springer, Cham. [https://doi.org/10.1007/978-3-032-17184-9\\_26](https://doi.org/10.1007/978-3-032-17184-9_26)

#### **Conference [ Total:5]**

##### **Sushovan Das:3, Alok Ranjan Pal: 2**

1. **Sushovan Das**, Uttam Kr. Mondal. “Secure Multi-channel Audio Broadcasting in Wireless Sensor Networks: A Machine Learning-Enabled Encoding Approach”, ICACA 2026, Jharkhand University. Springer book series Lecture Notes in Networks and Systems
2. **Sushovan Das**, Uttam Kr. Mondal. “Blockchain Implied Acoustic Sensor Data Integration in Decentralized Pervasive Wireless Sensor Network”, ICACA 2026, Jharkhand University. Springer book series Lecture Notes in Networks and Systems
3. **Sushovan Das**, Uttam Kr. Mondal. “A Speech-Driven Context-Aware Transformer Framework for Behavioural Risk Detection in Conversational Data”, ICACA 2026, Jharkhand University. Springer book series Lecture Notes in Networks and Systems
4. Priyanka Ghosh, Upama Chatterjee, Antara Pal, **Alok Ranjan Pal**, Diganta Saha, “A Deep Learning based Approach to Sentiment Analysis through Video Captioning,” In: 4th Doctoral Symposium on Human Centered Computing (HUMAN 2026), March, 2026
5. **Alok Ranjan Pal**, Anasuya Sengupta, Antara Pal, Arghya Das, Diganta Saha, “Preparing and Annotating a Set of Collocating Words for Context Analysis using Eugene Nida Classification Model,” In: 2nd International Conference on Computational Intelligence and Information Retrieval (CIIR 2026), May 2026

## **Patent [ Total:2]**

### **Sushovan Das (2)**

1. “SYSTEM AND METHOD FOR AUTHENTICATED SINGLE-PATH TRANSMISSION OF SEMANTIC ACOUSTIC DATA IN WIRELESS SENSOR NETWORK” Sushovan Das, Uttam Kr Mondal Patent ID - 202631033935 A, Journal No. 18/2026 Dated 01/05/2026
2. “Photonic Logic Circuit for Parallel XOR and XNOR Operations Using TOAD Tree Network” Prof. (Dr.) Dilip Kumar Gayen, Dr. Arunava Bhattacharyya, Prof. Satyajit Bhunia and Prof. Sushovan Das Application No. 202531078395 A The Patent Office Journal No. 35/2025 Dated 29/08/2025

## **R & D Project [ Total:1]**

### **Alok Ranjan Pal(1)**

1. **Alok Ranjan Pal:** Air Pollution Monitoring and Digital Alerting of Colony Residents, College of Engineering & Management, Kolaghat (Through R&D Cell), 2026 , **Ongoing**

### **FDP (Total: 20)**

[ Alok Ranjan Pal (3), Sudipta jana (3), Atul Talukder (3), Suman Biswas(2), Lab Kumar Mudi (4), Subhajit Ojha (3), Apurba Roy (2) \*\*]\*\*

### **Alok Ranjan Pal (3)**

FDP on Generative AI Unlocked with Large Language Models organized by Department of CSE (AI & ML), Narula Institute of Technology from 08th to 12th September, 2025

Nurturing a Data Culture for the Digital Era: FDP on Responsible Data Science , Cyber Ethics and it's Commercialization organized by Brainware University, Bachelor of Technology in Computer Science & Engineering - Data Science from July 07 2025 to one Week

Five Day Faculty Development Program on Emerging Trends in Mathematical Research organized by Department of Mathematics, SriChandrasekharendra Saraswathi Viswa Mahavidyalaya from 19.8.2025 to 23.8.2025

### **Sudipta jana (3)**

FDP on Embedded Systems and IoT Organized by Jaypee University Of Engineering & Technology , Guna from May 26 - June 1, 2026

STTP on “Smart Electronic Devices and Future Computing Paradigms” Organized by Bengal College Of Engineering & Technology Durgapur from 16-20, June 2026

FDP on Future Industries with Agentic AI, IoT, and Green Intelligent Technologies Organized by Department of CSE (IoT, CS, BT), Institute of Engineering and Management, New Town in association with HRDC, IEM-UEM Group from 15-19, June 2026

### **Atul Talukder (3)**

FDP on Embedded Systems and IoT Organized by Jaypee University Of Engineering & Technology , Guna from May 26 - June 1, 2026

FDP on Smart Electronic Devices and Future Computing Paradigms organized by The Institute of Engineers (India), Durgapur Local Centre & Department of CSE, IT and CSE (AI/ML) Bengal College of Engineering and Technology, Durgapur from 16-20, June 2026

FDP on Future Industries with Agentic AI, IoT, and Green Intelligent Technologies Organized by Department of CSE (IoT, CS, BT), Institute of Engineering and Management, New Town in association with HRDC, IEM-UEM Group from 15th June -19th June, 2026

**Suman Biswas(2)**

FDP on Embedded Systems and IoT Organized by Jaypee University Of Engineering & Technology , Guna from May 26 - June 1, 2026

International Faculty Development Programme on Emerging Computational Paradigms and Research Frontiers Organized by Bengal College of Engineering and Technology, 2026,

**Subhajit Ojha (3)**

One week Faculty Development Program on Embedded Systems and IoT Organized by Jaypee University of Engineering & Technology, Guna, 2026

One week FDP on Emerging Computational Paradigms and Research Frontiers Organized by Bengal College of Engineering and Technology, Durgapur, 2026

One week FDP on Emerging Research Trends in Super-computing, AI, and Data Science Organized by Amity University Rajasthan (ATAL Academy), 2026

**Lab Kumar Mudi (4)**

One week Faculty Development Program on Embedded Systems and IoT Organized by Jaypee University of Engineering & Technology, Guna, 2026

Six days FDP on Next GEN Computing HPC, AI & Quantum Technologies Organized by AICTE Training and Learning (ATAL) Academy; G L Bajaj Group of Institutions, 2026

Six days FDP on Advanced Perspectives in IOT Organized by AICTE Training and Learning (ATAL) Academy; Government College of Engineering Station, 2026

One week FDP on “Future Industries with Agentic AI, IoT, and Green Intelligent Technologies“ Organized by Department of CSE (IoT, CS, BT), Institute of Engineering and Management, New Town in association with HRDC, IEM-UEM Group, 2026

**Apurba Roy (2)**

Participated in One week FDP on “Embedded Systems and IoT” held during May 26 to June 1, 2026, organized by Department of ECE of Jaypee University of Engineering & technology.

Participated in the 5-Days Online STTP on “Smart Electronic Devices and Future Computing Paradigms” held during 16-20, June 2026, Organized by the Institution of Engineers (India), Durgapur Local Centre & Department of CSE, IT and CSE (AI/ML) of Bengal College of Engineering and Technology, Durgapur, technically sponsored by IEEE EDS Kolkata Chapter, from 16-20, June 2026.

**Skill Development:**

Mr. Alok Maiti has completed a Network administration course from TCSiON in 2026.

**Department of ECE (HOD: Dr. Samiran Pramanik)****1.1.1 Department Profile**

- **Faculty Strength:** 13 (including 4 PhDs)
- **Technical Staff:** 5 (including 1 PhD)
- **Vision:**

Pursuing Excellence in Teaching-Learning Process to Produce High Quality Electronics and Communication Engineering Professionals.

- **Mission:**

To enhance the employability of our students by strengthening their creativity with different innovative ideas by imparting high quality technical and professional education with continuous performance improvement monitoring systems.

To carry out research through constant interaction with research organizations and industries.

### 1.1.2 Program Objectives & Outcomes

- **Program Educational Objectives (PEOs):**

**PEO-1:** Apply their technical expertise and analytical skills in Electronics, Communication, and related fields for solving complex engineering problems in industries or pursuing higher studies and research.

**PEO-2:** Exhibit professional ethics, communication, and leadership skills while working in interdisciplinary teams and diverse environments.

**PEO-3:** Demonstrate innovation and entrepreneurship, contributing to the development of sustainable and socially relevant technologies.

**PEO-4:** Engage in lifelong learning through advanced degrees, certifications, or self-learning to stay updated with technological advancements.

- **Program Specific Outcomes (PSOs):**

**PSO-1:** An ability to design and conduct the experiments, analyse and interpret the data using modern software or hardware tools with proper understanding (basic conceptions) of Electronics and Communication Engineering.

**PSO-2:** Ability to identify, formulate & solve problems and to apply the knowledge of electronics and communication to develop techno-commercial applications.

### 1.1.3 Key Academic & Research Achievements:

#### 1.1.3.1 Publications

#### **Journal Publications (Total: 3):**

- **D. K. Dey**, B. Prasad, P. Sarkar, G. Palai, J. S. N. Achary, and M. Pal, “Efficient photonic integrated circuit for enhanced optical communication system,” *J Opt*, Apr. 2025, doi: 10.1007/s12596-025-02680-0..
- **D. K. Dey**, B. Prasad, G. Palai, and P. Sarkar, “Understanding of efficient optical circuit using silicon waveguide at third communication window,” *J Opt*, Sep. 2024, doi: 10.1007/s12596-024-02189-y.
- S. Rana, **S. Pramanik**, D. Mitra, and C. Koley, “Design and Analysis of Multifunctional Metasurface for Linear and Circular Polarized Incident Wave,” *RADIOENGINEERING*, vol. 34, no. 4, pp. 575–582, Dec. 2025, doi: 10.13164/re.2025.0575.

- **Books/Book Chapters (Total: 4):**

**D. K. Dey**, B. Prasad, G. Palai, and P. Sarkar, “High-Efficiency Optical Polarizer using Silicon based 2D Device for Photonic Integrated Circuits,” *Computing, Communication and Intelligence*. CRC Press, pp. 142–146, Feb. 23, 2026. doi: 10.1201/9781003768654-31.

