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# CHAKSHU

A Bi-annual Newsletter

**Electronics &  
Communication  
Engineering**

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## Message from Head of Department



**Dear Readers,**

It gives me immense pleasure to present to you the latest edition of “**Chakshu**”, our department's official newsletter. True to its name, *Chakshu*—the "eye"—serves as a window into the vibrant academic and professional life of the **Electronics and Communication Engineering Department**.

This edition showcases the remarkable journey of our students, faculty, and alumni through **cutting-edge research, innovation, and impactful events**. From groundbreaking projects and published papers to national-level achievements and successful placement outcomes, the accomplishments featured here are a testament to the hard work and dedication of our entire ECE family.

I am especially proud of the continuous strides our department has taken in fostering a culture of **interdisciplinary learning, industry collaboration, and entrepreneurial thinking**. Our alumni continue to make us proud worldwide, and we are equally inspired by the rising stars among our current students.

I extend my heartfelt congratulations to all the achievers featured in this edition and express sincere gratitude to the editorial team for their efforts in compiling and curating this issue.

Let us continue to innovate, inspire, and grow together.

**Prof. (Dr.) Kimmi Verma**

## Message from Editor



**Hello Readers!**

It is with great pride and pleasure that we present to you the next edition of the Newsletter **“CHAKSHU”** on behalf of the department of ECE. The newsletter is an impressive culmination of facts, achievements, opinions, and information surrounding our ECE department.

It particularly highlights the experiences of students, staff, and alumni in curricular, co-curricular and extra-curricular walks of the collegiate life. For your viewing, we have put together an array of articles spanning from interviews of our best and most successful students to write-ups about the latest buzz in the tech world.

We encourage our readers to scour through these pages because we truly believe there is something here for everyone! As Editors, we would be remiss if we fail to touch upon our gratitude to the faculty coordinators and the faculty in charge, whose help and care greatly contributed to the creation of this newsletter. In the same breath, we would also like to dearly thank our team including incredible writers, designers and editors who poured in their hours to make this newsletter possible.

There is a saying, “If you want to go fast, work alone. If you want to go far, work together” So if there is one message, we wish to leave to our readers is that it is to never underestimate the power of unity in the face of adversity.

**Ranjeeta Yadav**  
Assistant Professor-ECE



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## DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

### VISION

To contribute to India and the world through excellence in education and research in the field of Electronics & Communication Engineering and serve as valuable resource for the industry and the society at large.

### MISSION

To create an environment, which shall encourage the development of innovative professionals and researchers in the cutting-edge technologies of Electronics & Communication Engineering, in line with industry requirements and to impart professional ethics with a positive attitude.

### Programme Educational Objectives (PEOs)

**PEO1:** To impart the students sound technical knowledge and skills in the core & related science & mathematics subjects of Electronics & Communication Engineering so that they graduate as professionally competent engineers, capable of applying & implementing the acquired skills.

**PEO2:** To inculcate in students a desire to be innovative and passionate about excelling in the field of Electronics & Communication Engineering.

**PEO3:** To develop managerial and soft skills so that they become confident and competent enough to take challenging responsibilities & leadership roles in the industry & corporate.

**PEO4:** To equip them with solid foundation in ECE engineering so that they can pursue higher studies in the subject.

**PEO5:** To groom the students to acquire professional ethics, moral values and devotion to duty so that they prove to be worthy citizens of India with an international outlook.

## Program Outcomes (POs)

**PO 1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

**PO 2. Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

**PO 3. Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

**PO 4. Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

**PO 5. Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

**PO 6. The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

**PO 7. Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO 8. Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**PO 9. Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse exams, and in multidisciplinary settings.

**PO 10. Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

**PO 11. Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

**PO 12. Life-long learning:** Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

## Programme Specific Outcomes (PSOs)

**PSO 1:** An ability to design and analyze the concepts and applications in the field of communication/ networking, signal processing, embedded systems, and semiconductor technology.

**PSO 2:** An ability to comprehend the technological advancements in the usage of modern design tools to analyze and design subsystems/processes for a variety of applications.

**PSO 3:** An ability to learn the courses related to Microelectronics, Signal processing, Microcomputers, Embedded and Communication Systems to develop solutions to real world problems.

**PSO 4:** An ability to communicate in both oral and written forms, the work already done and the future plans with necessary road maps, demonstrating the practice of professional ethics and the concerns for social and environmental impact.



