SPARK

A Bi-yearly in-House Newsletter of

Department of Electrical Engineering

B.P. Poddar Institute of Management & Technology

Vision of the Institute

To emerge as a progressive and premier Institute for Engineering and Technology education with ethical values for creative engineering solutions commensurate with global changes.

Mission of the Institute

- Offer quality education through modern accessible, comprehensive and research oriented teaching – learning process.
- Create opportunities for students and faculty members in acquiring knowledge through research and development.
- Providing effective interface with industry by strengthening Industry-Institute interaction and developing entrepreneurial skills.
- Meet ever-changing needs for the nation through rational evolution towards sustainable and environment friendly technologies.

Vision of the Department

To emerge as a knowledge hub for higher learning and research in Electrical Engineering.

Mission of the Department

- To create a conducive quality teaching –learning environment to make the student assimilate thorough knowledge in Electrical Engineering. To create a platform for building confidence among faculties and students by exchanging their views through research, interactive sessions with industry and by the use of modern tools.
- To adopt a goal driven teaching learning method to foster innovative entrepreneurship skills in student community with expertise in different engineering domain.
- To enable students to become authorities in the field of electrical engineering along with sustainable and environment friendly technologies to meet the societal needs.

Program Educational Objectives

The graduates of Electrical Engineering shall:

- Acquire adequate physical, analytical and technical knowledge of Electrical Engineering and allied fields to curate solutions, which effectively address the challenges posed by dynamic work environments.
- Inculcate self- assurance, collaborative spirit, critical thinking and acumen for innovation towards gaining a competitive edge in research and development as well as in entrepreneurial ventures.
- Imbibe professional ethics and the attitude to bank on sustainable and eco-friendly practices only, for the wellbeing of society at large.

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Editor: Ms. Shreya Das, III (EE)
Assistant Editor: Mr. Arpan Pal, II (EE)
Ms. Rupanjali Basak, I (EE)

Prasanta Chandra Mahalanobis: Indian scientist and statistician

Prasanta Chandra Mahalanobis (1893–1972) was a pioneering Indian scientist and statistician who played a crucial role in the development of modern statistics in India. He is best known for founding the Indian Statistical Institute (ISI) in 1931, which became a globally respected center for research, training, and application of statistical methods. Mahalanobis made significant contributions to the field of statistics, most notably the Mahalanobis distance, a measure used to determine the distance between a point and a distribution. This concept remains widely used in data analysis, machine learning, and pattern recognition. He was instrumental in applying statistical techniques to large-scale surveys and national planning. As a key advisor to the Government of India, Mahalanobis designed India's Second Five-Year Plan (1956–1961), emphasizing industrialization and economic growth through heavy industries. His approach helped shape India's economic policies in the early years after independence.

Vikram 32: A 32-Bit High-Performance Microprocessor Design

India's first entirely domestic 32-bit microprocessor, the Vikram 32 processor (VIKRAM3201), was created by ISRO in collaboration with the Semiconductor Laboratory in Chandigarh. It focuses on real-time and mission-critical computing and is specifically designed for space applications like satellite navigation, guidance, launch vehicle avionics, and mission control. The processor is designed in Ada and has a 32-bit architecture with a unique set of instructions. It can perform floating-point calculations and is being developed with support for the C compiler. Vikram 32, which was created using 180 nm CMOS technology, is designed to be dependable in the harsh temperature, vibration, and radiation environments that are encountered during rocket launches and orbit.

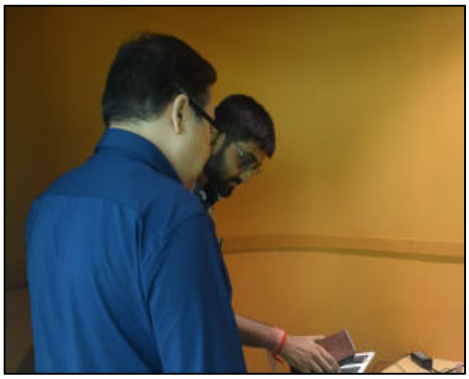
Advancements in Science & Technology

- Semiconductor Milestone: India marked a historic milestone in September 2025 with the launch of its first domestically produced 32-bit "Vikram" processors for commercial applications.
- Scaling Sovereign AI: Compute power under the India AI Mission escalated to 38,000 GPUs by December, enabling affordable infrastructure for 12 native multimodal AI models.
- Spaceflight Readiness: ISRO finished the final "dress rehearsal" for Gaganyaan G1 in late 2025, employing the humanoid Vyommitra to test key life support systems.