**S. Pramanik** et al., “Study on Bandwidth Tuning Metasurface with Polarization Conversion Characteristics,” *Lecture Notes in Networks and Systems*. Springer Nature Singapore, pp. 509–516, 2025. doi: 10.1007/978-981-96-5918-0\_43.

**S. Bhunia** et al., “Study on Bandwidth Tuning Metasurface with Polarization Conversion Characteristics,” *Lecture Notes in Networks and Systems*. Springer Nature Singapore, pp. 509–516, 2025. doi: 10.1007/978-981-96-5918-0\_43.

**D. Das** et al., “Study on Bandwidth Tuning Metasurface with Polarization Conversion Characteristics,” *Lecture Notes in Networks and Systems*. Springer Nature Singapore, pp. 509–516, 2025. doi: 10.1007/978-981-96-5918-0\_43.

#### **Patents (Total: 1):**

Dilip Kumar Gayen, Arunava Bhattacharyya, **Satyajit Bhunia** and Sushovan Das, *Photonic Logic Circuit for Parallel XOR and XNOR Operations Using TOAD Tree Network*, The Patent Office Journal No. 35/2025 Dated 29/08/2025.

#### *1.1.4 Faculty Achievements*

##### **1.1.4.1 FDP Participation:**

**19 FDPs attended by faculty across different domains.**

(Highlights: Dr. Hirak Kumar Maity – 1, Dr. Seba Maity – 1, Dr. Sabitabrata Dey – 3, Prof. Sukes Maity – 2, Prof. Dipankar Saha – 2, Prof. Soumi Ganguly – 2, Dr. Samiran Pramanik – 2, Prof. Paramita Mukherjee – 2, Prof. Satyajit Bhunia – 2, Prof. Dipan Kumar Dey - 2)

#### *1.1.5 Student Achievements*

**GATE Qualified:** 02 students

**Higher Studies:** 1 students (M.Tech at IIT, Kgp)

**Publications by Students:** 1 (presented at international conferences in collaboration with faculty)

#### *1.1.6 Student Activities*

- **Career-Upgrading Courses/Internships:** 81 students of final year (2022-26 Batch) completed Industrial Training in some flourishing and emerging domains of Electronics (VLSI, Embedded Systems etc.) from some reputed companies/ institutions like Jadavpur University, MSME Tool Room – Kolkata, BSNL etc.
- **Department Tech Magazine:** *OHMs: Our Hardware Minds* published on 15th September 2025
- **Hackathon:**
  - 1) One team from ECE 3rd Year (2023-27 Batch) participated in XPELERATE 2025 India's Premier Oracle Apex Hackathon and secure a position among top 10 all over India.
  - 2) One team from ECE 3rd Year (2023-27 Batch) participated in Smart India Hackathon 2025 in the last year.
  - 3) One team of 6 members (3 students from ECE 3rd year and 3 students from ECE 4th year) participated in Inter-college Hackathon organized by Technical Activities Committee of CEMK on 18th April 2026 and secured 2nd position.
- **Coding Contest:** 6 students from ECE 2nd Year participated in the Coding Contest in C 2026 organized by TAC on 17th June 2026.

#### *1.1.7 Extension, Outreach & Collaborations*

- **Invited Talks:**
  - o Mr. Kishan Kumar, Ex-System Engineer @ TCS– 11-02-2026

## Department of Mechanical Engineering (HOD: Dr. Deb Kumar Adak)

### 1.1.1 Department Profile

- **Faculty Strength:** 07 (including 2 PhDs)
- **Technical Staff:** 5
  - **Vision:** Better employability and promoting a culture of research in the field of Mechanical Engineering.
  - **Mission:**
    1. To impart quality education to the students and enhance their knowledge, skill and attitude to make them technically competent mechanical engineers globally.
    2. To enhance employability of students in industry, educational and research organisations in India as well as in abroad by the method of continuous evaluation and improvement.

### 1.1.2 Program Objectives & Outcomes

- **Program Educational Objectives (PEOs):**
  1. Global Engineers.
  2. High level of knowledge with social value and ethics.
  3. Competency and continuous learning capability.
- **Program Specific Outcomes (PSOs):**
  1. Analyze, design and evaluate thermal and fluid system.
  2. Design mechanical component and systems, plan for manufacturing by using modern methods.

### 1.1.3 Key Academic & Research Achievements:

#### *1.1.3.1 Publications*

- **Journal Publications (Total- 1):**
  1. **Deb Kumar Adak**, Bidhan Chandra Gayen, Santanu Das and Barun Halder. “Experimental investigation into abrasive jet drilling on soda lime glass at 8 kg/cm<sup>2</sup> system pressure”, Reason A Technical Magazine, 2026, ISSN: 2277-1654. (accepted)
- **Conference Papers (Total- 4):**
  1. **Deb Kumar Adak**, Alakesh Maity, Saikat Jana and Santanu Das, “An investigation on hot air abrasive jet machining on soda lime glass using silicon carbide abrasive”, Page no. 151, All India Manufacturing Technology, Design & Research Conference (AIMTDR-2025), IIT Indore, 11-13 Dec, 2025.
  2. **Deb Kumar Adak**, Barun Halder and Santanu Das, “Surface generation on 316 stainless steel using silicon carbide abrasive”, 5th Research Colloquium (RESCOL-V), BIT Mesra, Ranchi, 13-14 July, 2025. **Awarded with 1st prize in the category.**
  8. **Koushik Mondal, Tarun Kanti Pal** and Himadri Chattopadhyay, “Transport phenomena under impinging annular jets of power law fluids” In proceedings of the 28th National and 6th International ISHMT-ASTFE Heat and Mass Transfer Conference, Jodhpur, 2025, (IHMTTC-2025). pp 393-398.
  9. **Koushik Mondal, Tarun Kanti Pal** and Himadri Chattopadhyay, “Numerical investigation of heat transfer and fluid flow under impinging annular jets of power-law fluids” In the proceedings of the 3rd International Conference on Mechanical Engineering, Jadavpur, 2026, (INCOM-2026).
- **Books/Book Chapters (Total- 2):**

1. **Deb Kumar Adak**, Bidhan Chandra Gain, Santanu Das, Barun Haldar, “Surface preparation with abrasive jet erosion on SS 316 using silicon carbide”, Page No. 495-505, Advanced Engineering Optimization Through Intelligent Techniques, Ravipudi Venkata Rao, Jan Taler, Dawid Taler, **Springer Nature** Singapore Pte Ltd. [https://doi.org/10.1007/978-981-96-8070-2\\_39](https://doi.org/10.1007/978-981-96-8070-2_39).

5. **Deb Kumar Adak**, Sourav Misra, Santanu Das, Naser A. Alsaleh, Barun Haldar, “Optimization of abrasive jet drilling on alumina plate using silicon carbide abrasive”, Page No. “Advances and Futuristic Trends in Machining Volume-II”, B. Bhattacharyya, N. K. Jain, M. Vashista, M. Z. K. Yusufzai, **Springer Nature** Singapore Pte Ltd. [https://doi.org/10.1007/978-981-96-8372-7\\_3](https://doi.org/10.1007/978-981-96-8372-7_3).

#### **1.1.3.2 R&D Project:**

**Deb Kumar Adak**, “Modification of abrasive jet machining setup with hot air system”, **Student project, R&D Cell, CEMK** – Cost: ₹28,000.

#### *1.1.4 Faculty Achievements*

##### **1.1.4.1 Ph.D. Awarded:**

1. Prof. Deb Kumar Adak (July 2025)

##### **1.1.4.2 FDP Participation:**

Total 13 FDPs attended by faculty across different domains.

(Highlights: Dr. Deb Kumar Adak – 3, Dr. Tarun Kanti Pal – 3, Prof. Sudip Bandyopadhyay – 2, Prof. Koushik Mondal – 1, Prof. Tanushree Jana – 1, Prof. Akhilesh Singh – 3.

#### *1.1.5 Student Achievements*

- **GATE Qualified:** 2 students
- **Higher Studies:** 1 student (M.Tech at ISM)
- **Publications by Students:** 2 (presented at international conferences in collaboration with faculty)

#### *1.1.6 Student Activities*

- **Career-Upgrading Courses/Internships:** 18 students completed AI, ML, Web Development, Cybersecurity, and Hackathon programs through IIT Kharagpur, ISRO, Goldman Sachs, and other platforms.

## **Department of Basic Science and Humanities (HOD: Dr. Amit Kumar Jana)**

### **1.1.1 Department Profile**

- **Faculty Strength:** 24 (including 9 PhDs, 10 Visiting)
- **Technical Staff:** 4
- **Vision:** Pursuing Excellence in Teaching-Learning to Produce High Quality Engineering Professionals.
- **Mission:** Imparting knowledge of Basic Science for its effective applications in the Engineering Disciplines and inculcating humanitarian values and concern for the environment among the students.

### **1.1.2 Program Objectives & Outcomes**

#### **Program Educational Objectives (PEOs):**

1. Provide a strong foundation in engineering fundamentals to formulate, analyze and solve problems related to computer hardware and software.

2. Provide adequate training on cutting edge technologies and soft skills to work as a team on global projects with leadership quality.
3. Promote students to be entrepreneurs having sound social values and ethics.

#### **Program Specific Outcomes (PSOs):**

1. Empower students to analyse and appreciate evolving technologies to realize computer-based systems.
2. Enhance skills to adopt ever-changing technologies in solving challenging problems of societal significance.