# 1. EVENTS

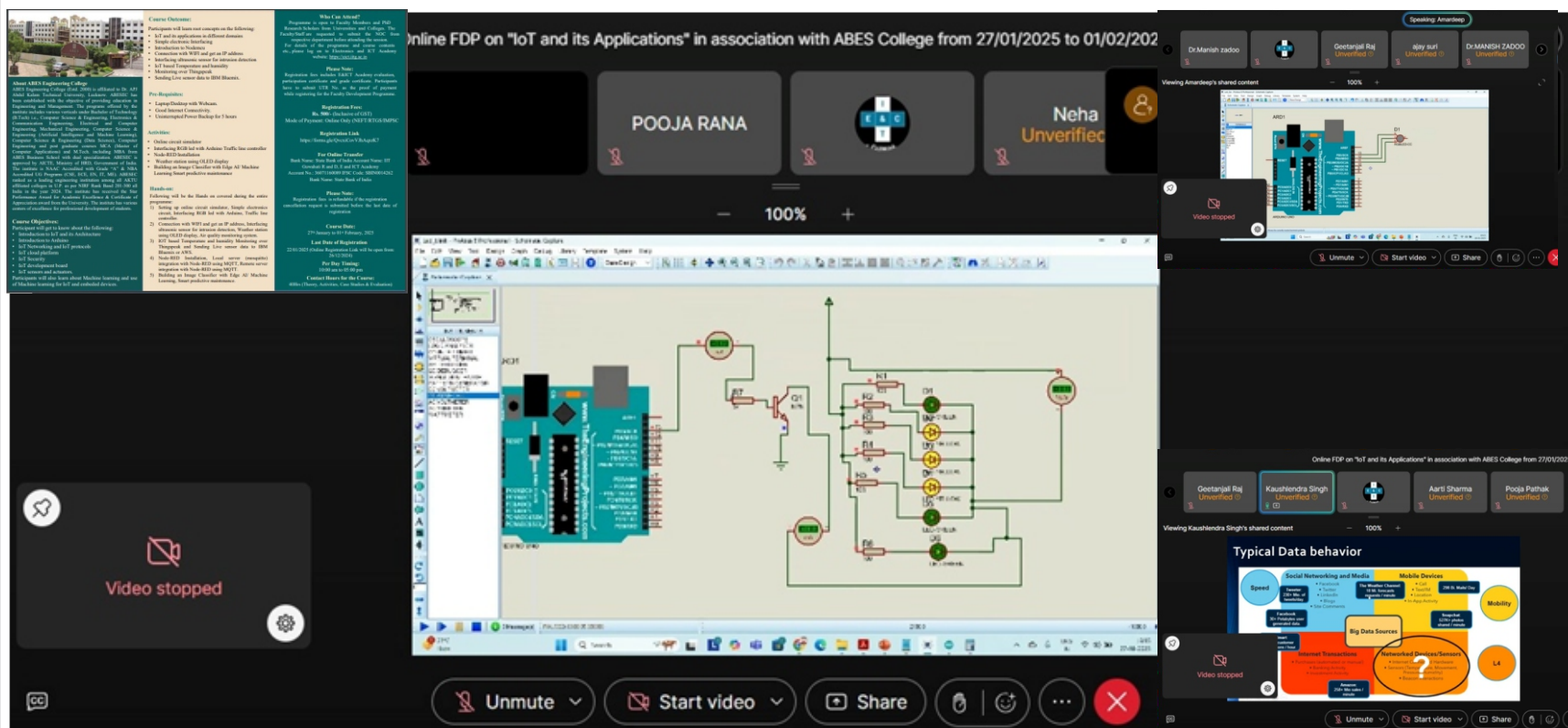
## 1.1 FDPs

The Department of Electronics and Communication Engineering, ABES Engineering College, Ghaziabad has organized a one-week online **Faculty Development Program (FDP)** on “**IoT and its applications**” in collaboration with **E&ICT IIT Guwahati** from **27th January to 1st February, 2025** for Faculty members and Researchers.

**FDP Outcome:** The session was characterized by enthusiastic participation from faculty members. The speaker concluded by addressing all the participants' questions regarding IoT and its applications in various domains, an introduction to NodeMCU and monitoring over thingspeak.

Participants have learnt root concepts on the following:

- IoT and its applications in different domains
- Simple electronic Interfacing
- Introduction to Nodemcu
- Connection with WIFI and get an IP address
- Interfacing ultrasonic sensor for intrusion detection
- IoT based Temperature and humidity
- Monitoring over Thingspeak
- Sending Live sensor data to IBM Bluemix.



## 1.2 Guest Lectures

1. The Department of Electronics & Communication Engineering has organized an **Expert Lecture on Topic 'IPR: Importance and supporting schemes in India'** for ECE IIInd Year students (Batch 2023-27) on 5th June, 2025 by **Speaker Mr. Satish Kumar (Assistant Director, Office of Development Commissioner (MSME) Ministry of Micro, Small & Medium Enterprises Government of India)**.