EVENT CORNER

Industry Connect: Young Innovators Meet 2025

The Department of Electrical Engineering, BPPIMT, proudly shares the participation of its students in Industry Connect: Young Innovators Meet 2025, organized by the Institution of Engineering and Technology Kolkata Network at Techno Main Salt Lake. The event served as a valuable platform for young innovators to showcase their ideas and engage with industry professionals, offering meaningful exposure to real-world applications and emerging technological trends.Our students delivered an excellent performance, with Tanushka Joshi and Sougata Roy Chowdhury securing a finalist position for their project "Smart Safety Kit for Drivers," while Archita Ghosh and Ritankar Chatterjee also achieved finalist status with "3-Axis Solar Tracker."The department also acknowledges the efforts of volunteers Mayuk Mitra and Satadru Jana, along with special recognition to Hena Mahata, who was honored by IET for her consistent contribution. The students were guided by Mr. Aritra Ghosh representing IET On-Campus Student Chapter, BPPIMT under IET Kolkata Local Network, whose mentorship added significant value to their journey.



Students participated in Industry Connect: Young Innovators Meet 2025

Seminar on "Modern Trends of EV in Indian Industries"

A seminar on "Modern Trends of EV in Indian Industries" was organized on 23rd July 2025 at BPPIMT by the Department of Electrical Engineering in association with the Institution of Engineering and Technology On-Campus Student Chapter, with a participation of 135 students.The session was graced by Amitabh Sinha and Saudamini Dutta. Mr. Sinha delivered an insightful talk on emerging EV trends, including advancements in battery technology, charging infrastructure, and sustainable practices, while Ms. Dutta conducted an engaging session on IET membership and professional growth opportunities.The seminar served as a valuable platform connecting academic learning with industry insights, making it an enriching experience for all participants.

A seminar organized by IET On-Campus Student Chapter and Department of Electrical Engineering

2nd International Conference on AI and Sustainable Computing (AISC 2025)

Shreya Das participated in the *2nd International Conference on Artificial Intelligence and Sustainable Computing (AISC 2025)*, held from 24th to 26th July 2025, under the guidance of Dr.Nandita Sanyal, HoD. The conference, supported by the IEEE and co-organized with the A.K. Choudhury School of IT, brought together researchers and professionals to discuss advancements in AI, sustainable computing, and ethical technologies.The event provided valuable exposure to global research trends and emerging innovations in the field.

2nd International Conference on Artificial Intelligence and Sustainable Computing (AISC 2025)

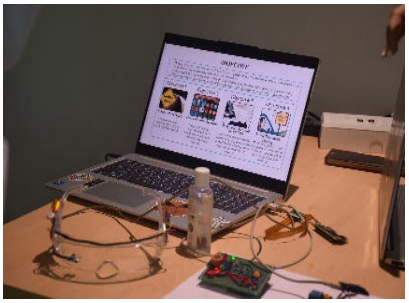
IGNITE 2025

On 30th August 2025, Students from B. P. Poddar Institute of Management and Technology participated in *IGNITE 2025*, a one-day student technical workshop held at Vidyut Bhavan and organized by the West Bengal State Power Engineers Association, under the guidance of Mr. Aritra Ghosh. With participation from multiple engineering colleges, the event served as a dynamic platform for learning, networking, and showcasing technical talent. A Special Prize was awarded to Rankan Das (EE) for excellence in the quiz competition.

Our students from the B. P. Poddar Institute of Management and Technology made a significant impact at IGNITE 2025

ACHIEVEMENT CORNER

Team Catalyst, comprising Tanushka Joshi and Sougata Roy Chowdhury, secured a finalist position at Medhamanthan 2025 – Showcase Your Innovation, organized by the IEEE CSS-IMS Kolkata Chapter.Their project, "Smart Safety Kit for Drivers," focuses on alcohol detection and drowsiness monitoring for accident prevention, reflecting strong innovation and real-world application.



Dr. Sudipta Chakraborty receiving Certificate upon successful competition of Ed LEAP (Education Leaders' Programme), a one-year (2024-25), Executive Education Program conducted by IIM, Calcutta.