#### **1.1.3 Key Academic & Research Achievements:**

##### *1.1.3.1 Publications*

#### ● **Journal Publications (Total: 9):**

Pijus Ghorai ,Biswajit Jana,Shubhankar Ghorai , Jhuma Ganguly. Synthetic strategy for multimodal –NH<sub>2</sub> functionalized chitosan-based materials towards sustainable evolution. *Carbohydrate Research*. Volume 552, 2025, Article: 109482.

Brojendra Nath Dey, **Asish Mitra**. Reimagining Indian Knowledge Systems: Integrating Timeless Wisdom into Contemporary Global Thought. *KRONIKA JOURNAL*, 25, 2025, 400-418.

Sombit Pramanik, Snehasish Biswas, Soumyadeep Jana, **Asish Mitra**. Colorectal Cancer (CRC) Detection using Convolutional Neural Network (CNN). *Journal of Mechanics of Continua and Mathematical Sciences*, 20, 2025, 158-166.

Brojendra Nath Dey, **Asish Mitra**. Rediscovering Traditional Knowledge Systems For Contemporary Global Sustainability. *Int. J. of Creative Research Thoughts*, 13, 2025, 36-48.

Brojendra Nath Dey, Ananta Kumar Das, Atanu Pal, **Asish Mitra**. Modeling and Simulation of Smart Technology for Sustainable Utilization of Municipal Solid Waste: A Case Study of Bishnupur Municipality. *Int. J. of Latest Technology in Engineering, Management & Applied Science (IJLTEMAS)*, 15, 2026, 929-932.

Poushali Das; **Avishake Kar**; Ipsita Pathak; Shibani Mukherjee; Siddhartha Chatterjee. Decoding Complexity and Emotion: A Computational Linguistic Approach to Sentence Comprehensibility and Writer Affect. *International Journal of Innovative Science and Research Technology*, Volume 10, 2025, 423-428.

Arunima Banerjee, Nitu Saha, Washim Akram, **Saundarya Biswas**, Siddhartha Chatterjee. Handwritten Digit Pattern Recognition by Hybrid of Convolutional Neural Network (CNN) and Boosting Classifier. *International Journal of Innovative Science and Research Technology (IJISRT)*, Volume 10, 2025, 2456-2165.

**Saundarya Biswas**, Nitin Liladhar Rane, Jayesh Rane. Enhancing customer experience , engagement , value creation , and loyalty through artificial intelligence and machine learning in CRM. *International Journal of Applied Resilience and Sustainability*, Volume 2 , Issue 2, Pages 473-502.

Sreya Pal, Rupsa Sanyal, Sanchayita Shit, **Asish Mitra**, Brojendra Nath Dey, Design and Development of an IoT-Enabled Arduino Uno-Based Intelligent Medical Waste Collection and Monitoring System with Android Application Support. DOI: 10.51583/IJLTEMAS. Int. J. of Latest Technology in Engineering, Management & Applied Science (IJLTEMAS), ISSN 2278-2540 15, 6, June 2026 2645-2653.

- **Conference Papers (Total: ):**

“A Comparative Study of Classical Theory and Machine Learning for Nanofluid Viscosity Prediction, Fourth International Conference on Advancements in Science, Engineering and Technology (ICASET 2026), took place on June 26–27, 2026, at the Vidya Vihar Institute in Purnea, Bihar, India.

**1.1.3.2 R&D Project: (ongoing)**

1. Materials-Informed and Quantum Machine Learning Framework for Mechanical Property Prediction of Engineering Materials – Cost: ₹50,000. P.I - Dr. Anirban Das
2. Modelling the axisymmetric spread of a contagious virus considering the effect of lockdown and vaccination- a roadmap for the future. – Cost: ₹50,000. P.I - Dr. Shibam Manna

*1.1.4 Faculty Achievements*

**1.1.4.2 FDP Participation:**

23 FDPs attended by faculty across different domains.

(Highlights: Prof. Anirban Das – 3, Prof. Indrajit Ghosh – 1, Prof. Amit Kumar Jana - 1, Prof. Avishake Kar – 1, Prof. Saundarya Biswas – 7, Prof. Partha Pratim Mitra – 1, Prof. Arko Banerjee – 1, Prof. Mallika Panigrahi - 2, Prof. Snehasish Bose – 4, Prof. Shibam Manna - 2)

*1.1.7 Extension, Outreach & Collaborations*

- **FDP Organized:**

- **Invited Talks:**

- Webinar was organized on “Excitonic Photovoltaic Technology: Development, Structure, Working Mechanism, Materials, Optimization, and Device Fabrication” on 23rd December, 2025. Speaker: Dr. Asit Patra, Senior Principal Scientist, NPL, New Delhi.

Convenor: Dr. Amit Kumar Jana

- Webinar was organized on “Astronomy and Indian Space Programs” on 28th January, 2026. Speaker: Prof. Ranjeev Mishra, Senior Professor, Inter-University Centre for Astronomy and Astrophysics, Pune. Convenor: Dr. Asish Mitra

## **Department of Electrical Engineering (HOD: Dr. Debiprasad Chakrabarty)**

### **Department Profile**

Faculty Strength: 10 (One Associate Professor, 8 Assistant Professor, 3 PhDs and one Visiting Professor)

Technical Staff: 5

No of Students:123

### **Departmental Vision:**

To produce highly skilled, value-driven and best quality Electrical Engineers by pursuing excellence in teaching-learning process.

### **Departmental Mission:**

1. To enhance the competitiveness of our electrical engineers in the current field by maintaining excellent academic environment that promotes continuous up gradation in learning and research through constructive interaction between students, faculty, staff, industry and community.

2. To continuously upgrade and broaden the knowledge base of our students by encouraging innovative ideas, problem solving skills, utilizing the available resources to the best and understanding their ethical responsibilities.

### **Program Specific Outcome (PSOs):**

PSO1: Students will be creative enough to solve the complex problems by applying professional and analytical approach.

PSO2: Students should be imparted with the state-of-the-art industry development so that they become more competent, rather being creative and imaginative electrical engineers, employable in fields of design, research, manufacturing, safety, quality and technical services.

PSO3: Students should be encouraged for higher level of learning so that they become competent enough for pursuing higher studies in electrical and associated fields of engineering.

### **Departmental Achievements**

In the Academic year 2025-26, Department of Electrical Engineering achieved NBA, for a period of three years, from 1st January, 2026 to 31st December, 2028. The Heads of the Departments sincerely appreciate the dedicated efforts of all faculty members, and staff of the Electrical Engineering for achieving this important academic milestone.

The Department also appreciate for the mentorship and guidance provided by Prof. Lipika Datta and Director, Prof. Dilip Gayen who supported and guided departments during the accreditation process.

This collective achievement stands as a testimony to effective teamwork, academic leadership, and a shared vision of excellence across departments.

### **Key Academic & Research Achievements:**

#### *Publications*

#### *Journal Publications: 1*

Prof. Debiprasad Chakrabarty (First Author), peer-reviewed Journal, Impact Factor = 3  
*Manipulating magnetic fluid droplets on a configurable, multitasking surface microfluidic application, Dr. Debiprasad Chakrabarty, Dr. N Chakraborty, R Ganguly, Journal of Magnetism and Magnetic Materials, 644, 173927, 2026, <https://doi.org/10.1016/j.jmmm.2026.173927>.*

### **Conference Papers (Total: 10):**

Prof. Tirtha Sankar Daphadar, EE, AP

1. A. K. Mondal, T. Santra and **T. S. Daphadar**, “Mitigating Transformer Inrush Currents Using Passive Magnetic Fault Current Limiter,” *2025 International Conference on Computer, Electrical & Communication Engineering (ICCECE)*, Kolkata, India, 2025, pp. 1-5, doi: 10.1109/ICCECE61355.2025.10940168.

2. **T. S. Daphadar**, A. B. Choudhury, T. Santra and S. Das, “Novel Adaptive PSO for Parameter Tuning in Superconducting Fault Current Limiters,” *2026 International Conference on Computing, Electronics & Communications Engineering (ICCECE)*, Kolkata, India, 2026, pp. 1-7, doi: 10.1109/ICCECE69715.2026.11492910.

3. **T. S. Daphadar**, T. Santra and A. B. Choudhury, “Parameter Optimization of a Magnetic Fault Current Limiter Using Biogeography-Based Optimization,” *2026 IEEE International Conference on Emerging Computing and Intelligent Technologies (ICoECIT)*, Hyderabad, India, 2026, pp. 1-5, doi: 10.1109/ICoECIT68303.2026.11496911

4. R. Majhi, **T. S. Daphadar**, A. Metia and A. Karmakar, "IoT-Based Condition Monitoring of Distribution Transformers Using Thermal and Load Current Data," *2026 International Conference on Signal, Systems, and Computing for Next-Gen Automation (ICSSCNA)*, Eluru, India, 2026, pp. 534-539, doi: 10.1109/ICSSCNA68616.2026.11546876.
5. **T. S. Daphadar**, A. B. Choudhury, T. Santra "Performance Enhancement of a Permanent-Magnet Fault Current Limiter with the Aid of Fuzzy Logic Control and Parameter Optimization" 5th International Conference on Engineering Mathematics and Computing (ICEMC 2025) 13th November-15th November 2025.
6. **T. S. Daphadar**, T. Santra and A. B. Choudhury." Optimized Design and Analysis of a Permanent Magnet-Biased Fault Current Limiter for Power System Protection" PEIS 2026 – International Conference on Power, Environment and Intelligent Systems. (IET) Date:03–04 April 2026. ISBN 979-8-90330-226-0
7. **Mondal, Shibaji, et al.** "CKF-Based Sensorless Control of PMSM Drives Integrating with GH-Framed DTC-SVM." *2025 IEEE 4th International Conference on Smart Technologies for Power, Energy and Control (STPEC). IEEE, 2025.*
8. Majhi, Rimpa, Tirtha Sankar Daphadar, Avik Metia, and **Animesh Karmakar**. "IoT-Based Condition Monitoring of Distribution Transformers Using Thermal and Load Current Data." In *2026 International Conference on Signal, Systems, and Computing for Next-Gen Automation (ICSSCNA)*, pp. 534-539. IEEE, 2026.
9. Majhi, Rimpa, Tirtha Sankar Daphadar, **Avik Metia**, and Animesh Karmakar. "IoT-Based Condition Monitoring of Distribution Transformers Using Thermal and Load Current Data." In *2026 International Conference on Signal, Systems, and Computing for Next-Gen Automation (ICSSCNA)*, pp. 534-539. IEEE, 2026.