### 2. International Student Chapter- ABESec OPTICA | | “TechSaar: Where Innovation Meets Inspiration”

**TechSaar** is an inter-departmental technical competition organized by OPTICA, the International Student Chapter of the **Electronics and Communication Engineering Department**. We are proud to announce the winners of **TechSaar**:

**First Prize-Project Title:** Smart Eye-Tracking Wheelchair

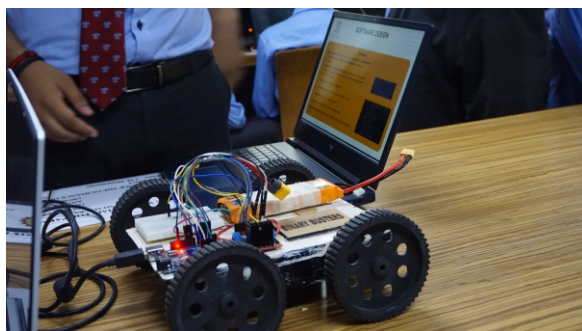
Participants: Arman Maurya, Apurv Verma, Devansh Dev Singh, Anvita Shukla (CSE 1st Year)

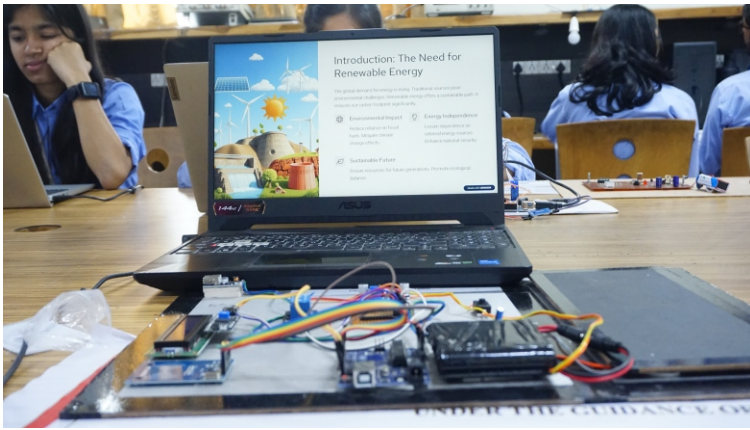
**Second Prize-Project Title:** ADC

Participants: Piyush Sharma, Utkarsh Jha, Shreyansh Sharma (ECE 2nd Year)

**Third Prize-Project Title:** Automobile Safety Control

Participants: Shraddha ECE 1st Year, Vigyat Varshney ECE 2nd Year





3. The Department of ECE has organized an Expert Lecture for the 2nd year students of ECE department who are currently enrolled in the **core domain training in the field of Microelectronics** in order to enhance students' skills in VLSI field. Speaker **Mr. Sparsh Jindal (Alumni of ECE Department, ABESec)** Lead Engineer at **Truechip Solution Pvt. Ltd.** Noida shared his experience of Academic excellence, current & future aspects of Fabless Industries with students.



4. The Department of ECE has organized an Alumni talk on **“VLSI industry perspective and Basics of Std Cell Layout”** for ECE students in order to enhance students' skills in VLSI field. Speaker **Ms. Geetika Singh (Alumni of ECE Department, ABESEC) Layout Design, Staff engineer at Synopsys India Pvt. Ltd** shared her experience of current & future aspects of VLSI Industry with students.

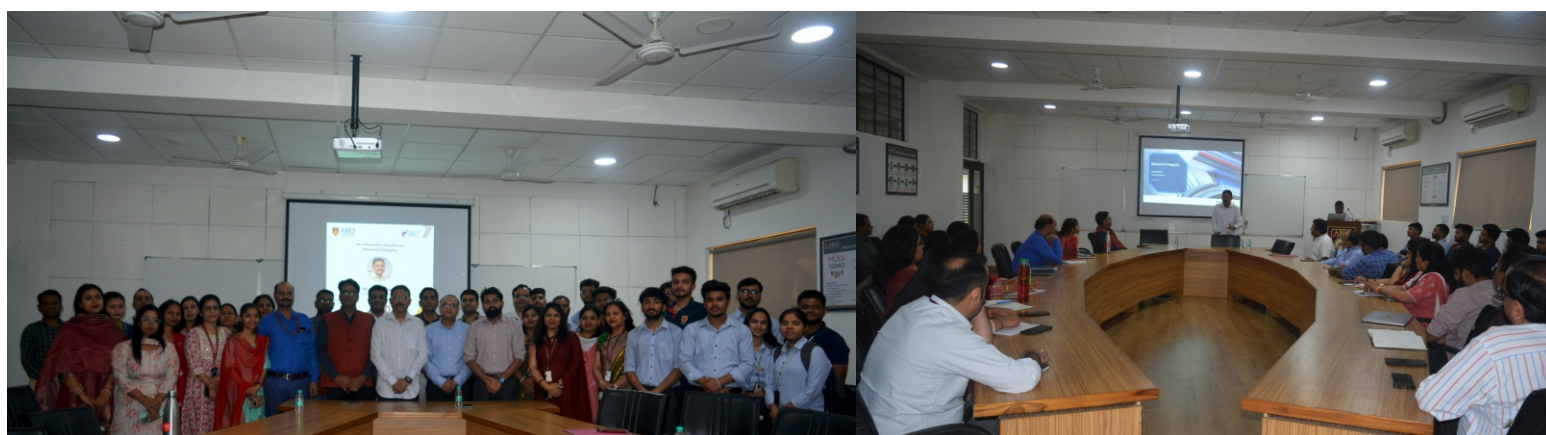
Outcome(s):

- Students got profound Knowledge in field of VLSI design.
- Students got aware about Std cell Layout design.
- Students are able to understand different job opportunities in VLSI field.