Students participated in the *PEAR* event organized by the IEEE, held from 22nd to 26th September at the Department of Applied Science, University of Calcutta, under the guidance of Dr. Nandita Sanyal, HoD. The five-day seminar focused on advancements in power electronics and renewable energy, enhancing technical knowledge, fostering collaboration, and promoting awareness of sustainable energy solutions.

Team NEXUS secured 3rd prize at FORMA 2.25 with their project "Automatic Seed Dispenser." Developed by Rankan Das, Rupanjali Basak, Arpita Das, and Sumit Kumar Ghara, the project earned appreciation for its practical approach and innovative design aimed at simplifying agricultural processes.

PLACEMENT CORNER

The Department is pleased to highlight the recent placement achievements of its students, reflecting their technical competence and industry readiness.

Lumino Industries Ltd : Arindam Paul

Systems Domain : Shaswat Ranjanl

CABCON India Ltd : Sambit Pauls

ABB : Ankita Paul

GAMES CORNER

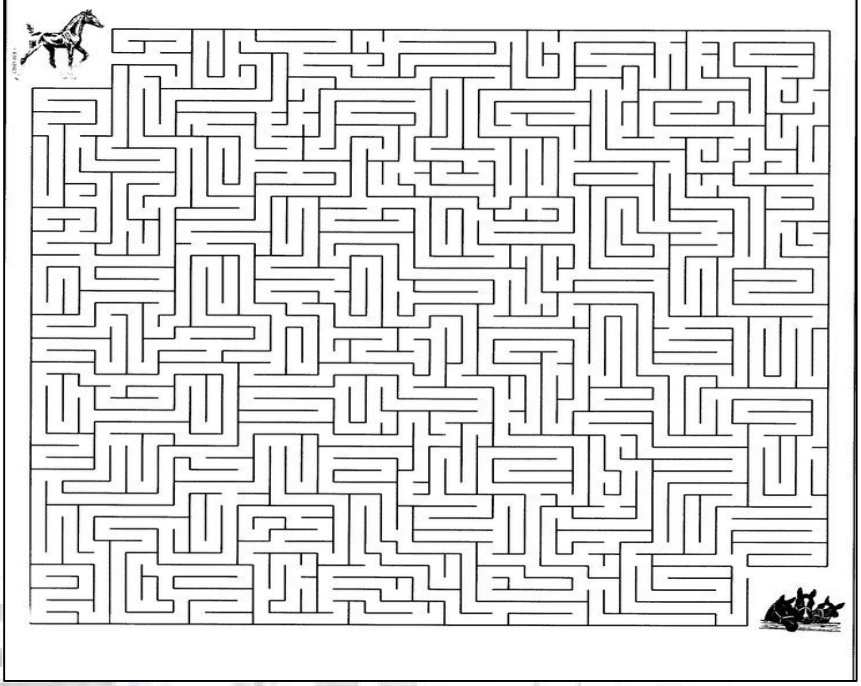
What is the most powerful force in the universe?
A) Gravity
B) Electromagnetism
C) Strong nuclear force
D) Mom calling your full name

What does grounding (earthing) actually do?
A) Increase voltage
B) Store charge
C) Protect from electric shock
D) Calm the electricity down

What is the real reason behind electric shock?
A) Voltage
B) Current through body
C) Resistance
D) Bad luck

Help the Foal find his Stablemates.

Find the correct path through the maze.



Jumbled Words

- NIOTCUDNI
- EGTLVAO
- NRUCRETR
- REWPO
- EANCITCDUNA
- EANCITSCAPA
- ROTSIRES
- ROTCUDNOC
- ROTLASUNI
- YCNEUQERF
- ESAHPR

Word Search

S W I T C H G E A R Q W E R T Y U I O P A S
C I R C U I T B R E A K E R A S D F G H J K
T R A N S M I S S I O N L I N E Z X C V B N
D I S T R I B U T I O N S Y S T E M Q W E R
S U B S T A T I O N A B C D E F G H I J K L
E L E C T R O M A G N E T I C X Y Z A S D F
I N D U C T A N C E Q W E R T Y U I O P L K
C A P A C I T O R Z X C V B N M A S D F G H
A L T E R N A T I N G C U R R E N T Q W E R
D I R E C T C U R R E N T A S D F G H J K L
F R E Q U E N C Y M O D U L A T I O N Z X C
P O W E R S Y S T E M O P E R A T I O N Q W

Call for Contribution: Students, staff and faculty members of Department of Electrical Engineering are requested to send their contribution for newsletter electronically to the email:spark.ee18@gmail.com.