#### *Faculty Achievements*

FDP Participation: 21 FDPs attended by faculty across different domains.

(Highlights: Prof. Shankar Prasad Ghosh – 2, Prof. Shobha Gupta –3, Prof. D.P. Chakrabarty-3, Prof.Tirtha Shankar Daphadar – 2, Prof.Shibaji Mondal-1, Prof. Debabrata Mukherjee -2, Prof Subhra Jana – 3, Prof.Animesh Karmakar – 3, Prof. Avik Metia-3)

#### *Student Achievements*

##### ● Publications by Students:

Rimpa Majhi published paper in International Conference.

Majhi, Rimpa, Tirtha Sankar Daphadar, Avik Metia, and Animesh Karmakar. "IoT-Based Condition Monitoring of Distribution Transformers Using Thermal and Load Current Data." In *2026 International Conference on Signal, Systems, and Computing for Next-Gen Automation (ICSSCNA)*, pp. 534-539. IEEE, 2026.

#### *Student Activities:*

##### **Career-Upgrading Courses/Internships:**

1. 3D Printing & Additive Manufacturing Technology (CDAC) :(10 Students)
2. IBM SkillsBuild Projects (Agentic AI Architect, AI Strategy & Business, Intelligence Intern, AI/ML Intern with Edunet/CSRBOX/AICTE): 4 students
3. EDC IIT Delhi & IIP Certifications (Artificial Intelligence, Machine Learning): 1 student
4. Full-Stack Web Development (HTML, PHP, MySQL / EDC IIT Delhi): 2 students
5. EDC IIT Delhi & IIP Certifications (Data Science, Python, DSA): 1 student

6. EV (Electric Vehicle) Internship: 1 student

**Department Tech Magazine: *Spark***, the departmental technical magazine of the Electrical Engineering department, showcases the academic achievements, research progress, and innovative projects of its students and faculty. Now in its fourth edition, the publication highlights the department's collaborative drive toward technical excellence, professional ethics, and cutting-edge advancements in renewable energy, smart systems, and electric mobility.

**Wall Magazine: Rainbow:** The Wall Magazine of the Electrical Engineering Department, inaugurated in May 2025, was successfully continued by the students during the academic year 2025–26. It showcased their creativity and talents through drawings, photographs, and sports achievements. The initiative was appreciated by Prof. Avik Metia and encouraged students' active participation in academic and extracurricular activities.

**Department's Bridge Course:** The Electrical Engineering Department's Bridge Course equips 2nd and 4th-semester students with industry-aligned, hands-on skills to bridge theory and practice. Tailored to their academic levels, students learn to read schematics, build, test, and troubleshoot basic to advanced circuits using standard laboratory instruments based on recruiter feedback.

**Departmental Newsletter: CEMK Electra News:** EE Department periodically published departmental newsletter that shares updates, achievements, upcoming events, project highlights and different technical activity by students as well as faculty and technical staff members of the department. Its main purpose is to build community, keep members informed, and showcase departmental progress to external partners.

**Placement Status:** In the academic year of 2025-26 our students got extremely excellent performance in placement. Many students got multiple offers through campus placement drives.

## 7. Institution Innovation Council (IIC) (Dr. Lipika Datta, President)

**Total Number of Events/Programs/Activities Organized: 15**

**Total Student Participation: 1177**

**Total Faculty/Staff Participation: 69**

**Total External Participation, if any: 3**

### 7.1 About the Committee

The **IIC (Institution's Innovation Council) Committee** promotes a culture of innovation, entrepreneurship, creativity, and research among students and faculty. Its objective is to encourage innovative ideas, problem-solving, entrepreneurship, and collaboration with industry and external organizations. The committee organizes activities such as innovation and entrepreneurship workshops, idea competitions, hackathons, awareness programmes, mentoring sessions, and industry interactions. It facilitates opportunities for students and faculty to develop, showcase, and implement innovative ideas and supports the development of an entrepreneurial mindset. The IIC Committee also coordinates with the Ministry of Education's Innovation Cell (MIC) and other stakeholders to strengthen the institution's innovation and entrepreneurship ecosystem.

Key activities during 2025–26 are summarized below:

### **7.1.1 Expert Talk on “Awareness of Entrepreneurship, Innovation and Leadership”**

- Date: 21st August 2025
- Venue/Mode: J K Das Auditorium/ Physical
- Resource Person: Dr. Sugata Roy
- Number of Participants: 85

#### **7.1.1.1 Objectives:**

- Create awareness about entrepreneurship and innovation.
- Develop leadership and problem-solving skills.
- Motivate students to pursue entrepreneurial opportunities.

#### **7.1.1.2 Major Activities/Highlights:**

- Expert talk on entrepreneurship, innovation and leadership.
- Interactive discussion and sharing of entrepreneurial experiences.
- Q&A session with the expert.

#### **7.1.1.3 Achievements & Impact/Outcomes**

- Increased awareness of entrepreneurial opportunities.
- Improved understanding of innovation and leadership.
- Motivated students to develop entrepreneurial ideas and initiatives.

### **7.1.2 Smart India Hackathon**

- Date: 25th September 2025
- Venue/Mode: W301, W303 and W307A / Physical
- Collaborating Committee: Technical Activity Committee
- Resource Person/Chief Guest/Expert, if applicable: Dr. Lipika Datta, Prof. Poulami Mishra, Dr. Chinmoy Maity, Prof. Arijita Ghosh, Dr. Jaydev Mishra, Prof. Suity Roy
- Number of Participants: 183

#### **7.1.2.1 Objectives:**

- Encourage students to develop innovative solutions to real-world problems.
- Enhance problem-solving, creativity and teamwork skills.
- Promote entrepreneurship and technology-driven innovation.

#### **7.1.2.2 Major Activities/Highlights:**

- Identification and selection of problem statements.
- Development and demonstration of innovative solutions.
- Team presentations and evaluation of prototypes.

#### **7.1.2.3 Achievements & Impact/Outcomes**

- Improved innovation and problem-solving skills.
- Enhanced teamwork and technical abilities.
- Increased exposure to entrepreneurship and real-world challenges.

#### **7.1.2.4 Winners/Recognitions/Awards, if applicable:**

- 1st Place: Group CODE REFLEX (Leader: Sk. Habib Hossain)
- 2nd Place: Group Astro Nudge (Leader: Sayantan Paul)
- 3rd Place: Group SUPER6 (Leader: Dikpal Mandal)

### **7.1.3 Expert Talk on “Entrepreneurship Development and Motivation”**

- Date: 18th October 2025
- Venue/Mode: J. K. Das auditorium / Physical

- Resource Person: Dr. Sabyasachi Mukhopadhyaya
- Number of Participants: 75 ( newly admitted 1st year students)

#### **7.1.3.1 Objectives:**

- To make a general awareness about entrepreneurship among the budding engineers.

#### **7.1.3.2 Major Activities/Highlights:**

- A presentation session was conducted to introduce students to the fundamentals of entrepreneurship, entrepreneurial mindset, and opportunities for starting a venture.
- The expert shared practical experiences, success stories, and strategies to motivate students to identify opportunities, take calculated risks, and develop innovative ideas.
- Students actively participated in discussions and a question-and-answer session, gaining guidance on idea generation, business planning, overcoming challenges, and pursuing entrepreneurship as a career.

#### **7.1.3.3 Achievements & Impact/Outcomes**

- The students came to know how to set up a start-up with innovative ideas.
- The students gained knowledge about career progression, requirements of aptitude and mindset to start an enterprise, key attributes of an entrepreneur.

#### **7.1.4 Celebrating National Entrepreneurship Day “Entrepreneurship Idea Competition”**

- Date: 7th November 2025
- Venue/Mode: W305 / Physical
- Collaborating Department: DIC of Computer Science and Engineering Department.
- Expert, if applicable: Dr. Chinmoy Maity
- Number of Participants: 23
- **Number of Volunteers, if applicable**

#### **7.1.4.1 Objectives:**

- To inspire innovation, creativity, and an entrepreneurial mindset among young learners.
- To provide platform for students to showcase their problem-solving abilities and develop skills in idea generation.

#### **7.1.4.2 Major Activities/Highlights:**

- Idea Presentation: 4th Year CSE students presented their innovative business ideas and entrepreneurial concepts before the judges and audience.
- **Evaluation and Interaction:** The ideas were evaluated based on innovation, feasibility, market potential, and social impact, followed by a question-and-answer session.
- **Recognition of Ideas:** Promising ideas were identified and students were encouraged to further develop their concepts into viable entrepreneurial ventures.

#### **7.1.4.3 Achievements & Impact/Outcomes**

- Students developed innovative thinking and problem-solving skills relevant to real world challenges.
- The activity promoted teamwork, leadership, and coordination among participants.
- The event motivated students to pursue entrepreneurship as a viable and impactful career path.