5. **An Interactive Session on Research Integrity, conducted by Mr. Aninda Bose, Executive Editor at Springer Nature Group, London (UK).** The session, held on **1st April, 2025**, provided an enriching platform for researchers, faculty members, and students to gain **practical insights and expert guidance** on navigating the research publication landscape. Mr. Bose, with his extensive experience in academic publishing, covered crucial aspects of research publications, including:

- **Understanding the Publication Process** – A step-by-step guide from conceptualization to submission.
- **Choosing the Right Journal** – Strategies to identify the most suitable publication platform.
- **Navigating Peer Review** – Tips on effectively addressing reviewer feedback.
- **Enhancing Research Visibility** – Methods to maximize research impact.
- **Ethical Considerations** – Best practices for maintaining integrity in publishing.



### 1.3 Workshops

1. The Department of ECE has successfully conducted a **Technical workshop** as part of the '**Embedded & IoT**' domain training for the students of ECE & EN 3rd year (Only registered students under the mentioned training) to gain industrial exposure and develop the practical aspects and utilization of this training. The session was conducted by invited speakers from Ducat, Noida. **The workshop covered many important aspects required for the 'Embedded & IoT training' and helped the students to work hands-on. This also facilitated them in making the projects which is an essential part of their domain training.**



2. The Department of Electronics & Communication Engineering has organized a **Workshop on 'Fundamentals of Cyber Security'** for the ECE IInd Year Students(Batch 2023-27) on **29th May, 2025** by different esteemed Speakers from **CDAC Delhi**.

**Outcome:** This lecture provided the intent of helping students and professionals with the knowledge and understanding of a cybersecurity, its importance, and applications.

About the Spokesperson: Our **keynote speaker** are

1. **Mr. Jaibheem Gaikwad (Project Manager, CDAC Delhi)**
2. **Ms. Richa Chaudhary (Senior Behavioural and soft skills trainer, CDAC Delhi)**
3. **Dr. Shoyab Ali (Training & Placement Officer, CDAC Delhi)**



3. A **workshop on “Robotics Product: ROS & Start-up Funding”** has been successfully conducted for 3rd year students of ABESEC (ECE, ELCE & EN Branches) during 27th Feb. - 6th March 2025. This workshop was jointly organized by INIF, Department of Electronics & Communication Engineering and Electrical & Computer Engineering, ABESEC. The workshop was sponsored by MeitY, Govt. of India under TIDE 2.0 scheme. For the workshop Trainers had contributed their experience dedicatedly to the students.

- Introduction to ROS
- Discussion on Entrepreneurship and Start-ups
- ROS services
- Hands-on on ROS services
- ROS visualization tools
- Gazebo
- How to create a workspace

**Workshop covered:**

- Hands-on on how to publish messages using terminal
- Installation of RaspberryPi
- Setup for robot control
- Hands-on with robot setup on terminal
- Hands-on with Robot
- How to control Robot motor



## 1.4 Trainings (Domain Specific) & PTM

- To provide training & guidance to students on the various aspects of building a career in the domain of ECE.
- Assist the students in exploring new opportunities & new technologies.
- Guide them in developing skills & job search strategies required to achieve their career objectives.
- Organize various types & levels of in-house domain training programs & extension programs to achieve the goals.
- To help the students to get placed in core companies.

| Session                                     | S. No. | Name of the Training                          | Name of the Trainer                                                                                                      | Area of Training        | No. of Students |
|---------------------------------------------|--------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|
| 2024-25<br>(EVEN)<br>(2 <sup>nd</sup> Year) | 1      | Electronics Circuit Design (ODD Sem)          | 1. Dr. Raman Kapoor<br>2. Dr. Shailendra Bisariya<br>3. Ms. Aakriti Chabra<br>4. Mr. Kamal Bhatia<br>5. Ms. Unnati Mehta | Microelectronics & VLSI | 225             |
|                                             | 2      | Microcontroller & Embedded Systems (EVEN Sem) | 1. Ms. Ranjeeta Yadav<br>2. Dr. Aarti Sharma<br>3. Ms. Pooja Pathak<br>4. Ms. Anupam<br>5. Ms. Rakhi Kumari              | Embedded Systems & IoT  | 225             |

| Session                                           | S. No. | Name of the Training                   | Name of the Trainer                                                                                         | Area of Training        | No. of Students |
|---------------------------------------------------|--------|----------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|
| 2024-25<br>(ODD & EVEN)<br>(3 <sup>rd</sup> Year) | 1      | VLSI Design using PSPICE               | Mr. Kamal Bhatia                                                                                            | Microelectronics & VLSI | 35              |
|                                                   | 2      | Front End VLSI Design                  | Dr. Raman Kapoor                                                                                            | Microelectronics & VLSI | 35              |
|                                                   | 3      | BackEnd VLSI Design                    | Dr. Shailendra Bisariya                                                                                     | Microelectronics & VLSI | 30              |
|                                                   | 4      | Embedded Systems and IOT (Level 1 & 2) | 1. Ms. Ranjeeta Yadav<br>2. Dr. Aarti Sharma<br>3. Ms. Pooja Pathak<br>4. Ms. Anupam<br>5. Ms. Rakhi Kumari | Embedded Systems & IoT  | 102             |

The **Department of Electronics and Communication Engineering** has successfully organized the **Parent-Teacher Meeting (PTM) on 17th May, 2025**. The meeting was attended by the parents of Third-year students, PL and mentors of ECE department.

Following points discussed in PTM:

- This meeting created awareness among parents about all the initiatives taken by the ECE Department.
- The attendance status of students was shared with the parents.
- The performance of students in ST-1 and ST-2 was discussed.
- Measures taken to improve the performance of students.

## 1.5 Industrial Visit

The Department of Electronics and Communication Engineering has successfully organized an insightful Industrial visit to **Network Bulls, Sector 14, Gurugram** for B.Tech students of ECE-IIInd Year Section-B (Batch 2023-27) on **28th May 2025**.

**About the Organization:** Network Bulls is the premier institute for networking trainings in India. Founded in 2009, Network Bulls offers advanced trainings in Associate, Professional and Expert level in Enterprise/R&S, Security, Data Center and Collaboration track certifications which are offered by Cisco Systems. Network Bulls' head office is located in Gurgaon.



## 1.6 Project Expo-2K25 | | "Electro Innovate-4.0"

The **Department of Electronics and Communication Engineering** successfully organised a **Project Exhibition for final-year students with the title "Electro Innovate-4.0" on June 4, 2025**. This Project exhibitions promoted knowledge sharing, collaboration, and inspiration by showcasing projects and innovations.

Outcomes:

1. Demonstration of Innovative live Projects by B. Tech Final Year Students.
2. B. Tech. Second Year & Third Year students got Exposure for project evaluation processes.
3. Real time learning environment for project evaluation methodology created for junior batches.
4. Audience got Learning platform for project related resources.
5. Exposure to publications & patenting process.

Guests:

1. Mr. Shantanu Director, ABS TECHNOLOGIES
2. Mr. Ayush Puri, Software Engineer, SRIN (Samsung)
3. Ms. Snigdha Tyagi, Staff Engineer, Synopsys India Pvt Ltd.



## 1.7 Farewell Party

1. The **Department of Electronics & Communication Engineering** has organized a Farewell "**NIRVAAN'25**" on **19th June, 2025** for ECE Final Year Students (Batch 2021-2025). The Farewell event started with Lamp Lighting & Maa Saraswati Vandana followed by different Cultural Programs, Title Distribution and Group Photography.

**The Title winners of this Farewell event were:**

- |                         |                     |                                             |
|-------------------------|---------------------|---------------------------------------------|
| 1. Mr/Ms Dancing Star : | Dipendra, Shivyana  | 2. Sonic Star:Udbhav Sharma                 |
| 3. Mr./Ms. Popular:     | Ishaan Jindal, Ria  | 4. Miss Diva:Anushka Verma                  |
| 5. Academic Ace :       | Sneha Poddar        | 6. Stunner: Anushka shukla                  |
| 7. All Rounder:         | Sneha Gupta, Jhanvi | 8. Mr./Ms. Radiant Smile: Shelly, Yashartha |
| 9. Mr./Ms. ECE:         | Rohan, Tanu         | 10. Mr/Ms. Farewell: Maahi, Badal           |
| 11. Ms. Intellect:      | Monal               |                                             |





## 2. RESEARCH & INNOVATION

The Research & Innovation activity of the ECE department integrates Publications, Patents, Incubation and Startup. The purpose behind this is to improve upon the quality and several publications. Every project group in the final year is advised to have at least two publications (Review & Implementation) out of their project in an academic session. Apart from this, every faculty member must have a maximum number of publications in reputed national/Internationals journals/Conferences.

- Any innovative and novel ideas from projects are further encouraged for a patent.
- The department provides support to students who are interested in their own startups/ business opportunities. It provides expert/ resource persons and helps in the registration of startups etc.