#### **7.1.4.4 Recognitions:**

- Mr. Arghya Das
- Mrs. Sirsha Karmakar
- Suman Das

- Priyangshu Upadhaya

#### **7.1.5 Celebration of National Energy Conservation Day**

- Date: 16th December 2025
- Venue/Mode: J K Das auditorium / Physical
- Resource Person: Er. Tarak Maji
- Number of Participants: 84 (Target audience: 2nd year and 3rd year EE, ECE and ME students)
- Number of Volunteers, if applicable

##### **7.1.5.1 Objectives:**

- To inspire students to merge innovation with sustainability by highlighting milestones in renewable energy

##### **7.1.5.2 Major Activities/Highlights:**

- **Expert Lecture Session:** An informative lecture was conducted on energy conservation, highlighting the importance of efficient energy use and sustainable practices.
- **Awareness and Interaction:** Students participated in an interactive session on energy-saving techniques and discussed the environmental and economic benefits of energy conservation.
- **Energy Conservation Pledge:** Students were encouraged to adopt responsible energy-use habits and contribute to reducing energy consumption in their daily lives.

##### **7.1.5.3 Achievements & Impact/Outcomes**

- The students gained an understanding of the importance of energy conservation, became aware of the current state of the art in the energy sector.
- Students learned about various techniques for effectively utilizing renewable energy resources

##### **7.1.5.4 Winners/Recognitions/Awards, if applicable:**

#### **7.1.6 Hands-on Experience in Cutting-edge Technologies**

- Date: 20th December 2025
- Venue/Mode: TPO Conference Room / Physical
- Collaborating Department: Training and Placement Cell
- Resource Person: Er. Partha Koley
- Number of Participants: 47 (target audience: 2nd and 3rd year students)

##### **7.1.6.1 Objectives:**

- Familiarize students with emerging technologies.
- Develop practical and technical skills.
- Encourage technology-based innovation.

##### **7.1.6.2 Major Activities/Highlights:**

- Hands-on demonstrations of cutting-edge technologies like ML Tools and IoT.
- Interactive learning and expert guidance.

##### **7.1.6.3 Achievements & Impact/Outcomes**

- Enhanced practical knowledge and technical skills.
- Better understanding of emerging technologies.
- Increased interest in innovation and technology-based solutions.

#### **7.1.7 Innovation Showcase: Demo Day/Exhibition/Presentation of Innovations and Prototypes**

- Date: 20th September 2025
- Venue/Mode: W303 / Physical
- Collaborating Committee: R & D Cell

- Number of Participants: 55

#### **7.1.7.1 Objectives:**

- Showcase faculty R&D projects and innovations.
- Promote research and prototype development.
- Encourage knowledge sharing and collaboration.

#### **7.1.7.2 Major Activities/Highlights:**

- Demonstration of faculty-developed prototypes and projects.
- Presentation of project concepts, technologies and outcomes.
- Interactive discussion and feedback on innovations.

#### **7.1.7.3 Achievements & Impact/Outcomes**

- Increased visibility of faculty R&D activities.
- Enhanced scope for collaboration and further development.
- Encouraged innovation and research commercialization.

### **7.1.8 Student Development Program on Specialized Coding**

- Date: 8th January to 18th January 2026
- Venue/Mode: E301 and TPO Conference Room / Physical
- Collaborating Department: Training and Placement Cell
- Resource Person: Mr. Alok Halder
- Number of Participants: 257

#### **7.1.8.1 Objectives:**

- Develop skills in Java Full Stack development.
- Provide practical exposure to web application development.
- Enhance coding and problem-solving skills.

#### **7.1.8.2 Major Activities/Highlights:**

- Hands-on training in Java programming and frameworks.
- Development of frontend and backend components.
- Practical coding exercises and project-based learning

#### **7.1.8.3 Achievements & Impact/Outcomes**

- Improved Java Full Stack development skills.
- Enhanced practical coding and application development abilities.
- Increased readiness for software development careers.

### **7.1.9 Webinar on Astronomy and Indian Space Program**

- Date: 28th January 2026
- Venue/Mode: Online
- Collaborating Department: Basic Science and Humanities Department
- Resource Person: Prof. Ranjeev Mishra
- Number of Participants: 100

#### **7.1.9.1 Objectives:**

- Create awareness about astronomy and space science.
- Introduce students to India's space programme.
- Inspire interest in space research and exploration.

#### **7.1.9.2 Major Activities/Highlights:**

- Webinar session by an expert on astronomy and space science.

- Discussion on India's space missions and achievements.
- Interactive Q&A with the expert.

#### **7.1.9.3 Achievements & Impact/Outcomes**

- Enhanced knowledge of astronomy and space technology.
- Improved understanding of India's space programme.
- Increased interest in space science and research.

#### **7.1.10 Multi-Sector Career Diversification**

- Date: *11th February 2026*
- Venue/Mode: TPO Conference Room / Physical
- Collaborating Department: Electronics and Communication Engineering
- Resource Person: Mr. Kishan Kumar
- Number of Participants: 51 (Target Audience: 2nd , 3rd and 4th year ECE students)

##### **7.1.10.1 Objectives:**

- Create awareness about diverse career opportunities.
- Help students explore careers beyond traditional fields.
- Develop career planning and decision-making skills.

##### **7.1.10.2 Major Activities/Highlights:**

- Expert talk on multi-sector career opportunities.
- Discussion on emerging career paths and industry trends.
- Interactive student Q&A and guidance session.

##### **7.1.10.3 Achievements & Impact/Outcomes**

- Increased awareness of diverse career options.
- Better understanding of emerging career opportunities.
- Enhanced confidence in career planning and selection.

#### **7.1.11 Inter-Department Hackathon V-4**

- Date: *10th February to 25th April 2026*
- Venue/Mode: W303 / Physical
- Collaborating Department: DIC of Computer Science and Engineering and R and D
- Expert: Dr. Chinmoy Maity, Dr. Lipika Datta
- Number of Participants: 39

##### **7.1.11.1 Objectives:**

- Encourage innovative and creative problem-solving.
- Develop teamwork and technical skills.
- Provide exposure to real-world challenges.

##### **7.1.11.2 Major Activities/Highlights:**

- Problem identification and team formation.
- Development of innovative solutions/prototypes.
- Project presentation and evaluation.

##### **7.1.11.3 Achievements & Impact/Outcomes**

- Enhanced technical and problem-solving skills.
- Improved teamwork and collaboration.
- Increased interest in innovation and entrepreneurship.

##### **7.1.11.4 Winners/Recognitions/Awards, if applicable:**

- 1st Place: Team Yukti (Leader: Krishna Prasad Khamrai)
- 2nd Place: Team GEN NEXUS (Leader: Prantik Koley)
- 3rd Place: Team Code Reckers (Leader: Soham Bhattacharyya)

#### **7.1.12 Inter-College Hackathon Competition**

- Date: 18th April 2026
- Venue/Mode: J K Das Auditorium / Physical
- Collaborating Department/Committee: TAC and Computer Science and Engineering
- Expert: Prof. Debasish Biswas
- Number of Participants: 60
- Number of Volunteers, if applicable: 6

##### **7.1.12.1 Objectives:**

- Encourage innovation and creative problem-solving.
- Develop technical, teamwork and communication skills.
- Provide exposure to real-world challenges and solutions.

##### **7.1.12.2 Major Activities/Highlights:**

- Participation of inter-college student teams in the hackathon.
- Development of innovative solutions and prototypes.
- Presentation and evaluation of proposed solutions.

##### **7.1.12.3 Achievements & Impact/Outcomes**

- Enhanced technical and problem-solving abilities.
- Improved teamwork, creativity and collaboration.
- Increased exposure to competitive innovation platforms.

##### **7.1.12.4 Winners:**

- 1st Place: Team Code Reflex (Leader: Sayak Bhattacharya)
- 2nd Place: Team OMNICORN ROBOTICS (Leader: Akash Patra)
- 3rd Place: Team Xenon (Leader: Arghadeep Chakraborty)

#### **7.1.13 Business Plan Competition**

- Date: 8th April to 27th May 2026
- Venue/Mode: TPO Conference Room / Physical
- Expert: Mr. Balaram Manna
- Number of Participants: 29
- Number of Volunteers: 3

##### **7.1.13.1 Objectives:**

- To encourage entrepreneurial thinking among students.
- To promote innovative and sustainable business ideas.
- To develop presentation and communication skills.
- To provide practical exposure to business planning and execution.
- To motivate students towards startup culture and innovation-driven solutions.

##### **7.1.13.2 Major Activities/Highlights:**

- Synopsis Submission
- Model Presentation
- Demonstration
- Q and A session

### **7.1.13.3 Achievements & Impact/Outcomes**

- Enhanced students' entrepreneurial thinking and business planning skills.
- Encouraged students to develop innovative and feasible business ideas.
- Improved presentation, pitching and problem-solving skills.

### **7.1.13.4 Winners:**

- 1st Place: Idea: Second Serve (Team leader: Krishna Prasad Khamrai)
- 2nd Place: Idea: Milkose (Team leader: Dipti Das and team)
- 3rd Place: Idea: LINGUA AI (Team leader: Indranil Samanta and team)

### **7.1.14 Celebration of National Technology Day**

- Date: 11th May 2026
- Venue/Mode: W203, W305 / Physical
- Expert: Mr. Avishake Kar
- Number of Participants:42

#### **7.1.14.1 Objectives:**

- Create awareness about modern and emerging technologies.
- Encourage students to explore technological innovations.
- Develop presentation and communication skills.

#### **7.1.14.2 Major Activities/Highlights:**

- Student presentations on modern technologies.
- Demonstration and discussion of emerging technologies.
- Interactive Q&A and knowledge-sharing session.

### **7.1.14.3 Achievements & Impact/Outcomes**

- Enhanced awareness of modern technologies.
- Improved presentation and communication skills.
- Increased interest in technological innovation.