### 2.1 Publications: Indexed Journals

- **Kimmi Verma**, "Spatio-temporal analysis of tidal wetlands using multi-spectral imaging, machine learning, and neural networks: A comprehensive approach to ecosystem monitoring and change detection," [Journal of South American Earth Sciences on Science Direct, Volume 161, 2025.](#)
- Anjana Bhardwaj, Amit Das, **Ranjeeta Yadav**, Pradeep Kumar, "Reliability analysis of dopingless vertical nanowire TFET with interface trap charges for ring-oscillator circuit implementation," *Microelectronics Reliability*, Volume 172, 2025,
- Balaram, Allam, B. Victoria Jancee, **Manidipa Roy**, and Dhiraj Kapila. "A Novel Approach for Accurate Signal Classification and Robust Performance Using an Enhanced Modulation Identification in MIMO Systems via Diffusion Kernel Attention Network With Green Anaconda Optimization." *International Journal of Communication Systems* 38, no. 12 (2025): e70157.
- Bhardwaj Anjana, Amit Das, Swarnima Roy, Khushboo, Abhishek Aman, and **Geetanjali Raj**. "Physics-based Computational Optimization in Dopingless Vertical Nanowire TFET using Triple Metal Gate Architecture." *Semiconductors* 59, no. 6 (2025): 521-531.
- **Singh Shivam**, Rajeev Kumar, Bhargavi Chaudhary, Priyanka Bhardwaj, Vipin Kumar Upadhyay, Anurag Upadhyay, and Malek G. Daher. "Gold immobilized SPR-Enhanced PCF biosensor for detection of cancer cells: a numerical simulation." *Plasmonics* 20, no. 6 (2025): 3535-3544.
- Singh Pooja, Lokendra Singh, Sameer Yadav, Sudhanshu Shekhar, Siddharth Bhalerao, Preeti Rai, Prakash Pareek, and **Ajay Suri**. "Two-way detection of tuberculosis bacilli using fano resonance sensor and machine learning algorithms." *Materials Research Express* 12, no. 3 (2025): 035003.
- Das Amit, Anjana Bhardwaj, Ashish Gupta, and **Geetanjali Raj**. "Numerical Comparative Analysis of 10T-SRAM Cells with 6T, 7T, 8T, and 9T Using Vertical Nanowire Tunnel FETs." *Semiconductors* 59, no. 5 (2025): 427-435.
- Kumar Rajeev, Vimal Kant Pandey, Javed Alam, Suman Garia, and **Shivam Singh**. "Detection of cortisol using long range surface plasmon resonance sensor with enhance figure of merit." *Microchemical Journal* 209 (2025): 112696.
- Bhardwaj Anjana, Amit Das, **Upasana Sharma**, Ashish Gupta, and Swarnima Roy. "Temperature Induced Analog Performance Modulation of High-Semicond2560002Bhardwaj-F1. png Vertical Nanowire Tunnel FET." *Semiconductors* 59, no. 4 (2025): 382-390.

- Bouandas, Hiba, Rajeev Kumar, Mostefa Benhaliliba, **Shivam Singh**, and Lalit Garia. "Plasmonic sensor design: Cu-SiO<sub>2</sub>-Ni-black phosphorus for enhanced surface plasmon resonance in visible regime." *Microchimica Acta* 192, no. 2 (2025): 114.
- Venkatesan, Kishore Kumar, Sathiyam Samikannu, and **Shivam Singh**. "Detection of cancer type cells using surface plasmon resonance employing copper, perovskite, and MXene layer with sensitivity enhancement." *Plasmonics* (2025): 1-11.
- Kumar, Rajeev, **Shivam Singh**, Hiba Bouandas, and Javed Alam. "Detection of COVID-19 using surface plasmon resonance sensor for sensitivity enhancement: theoretical analysis." *Plasmonics* (2025): 1-11.
- Jha, Pankaj, Divya Saxena, and **Navneet Sharma**. "Tunable Graphene-Loaded Ultra Wide-Band Antenna for Reconfigurable Notch Band in THz Spectrum." *Plasmonics* (2025): 1-9.
- Chandra Saurabh, Rajeev Arya, Rohit Sharma, Shahad Almansour, and Michał Gandor. "Occlusion-Aware Secure Device-to-Device Communication in Social Internet of Things Networks." *IEEE Transactions on Consumer Electronics* (2025).
- Alodhayb Abdullah N., Saravanan Pandiaraj, and **Shivam Singh**. "Sensitivity enhancement using surface plasmon resonance sensor for colorectal detection by employing heterostructure." *Plasmonics* (2025): 1-11.
- **Johri Arpita**, Varnita Verma, and Mainak Basu. "Optimization and Intelligent Control in Hybrid Renewable Energy Systems Incorporating Solar and Biomass." *Energy Engineering: Journal of the Association of Energy Engineers* 122, no. 5 (2025): 1887.
- Chandra Saurabh, Rajeev Arya, Rohit Sharma, Kusum Yadav, and Michał Gandor. "Freshness-Aware Device-to-Device Communication in Digital Twin Network for Disaster Management." *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* (2025).
- Liu Lan, Zhouyi Xiao, Jianpeng Hu, Jingxin Han, Jung Yoon Kim, Rohit Sharma, and Chengfan Li. "FSBNet: A Classifying Framework of Disaster Scene for Volcanic Lithology Through Deep Learning Models." *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* (2025).
- **Bisariya Shailendra**, and Neelofer Afzal. "A novel Bulk-driven current differential transconductance amplifier and its applications." *Sigma Journal of Engineering and Natural Sciences* 43, no. 1 (2025): 62-72.
- **Chaudhary Kavita**, Jitendra Bahadur Maurya, Ankur Kumar, . "Nanomaterials for FET Biosensor—A Systematic Review on Its Application, Advantages and Limitations." *Plasmonics* 20, no. 6 (2025):

## 2.2 Publications: Indexed Conferences

- Barthwell, Shivangi, Deepak Chauhan, Rakesh Kumar, Gaurav Dhiman, **Ajay Suri**, Sohini Chowdhury, and Suresh Singh. "Tele-alarmed smoke detecting devices using GSM." In *AIP Conference Proceedings*, vol. 3185, no. 1, p. 030013. AIP Publishing LLC, 2025.
- Kumar Arvind, Jitendra Singh, and **Rohit Sharma**. "Enhancing Sugarcane Disease Diagnosis: UNET Architecture for Red Rot Identification." In *2025 2nd International Conference on Computational Intelligence, Communication Technology and Networking (CICTN)*, pp. 821-826. IEEE, 2025.
- Chauhan Rahul, Hemant Pokhariya, Prateek Negi, Chandradeep Bhatt, Rakesh Kumar, Gaurav Dhiman, **Ajay Suri**, Deepak Kumar, and Sohini Chowdhury. "A comparative study of x-ray and CT images to using imaging and deep learning to detect the COVID19 virus." In *AIP Conference Proceedings*, vol. 3185, no. 1, p. 030001. AIP Publishing LLC, 2025.
- Gaur, Shuddhatm, Shubh Goel, Monal Sharma, and **Shivam Singh**. "A Review on Energy-Efficient PCF Based Plasmonic Biosensors for Biosensing Applications." In *2025 3rd International Conference on Device Intelligence, Computing and Communication Technologies (DICCT)*, pp. 614-619. IEEE, 2025.

- Gupta Abhishek, **D. K. Sharma**, and D. N. Sahai. "A High QoS Cluster Routing Scheme for Wireless Sensor Networks in Smart Agriculture Application." In International Conference on Information Technology, pp. 83-95. Singapore: Springer Nature Singapore, 2025.
- Sudhakar A. V. V., **Upasana Sharma**, K. Visala, K. Suresh Kumar, Chirag Arora, and Kuldeep Chouhan. "Smart Antennas and Machine Learning: Enhancing Beamforming in Wireless Communications." In 2025 International Conference on Pervasive Computational Technologies (ICPCT), pp. 441-445. IEEE, 2025.
- Bisaria Charu, K. R. Praneeth, Divya Nimma, T. Naresh Babu, **Manidipa Roy**, and M. Karthik. "Enhanced AI Model for Multimodal Influencer Marketing Analysis and Classification." In 2025 Fifth International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies (ICAECT), pp. 1-6. IEEE, 2025.

## 2.3 Publications: Book Chapters

- **Suri Ajay**, Dharmendra Nishad, and Anshul Pandey. "Efficient design of solar powered air purifier with air quality monitor and dust sensor: A review." Integrated Technologies in Electrical, Electronics and Biotechnology Engineering (2025): 36-40.
- Raghuvanshi, Neha Singh, **Arpita Johri**, **Mudit Saxena**, Ashwani Kumar, and Yatika Gori. "Economic and environmental aspects of heat exchanger applications." In Heat Exchanger Technologies for Sustainable Renewable Energy Systems, pp. 158-189. CRC Press, 2025.
- **Raghuvanshi Neha Singh**, **Arpita Johri**, **Mudit Saxena**, Ashwani Kumar, Nitesh Dutt, Mukesh Kumar Awasthi, and Sivasakthivel Thangavel. "Innovative technologies in heat exchangers for renewable energy systems." In Heat Exchanger Technologies for Sustainable Renewable Energy Systems, pp. 1-29. CRC Press, 2025.

## 2.4 Patents

| S.No. | Title of Invention                                                 | Applicant / Inventors from ABESEC | Status  | Application No. |
|-------|--------------------------------------------------------------------|-----------------------------------|---------|-----------------|
| 1     | IoT BASED MECHANICAL ROBOTIC ARM.                                  | Dr. Manidipa Roy                  | Granted | 455303-001      |
| 2     | ARTIFICIAL INTELLIGENCE-BASED ANTENNA FOR BIOMEDICAL APPLICATIONS. | Dr. Mandipa Roy                   | Granted | 449872-001      |
| 3     | ARTIFICIAL DEVICE TO DETECT SCIENCE AGE OF OBJECTS.                | Dr. Aarti Sharma                  | Granted | 447703-001      |

## 2.5 MoU

- **Memorandum of Understanding (MoU)** has been signed between **ABES Engineering College, Ghaziabad**, and **Lagozon Group**, which was hosted by the Department of ECE on **January 19, 2025**. The MoU was delivered and signed on behalf of ABES Engineering College, Ghaziabad, by **Prof.(Dr.) Devendra Kumar Sharma, Director, ABESEC** and **Mr. Vipul Vashishth (CEO- Lagozon Edutech. Pvt. Ltd.)** in the presence of **Dr. Rohit Sharma, Dean Research and HoD ECE**.