### **7.1.15 Training on Technology Commercialization, Licensing and Transfer Practices and Strategy**

- Date: 30th May 2026
- Venue/Mode: TPO Conference Room / Physical
- Expert: Mr. Sutanu Guchhait, IPR Advocate
- Number of Participants:47

#### **7.1.15.1 Objectives:**

- Understand technology commercialization and licensing.
- Learn technology transfer practices and strategies.
- Promote effective utilization of research outcomes.

#### **7.1.15.2 Major Activities/Highlights:**

19. Training on technology commercialization and licensing.
20. Discussion on technology transfer processes and strategies.
21. Interactive session with practical examples.

### **7.1.15.3 Achievements & Impact/Outcomes**

- Improved understanding of technology commercialization.
- Enhanced knowledge of licensing and technology transfer.

## **Research and Development Cell (Dr. Alok Ranjan Pal, Chairman & In-Charge)**

### **Event Organized:**

- **Talk on “R&D Awareness and Capacity Building”**

Speaker: Prof. Sandeep K. Shukla, Director of International Institute of Information Technology, Hyderabad (IIITH)

Date: 7th November, 2025.

- **Activity: Showcasing the completed and ongoing projects**

Objective of the program: To showcase the completed and ongoing projects in front of the enthusiastic students and teachers of the college.

Date: 16th December 2025.

- **Activity: Inter Department HACKATHON V-4**

Objective of the Program: The objective of the Inter-Department Hackathon is to foster innovation, collaborative learning, and practical problem-solving among students by providing a platform to develop creative and technology-driven solutions to real-world challenges through teamwork, research, and interdisciplinary interaction.

Date: 10th February 2026 to 25th April 2026.

- **Activity: Training on Technology Commercialization, Licensing and Transfer Practices and Strategy**

Expert: Mr. Sutanu Guchhait, IPR Advocate

Founder/Head (IPR) at LEXMOTION, Kolkata

Objective of the Program: The primary objective of organizing this expert talk is to create awareness among students, researchers, faculty members, innovators, and entrepreneurs about the process of transforming research outcomes and innovative technologies into commercially viable products and services. The program aims to bridge the gap between academic research and industry applications by providing practical insights into technology transfer mechanisms, licensing models, intellectual property management, and commercialization strategies.

Date: 30th May 2026

## In-House Project

Year: February to December, 2026

No of submitted Project Proposals: 6

Total approved budget: 2,75,800/-

|   | Title of the project                                                                                                             | Name of PI                 | Dept. | Budget (Rs.) | Duration |
|---|----------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------|--------------|----------|
| 1 | Materials-Informed and Quantum Machine Learning Framework for Mechanical Property Prediction of Engineering Materials            | Dr. Anirban Das            | BSH   | 50,000/-     | 1 year   |
| 2 | Air Pollution Monitoring and Digital Alerting of Colony Residents                                                                | DR. ALOK RANJAN PAL        | CSE   | 35,000/-     | 1 year   |
| 3 | Design and Development of an Automatic Tree Planter                                                                              | Prof. Debottam Das         | ECE   | 45,000/-     | 1 year   |
| 4 | Project Title: V.A.R.A. – Voice-Vision Assisted Robotic Arm                                                                      | Dr. Seba Maity             | ECE   | 49,800/-     | 1 year   |
| 5 | Modelling the axisymmetric spread of a contagious virus considering the effect of lockdown and vaccination- a roadmap for future | Prof. Shibam Manna         | BSH   | 50,000/-     | 1 year   |
| 6 | Six axis (DOF) industrial Multi-Purpose Robot (collaborative)                                                                    | Prof. Shankar Prasad Ghosh | EE    | 46,000/-     | 1 year   |

### 1. Different technical quality improvement related fees reimbursement

|   |                                         |
|---|-----------------------------------------|
| 1 | <b>Publication charge reimbursement</b> |
|   |                                         |
|   | <b>Dept of CSE</b>                      |
|   |                                         |
|   | Prof. Soumitra De                       |
|   | Prof. Siddhartha Chatterjee             |
|   | Prof. Jaydev Mishra                     |
|   | Prof. Lipika Datta                      |
|   | Prof. Abhinaba Bhattacharyya            |
|   | Prof. Rupsa Sarkar                      |
|   | Prof. Sushovan Das                      |

|          |                                              |
|----------|----------------------------------------------|
|          | Prof. Alok Ranjan Pal (for in-house project) |
|          |                                              |
|          | <b>Dept of BS</b>                            |
|          |                                              |
|          | Prof. Asish Mitra (for journal publication)  |
|          |                                              |
|          | <b>Dept. of EE</b>                           |
|          |                                              |
|          | Prof. Shibaji Mondal                         |
|          | Prof. Tirtha Sankar Daphadar                 |
|          |                                              |
|          | <b>Dept. of ME</b>                           |
|          |                                              |
|          | Prof. Deb Kumar Adak (for in-house project)  |
|          | Prof. Koushik Mondal                         |
|          |                                              |
|          | <b>Dept. of IT</b>                           |
|          |                                              |
|          | Prof. Mritunjoy Midya                        |
|          |                                              |
|          |                                              |
| <b>2</b> | <b>Patent charge reimbursement</b>           |
|          |                                              |
|          | Prof. Arko Banerjee                          |
|          | Prof. Sushovan Das                           |
|          |                                              |
| <b>3</b> | <b>FDP, NPTEL fees reimbursement</b>         |
|          |                                              |
|          | Prof. Siddhartha Chatterjee                  |
|          | Prof. Deb Kumar Adak                         |
|          | Prof. Sabitabrata Dey                        |
|          | Prof. Saundarya Biswas                       |
|          |                                              |
|          | <b>Total Rs.1,49,080/-</b>                   |
|          |                                              |

### Activity under process

Communication under process regarding the Intellectual Collaboration with the Dept. of LRU, ISI, Kolkata for some funded projects.

## Library: ( Library in Charge: Mr. Amit Kumar Ghosh)

We have hugged open access library

- 1) Total No. of Volumes of Books: 45,134 (As on 15.09.2026)
- 2) Total No. of Titles of Books: 6168 (As on 15.09.2026)
- 3) No. of Books purchased from July, 2025 to June, 2026: 184
- 4) Cost of books purchased for AY 2025-26: Rs. 1, 11,602.00
- 5) No. of Indian Journals (Hard Copy) = 41
- 6) Cost of Indian Journals for AY 2025-26: Rs.99, 500.00
- 7) No. of International Journals (Hard Copy) = 07
- 8) Cost of International Journals (Hard Copy) for AY 2025-26: Rs.22, 350.00
- 9) Online Journals subscribed in AY 2025-26: MAT Journals (17 titles) (Prices are already included in Indian Journals)
- 10) Online Journals subscribed in AY 2025-26: ProQuest Engineering & Technology Journals (91 titles) (Rs. 74,000.00)
- 11) DELNET Membership has been obtained.
- 12) DrillBit Plagiarism checker (300 documents) has been subscribed (Rs. 50,000.00)

## 3D Printing and Additive Manufacturing Technology Lab (Dr. Tarun Kanti Pal, Coordinator)

Activities of 3D Printing and Additive Manufacturing Technology Lab (Under C-DAC Kolkata), CEMK (AY: 2025-26)

### 1. Bootcamps

- **Total Bootcamps Conducted:** 6
- **Total Student Attendance:** 320
- **Participating Institutions & Attendance Breakdown:**
  - **Kolaghat Government Polytechnic:** 106 students (*2 sessions: 56 on Jul 25–26, 2025; 50 on Aug 7–8, 2025*)
  - **Uluberia College:** 34 students (*Feb 23, 2026*)
  - **Dr. Meghnad Saha Institute of Technology:** 120 students (*2 sessions: 60 on Mar 27, 2026; 60 on Jul 20–22, 2026*)
  - **Global Institute of Science and Technology, Haldia:** 60 students (*Aug 31 – Sep 2, 2026*)

### 2. Workshops & Mobilization

- **Total Workshops Conducted:** 21
- **Total Student Attendance:** 1,380
- **Institution-Wise Breakdown:**

- **College of Engineering and Management, Kolaghat:** 15 sessions | **770 students**
  - *CSE*: 247 students (4 sessions)
  - *EE*: 228 students (4 sessions across 1st, 2nd, and 3rd years)
  - *AIML*: 146 students (2 sessions)
  - *ME*: 113 students (2 sessions)
  - *ECE*: 75 students (2 sessions across 1st and 3rd years)
- **Medinipur Sadar Govt. Polytechnic:** 1 session | **155 students** (*ME, CE, EE - 2nd Year*)
- **Kolaghat Government Polytechnic:** 1 session | **112 students** (*EE, EPS, IAE - 2nd Year*)
- **Uluberia College:** 2 sessions | **115 students** (*Science - 2nd Year*)
- **Global Institute of Science and Technology, Haldia:** 1 session | **67 students** (*BCA & B.Sc. IT - 3rd Year*)
- **Ghatal Government Polytechnic:** 1 session | **63 students** (*ME, CE, EE - 3rd Year*)
- **Dr. Meghnad Saha Institute of Technology:** 1 session | **59 students** (*ME, CE, EE - 3rd Year*)

### 3. Academic Projects, R&D, and Publications

- **Projects Completed:**
  - **M.Tech Projects:** 2 completed
  - **B.Tech Projects:** 3 completed
  - **Prototypes & Models Developed:** 12
- **Publications:**
  - **Conference Papers:** 1 published
  - **Journal Papers:** 1 submitted

Course Certification Completed (as on 09-09-2026): **295**

### Technical Activities Committee Activities (Prof. Soumitra De, Convenor)

**Total Number of Events/Programme/Activities Organized: 07**

**Total Student Participation: 618**

**Total Faculty/Staff Participation: 30**

**Total External Participation, if any: 20**

#### About the Committee

Provide a brief description of the purpose, objectives, major responsibilities and role of the Committee in the College. Key activities during 2025–26 are summarized below:

#### Short Film & Photography Competition

- Date: March 28, 2026
- Venue/Mode: TPO Conference Hall
- Collaborating Department/Committee/Organization, if any: All Dept.
- Resource Person/Chief Guest/Expert, if applicable: 2 Experts

- Number of Participants:20
- Number of Volunteers, if applicable :19

### **Inter-College Hackathon**

- Date: April 18, 2026
- Venue/Mode: J K Das Auditorium
- Collaborating Department/Committee/Organization, if any: All Dept.
- Resource Person/Chief Guest/Expert, if applicable: 1 Expert
- Number of Participants:65
- Number of Volunteers, if applicable :19

### **Robotics 2K26**

**Date: May 30, 2026**

- Venue/Mode: Open Air Auditorium
- Collaborating Department/Committee/Organization, if any: All Dept.
- Resource Person/Chief Guest/Expert, if applicable: 2 Expert
- Number of Participants:58
- Number of Volunteers, if applicable :19

### **Coding Competition (C) & Coding Competition (Java, Python)**

- Date: June 17, 2026 & September 13,2025
- Venue/Mode: CSE dept. all labs
- Collaborating Department/Committee/Organization, if any: All Dept.
- Resource Person/Chief Guest/Expert, if applicable: 4 Expert
- Number of Participants:250
- Number of Volunteers, if applicable :19

### **Intra-College Hackathon**

- Date: November 01, 2025
- Venue/Mode: CSE dept. Labs
- Collaborating Department/Committee/Organization, if any: All Dept.
- Resource Person/Chief Guest/Expert, if applicable: 3 Expert
- Number of Participants:60
- Number of Volunteers, if applicable :19

### **Tech Quiz Competition**

- Date: September 13, 2025
- Venue/Mode: J K Das Auditorium
- Collaborating Department/Committee/Organization, if any: All Dept.
- Resource Person/Chief Guest/Expert, if applicable: 1 Expert
- Number of Participants:165
- Number of Volunteers, if applicable :19

### **Objectives:**

- Skill Acceleration
- Practical Application
- Professional Networking
- Interdisciplinary Collaboration

- Industry Readiness

### **Major Activities/Highlights:**

- Hackathons and Code Sprints
- Robotics and Hardware Challenges
- Technical Quizzes and Trivia
- Project Exhibitions and Programming Skill Evaluation

### **Achievements**

Innovation and Prototypes  
Skill Amplification  
Talent Recognition

### **Impact/Outcomes**

- Technical Growth
- Soft Skills Development
- Portfolio Building

### **Winners/Recognitions/Awards, if applicable:**

#### **Short Film Competition & Photography Competition**

| Photography Competition — Final Results |                                                                                                        |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>1st</b>                              | <b>Srawan Singh Rajput</b>   AIML/23/16   <a href="mailto:aiml2316@cemk.ac.in">aiml2316@cemk.ac.in</a> |
| <b>2nd</b>                              | <b>Supriya Naskar</b>   CSE/24/060   <a href="mailto:cse24060@cemk.ac.in">cse24060@cemk.ac.in</a>      |
| <b>3rd</b>                              | <b>Sindrela Mondal</b>   AIML/23/36   <a href="mailto:aiml2336@cemk.ac.in">aiml2336@cemk.ac.in</a>     |

| Short Film Competition — Final Results |                                                                    |
|----------------------------------------|--------------------------------------------------------------------|
| <b>1st</b>                             | <b>Diyasi Nag</b>   ECE/23/04   Team: Diyasi Nag & Ankika Das      |
| <b>2nd</b>                             | <b>Alankrita Maiti</b>   CSE/25/009   Team: Logic Loops            |
| <b>3rd</b>                             | <b>Sanket Ghorai</b>   CSE/25/051   Team: Ritam Jana & Gourish Pal |

### **Inter-College Hackathon**

|            |                                                                                                                                             |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1st</b> | <b>Code Reflex</b>   Sayak Bhattacharya   <a href="mailto:cse23089@cemk.ac.in">cse23089@cemk.ac.in</a>                                      |
| <b>2nd</b> | <b>OMNICORN ROBOTICS</b>   Akash Patra   <a href="mailto:ece2245@cemk.ac.in">ece2245@cemk.ac.in</a>                                         |
| <b>3rd</b> | <b>Xenon</b>   Arghadeep Chakraborty   <a href="mailto:cse23136@cemk.ac.in">cse23136@cemk.ac.in</a> along with 3 students of other colleges |

## Robotics Competition — Line Follower | RoboRace | RoboWar

| Line Follower — Final Standings |                                                     |
|---------------------------------|-----------------------------------------------------|
| <b>1st</b>                      | <b>Ard Infinity</b>   Arunava Das (AIML/25/113)     |
| <b>2nd</b>                      | <b>AutoBots</b>   Soumalya Chatterjee (AIML/25/051) |
| <b>3rd</b>                      | <b>Roboverse</b>   Nibedita Das (ECE/24/015)        |

| RoboRace — Final Standings |                                                 |
|----------------------------|-------------------------------------------------|
| <b>1st</b>                 | <b>Robo-Sapiens</b>   Mahavis Alam (CSE/25/048) |
| <b>2nd</b>                 | <b>Phoenix</b>   Sayan Samanta (ECE/24/011)     |
| <b>3rd</b>                 | <b>Roboverse</b>   Nibedita Das (ECE/24/015)    |

| RoboWar — Final Standings |                                                 |
|---------------------------|-------------------------------------------------|
| <b>1st</b>                | <b>Robolog</b>   Gourab Biswas (CSE/24/046)     |
| <b>2nd</b>                | <b>Phoenix</b>   Sayan Samanta (ECE/24/011)     |
| <b>3rd</b>                | <b>Robo-Sapiens</b>   Mahavis Alam (CSE/25/048) |

## C Coding Competition

| C Coding Competition 2K26 — Final Results                 |  |
|-----------------------------------------------------------|--|
| <b>Sreejit Gayen</b>   CSE/25/014   Score: 37 / 60        |  |
| <b>Anish Senapati</b>   AIML/24/020   Score: 30 / 60      |  |
| <b>Md Rashid Iqbal Khan</b>   CSE/25/254   Score: 20 / 60 |  |

## Java Coding Competition:

**First Position :** Akash Samanta [CSE/23/129]

**Second Position:** Tamal Malas [ CSE/24/63]

**Third Position:** Sayan Biswas [CSE/23/9]

## Tech Quiz:

**First Position :** Team Algonauts

Pramit Sarkar [AIML/24/16]

Pritam Singh [AIML/ 24/12]

Ritabrita Maity [ AIML/24/10]

**Second Position:** Team Tech Titans

Puspam Banerjee[CSE/24/6]

Shrijan Saha [CSE/24/136]

Shreya Poddar Dutta[CSE/24/144]

**Third Position:** Team Quizcore

Subhadip Sahoo [EE/24/07]

Anwesha Samanta[CSE/24/152]

Tiyasa Maiti [EE/24/16]

## **6. Training & Placement Highlights (Mr. P. C. Ghosh, TPO)**

### *6.1 Industrial Training*

**Department wise:**

**EE:** A total of 29 Electrical Engineering students from the 2026 batch underwent industrial training in WBPDC and WBSETCL.

**ECE:** A total of 81 Electronics & Communication Engineering students from 2026 batch underwent industrial training in All India Radio, BSNL, Jadavpur University etc.

**ME:** A total of 9 Mechanical Engineering students from 2026 batch underwent industrial training in The Ramco Cements Ltd.

### *6.2 Placements*

**Overall**

- Total Eligible Students: 323  
Overall Placement Percentage: 80%

**Top Recruiters with number:**

Apollo Tyres Ltd. (22), Skipper Ltd. (19), Rialto Enterprise (16), Tata Consultancy Services (11), Quality Austria Central Asia (8), Rashmi Group (8), Motherson Automotive Technologies & Engg (7), SPR Auto Interior Solutions (7), Synnova Gears (6), Kaynes Technology India (6), Yazaki (6), Ramsarup Industries (Shyam Metalics) (5), Hindustan Unilever Ltd. (5), Infosys Technologies Ltd. (3), Flender Drives Pvt. Ltd. (2), Tech Mahindra (2), Titagarh Wagons (4), Linde India (1), R R Kabel (2), IBM (1), Visteon Corporation (1), Sisir Radar (2), ZenYData Technologies (3) etc.

### *Skill Development & Training*

Aptitude and soft skill sessions conducted by Mr. Joy Sengupta for the 2027 batch as well as other batches.

Mock aptitude tests and interviews organized to enhance employability.

Industry experts invited for career guidance seminars, workshops, and interactive sessions.

### 6.5 Alumni Engagement

- CEMK Alumni Association organized the Alumni Re-Union-2026 on 17th January, 2026, attended by approximately 200 alumni members. Alumni interacted with college management and current students, offering support for institute development and student initiatives.
- Cultural programs, games, and interactive sessions were conducted to strengthen alumni-student engagement.
- Distinguished senior alumni are conducting regular interactive programs with current students through both online and offline modes, providing mentorship and career guidance.

### Estate Campus Service (ECS) Department (Mr. Sambhunath Maity and Mr. Goutam Ghosh)

- During the Financial Year 2025-26, the Estate Campus Service (ECS) Department, under the guidance of **Mr. Sambhunath Maity** and **Mr. Goutam Ghosh**, undertook and monitored various infrastructure, maintenance, safety, security, housekeeping, and facility-development activities across the College campus and residential areas.
- The activities involved a total expenditure of about Rs. 1, 42, 50, 000/- (Rupees One Crore Forty-Two Lakh Fifty Thousand only). The major expenditure areas included Civil Works, Electrical Works, Fire Safety, Security Services, Manpower & Housekeeping, and Estate & Facility Procurement, contributing to the smooth operation, upkeep, safety, and continuous improvement of the College infrastructure.

#### Key Developments in Campus Infrastructure: FY 2025 - 2026

- *Civil Works*  
Total Expenditure: Rs. 23,44,377 (**Rs. 23.44 lakhs**)
  - Annual Civil Maintenance: Regular civil maintenance works were undertaken across the campus and hostel facilities, with an expenditure of Rs. 07.04 lakhs.
  - Academic & Laboratory Works: Civil works included CDAC-related works, CTN Lab renovation/partition work, room renovation in N101 (EE Department), and other building improvements were carried out at a cost of Rs. 2.49 lakhs.
  - Hostel Improvements: Works included tile procurement for dining/hostel areas, roof repair, hostel toilet repairs, painting, civil works in the 1st Year and 4th Year hostels, and repairs in the 2nd Year hostel, with an expenditure of Rs. 5.47 lakh .
  - Renovation & Facility Development: Renovation of the 1st Year Canteen, false-ceiling work, and partition works in administrative building, and other infrastructure improvements were carried out at a cost of Rs. 5.81 lakhs.
  - Other Civil/Facility Works: Water-pipe replacement, septic-tank cleaning, levelling, playground maintenance, masonry and fixture repairs were carried out at a cost of Rs. 2.63 lakhs.
- *Electrical Works*  
Total Expenditure: Rs. 54, 62, 611 (**Rs. 54.63 lakhs**)

- Electrical Maintenance: Electrical manpower services and routine electrical maintenance were provided throughout the campus during the financial year at a cost of Rs. 5.15 lakh.
- Electrical Materials & Equipment: Electrical items, wires, street lights, timers, DG-set preparation items, fans and related materials were procured for maintenance and operational requirements at a cost of Rs. 12.45 lakh.
- Air-Conditioning: AC units were purchased, serviced, and repaired for various campus facilities, including CDAC Lab and administrative areas, at a cost of Rs. 3.9 lakh.
- Lighting & Cabling: Street-light purchase/repair, underground cable work, ceiling-fan maintenance and other electrical upgrades were carried out at a cost of Rs. 2.90 lakh.
- Electricity Charges: Electricity consumption charges for the college amounted to approximately Rs. 30.08 lakh.
- *Fire Safety*  
Total Expenditure: Rs. 42,574 (**Rs. 0.43 lakhs**)  
Fire Safety Equipment: New fire extinguishers were procured and existing extinguishers were refilled to maintain fire-safety preparedness across the campus.
- *Security*  
Total Expenditure: Rs. 27,21,089 (**Rs. 27.21 lakhs**)  
During the financial year 2025 - 26, the College continued to provide round-the-clock security services across the campus through regular deployment of security personnel and timely payment of their wages. This expenditure helped ensure the safety and security of students, staff, residential areas, and campus facilities. In addition, approximately Rs. 0.89 lakh was spent towards bonus and other related payments to security personnel.
- *Manpower & Housekeeping*  
Total Expenditure: Rs. 12,60,137 (**Rs. 12.60 lakhs**)
  - Maintenance Manpower: Regular manpower wage payments were made for civil/general maintenance and electrical maintenance activities. Cost: Rs. 9.14 lakh
  - Housekeeping Support: Cleaning staff payments, laundry and washing-related expenses were incurred for maintaining campus facilities. Cost: Rs. 2.09 lakh
  - Additional Manpower: Additional manpower remuneration and other manpower-related payments were processed as required. Cost: Rs. 1.34 lakh
- *Estate & Facility Procurement*  
Total Expenditure: Rs. 24, 19,555 (**Rs. 24.19 lakhs**)
  - Water & Utility Facilities: Maintenance of Aqua Guards, water filters, tanks and pumps was carried out, with an expenditure of Rs. 3.25 lakhs..
  - Furniture & Facility Items: Chairs, benches, tables, racks, curtains, mats and other essential items were procured for academic, administrative and hostel facilities, at a cost of Rs. 5.71 lakhs.
  - Campus Operations: Cleaning materials, consumables, tools, equipment and other estate-related items were procured to support the smooth functioning of the campus, at a cost of Rs. 9.40 lakhs.
  - Campus Events & Accreditation Support: Necessary arrangements and facility support for the NBA visit, Foundation Day and other institutional events were undertaken, with an expenditure of approximately Rs. 5.83 lakhs.

## 7.2 National Cadet Corps (NCC) (Dr. Debkumar Adak, Nodal Officer)

**About the NCC:** The world's largest uniformed youth organization, operating as a voluntary tri-services organization comprising the Army, Navy, and Air Force. The total enrolled strength of the National Cadet Corps (NCC) in India is over 20 lakh (2 million) cadets across more than 750 districts. Headquartered in New Delhi, India, it functions under the Ministry of Defence.

**Motto:** “*Ekta aur Anushasan*” (Unity and Discipline).

**Formation:** Established on July 16, 1948, under the National Cadet Corps Act of 1948 with an initial strength of just 20,000 cadets.

**Leadership:** Headed by a Director General who is a-serving Lieutenant General from the Indian Army.

**Enrollment:** Open to school and college students on a voluntary basis with no liability for active military service.

### 7.2.1 Camps Attended:

- Three Annual Training Camps (CATC) held at Tamluk
- Army Attachment Camp: Barrackpore camp and Kalyani camp (Three cadets in each camp)

### 7.2.2 Campus Activities:

- Plastic-Free Drive
- Republic Day Parade participation
- Support for Blood Donation Camp
- Parade & Flag hoisting on Independence Day

### 7.2.3 Certifications Awarded (Cumulative since 2022):

- ‘C’ Certificate: 34 students
- ‘B’ Certificate: 37 students

### 7.2.4 Special Mentions:

29. NCC cadets represented the college at various district and state-level events, showcasing discipline, leadership, and community engagement.

### 7.2.5 Total Cadet: Year wise details

**2020-21: Total 23 cadets**

**2021-22: Total 25 cadets**

**2022-23: Total 25 cadets**

**2023-24: Total 23 Cadets**

**2024-25: Total 11 cadets**

**2025-26: Total 26 cadets**

## **7. Student Welfare & Co-Curricular Activities (Dr. Seba Maity, Convenor)**

### **7.1 National Service Scheme (NSS) Activities – 2025–26**

Total Number of Events/Programmes/Activities Organised: 8

**Total Student Participation: 800**

**Total Faculty/Staff Participation: 50**

**Total External Participation, if any:**

### **7.2 About the Committee**

Provide a brief description of the purpose, objectives, major responsibilities and role of the Committee in the College. Key activities during 2025–26 are summarised below:

#### **7.2.1 Cleanliness Drive (Write the Name of Event)**

- Date: 01/08/25,13/08/25,20/08/25
- Venue/Mode:College campus,
- Collaborating Department/Committee/Organisation, if any:NSS and Environmental sustainability Committee
- Resource Person/Chief Guest/Expert, if applicable:NO
- Number of Participants:200 (approx)
- Number of Volunteers, no

##### **7.2.1.1 Objectives:**

For green & clean campus

##### **7.2.1.2 Major Activities/Highlights:**

- Awareness Program by West Bengal Consumer forum (27/08/25) , total participants 136
- Quiz Competition (10/01/26) , Students Participants-150
- Youth Day celebration (13/01/26), Students Participants-60
- Blood donation camp (08/04/26),Total donor-35
- Thalassemia Camp (11/05/25) , Total Participants -60
- Paschim Banga Divas Celebration (20/06/26) Total Participants-120
- Internationnal Yoga day celebration (21/06/26), Total Participant -25

## **8. Scholarships & Freeships-2025-26 (Mr. Alok Maiti)**

CEMK provided substantial financial assistance to students, ensuring equitable access to higher education and supporting meritorious and economically disadvantaged students.

### **Scholarship Distribution:**

- **Swami Vivekananda MCM (SVMCM):** 502 students (Fresh: 286, Renewal: 216)
- **Kanyashree Prakalpa (K2):** 17 students
- **Aikyashree Scholarship:** 52 students (MCM: 16, SVMCM: 36)
- **National Scholarships (AICTE-Pragati, Central):** 10 students (Fresh: 2, Renewal: 8)
- **OASIS (SC/ST/OBC):** 5 students
- **Full Tuition Fee Waiver:** 12 students (129 under TFW Scheme, 2 for WBPDCCL wards)
- **Half-Freeship:** 1 student
- **Scholarships from outside the State (E-Kalyan, Govt. of Jharkhand):** 1 students

**Additional Note:**

- The college has a dedicated Student Welfare Cell to assist students in applying for scholarships, free ships, and other financial aid programs

## Conclusion

The academic year **2024–25** has been a significant period of growth, achievement, and consolidation for the college. Notable accomplishments include:

- Robust academic performance and research outputs across all departments
- Significant infrastructure developments, including modern labs, digital learning facilities, and residential upgrades
- Outstanding placement records and industry collaborations
- Holistic student development through vibrant co-curricular activities, NSS, NCC, and skill-enhancement programs

The college remains committed to nurturing future-ready engineers and professionals, guided by academic rigor, innovation, and social responsibility. We extend our sincere gratitude to our faculty, staff, students, parents, alumni, and industry partners, whose support has been integral to our success.

With confidence and dedication, CEMK is poised to scale new heights in the coming academic years.

Once again, I extend my heartfelt welcome and sincere gratitude to all of you for being a part of this memorable occasion.

I wish the Annual Function of CEMK every success and hope that today's programme will inspire all of us to work with renewed enthusiasm and commitment towards a brighter future for our institution and our students.

Director

College of Engineering & management, Kolaghat