## 3. FACULTY ACHIEVEMENTS

### 3.1 FDPs Attended Outside The College

- **FDP on “IoT and its Applications” (27 Jan – 1 Feb 2025, EICT & IIT Guwahati)**
- Attended by: Ms. Upasana Sharma, Dr. Ritu Agarwal, Ms. Shilpa Srivastava, Ms. Rakhi Kumari, Dr. Navneet Sharma, Ms. Pooja Pathak, Ms. Anupam, Dr. Ajay Suri, Ms. Geetanjali Raj, Dr. Manidipa Roy, Mr. Mudit Saxena, Dr. Aakriti Chhabra, Dr. Shivani Sharma, Ms. Sonam Tyagi, Ms. Unnati Mehta, Mr. Deepak Garg, Ms. Ranjeeta Yadav, Mr. Hitesh Tomar, Dr. Raman Kapoor, Dr. Manish Zadoo, Mr. Kamal Bhatia, Ms. Arpita Johri, Dr. Shivam Singh, Dr. Rajneesh Singh, Mr. Manish, Ms. Kavita Chaudhary, Dr. Aarti Sharma, Dr. Shailendra Bisariya, Mr. Shahbaz Alam
- Total: 29 participants
- **FDP on “Antennas & RF Circuits for Energizing Low Power Devices”**
  - ◆ 24 Feb – 1 Mar 2025, AICTE ATAL, Tripura University
  - ◆ Attended by: Dr. Shivani Sharma
- **FDP on “Advances in AI for Image Processing & Medical Applications”**
  - ◆ 3 – 7 Mar 2025, MeitY & NIT Patna
  - ◆ Attended by: Ms. Sonam Tyagi
- **FDP on “Quantum Communication and AI/ML”**
  - ◆ 7 – 11 Mar 2025, EICT & NIT Patna
  - ◆ Attended by: Ms. Ranjeeta Yadav
- **FDP on “LaTeX”**
  - ◆ 24 – 29 Mar 2025, CVR College of Engineering
  - ◆ Attended by: Ms. Sonam Tyagi
- **FDP on “Advancing Real-Time IoT Applications with ML & DL”**
  - ◆ 4 – 14 Apr 2025, NIT Jalandhar
  - ◆ Attended by: Ms. Sonam Tyagi
- **Workshop on “Metamaterial Antennas & Applications”**
  - ◆ 18 – 20 Apr 2025, IIT Kanpur
  - ◆ Attended by: Mr. Mudit Saxena
- **FDP on “Machine Learning & IoT”**
  - ◆ 10 – 14 Feb 2025, E&ICT IIT Roorkee & MEC Ajmer
  - ◆ Attended by: Dr. Raman Kapoor
- **FDP on “Emerging Frontiers in AI-Driven Edge & Quantum Computing”**
  - ◆ 9 – 14 Jun 2025, EICT & IIT Roorkee
  - ◆ Attended by: Mr. Deepak Garg, Dr. Manish Zadoo, Dr. Aarti Sharma, Dr. Ajay Suri

## 3.2 Reviewer of Conference/Journals

- **Dr. KIMMI VERMA**, has been serving as a reviewer in the “**5th International Conference on Advances and Applications of Artificial Intelligence and machine learning 2025**” at Sharda University.
- **Dr. RAMAN KAPOOR** has been serving as a reviewer of the Conference titled “**7th International Conference on Computing, Communication and Automation**” held at Galgotias University, Greater Noida, India.
- **Dr. MANIDIPA ROY** has been serving as a reviewer of the Conference titled “**Advancement in Electronics & Communication Engineering 2025**” held at Raj Kumar Goel Institute of Technology, Ghaziabad, India.
- **Dr. MANIDIPA ROY** has been serving as a reviewer of the Conference titled “**7th International Conference on Computing, Communication and Automation**” held at Galgotias University, Greater Noida, India.
- **Dr. MANIDIPA ROY** has been serving as a reviewer of the Conference titled “**International Conference on Computing Sciences and Communications**” held at ABES Engineering College, Ghaziabad, India.
- **Dr NAVNEET SHARMA** has received a certificate of appreciation for his valuable contribution as a Reviewer of many renowned (SCI/SCIE/SCOPUS) Journals namely: - **Physica Scripta, Microwave and Optical Technology Letters** etc.
- **Dr. RITU AGARWAL** has been serving as a reviewer of the “**2025 3rd International Conference on Communication, Security, and Artificial Intelligence**”.

## 3.3 Research Outcome

- **Prof.(Dr.) ROHIT SHARMA** published a paper in **SCIE/Q1 Journal** having Impact factor of 9.0 on the theme of “**Hypergraph-Based Channel Effects on Age of Information in D2D-Enabled Social Industrial IoT Networks**”.
- **Prof.(Dr.) ROHIT SHARMA** published a paper in **SCIE/Q2 Journal (IEEE Transactions on Consumer Electronics)** having Impact factor of 4.3 on the theme of “**Occlusion-Aware Secure Device-to-Device Communication in Social Internet of Things Networks**”.
- A Design patent has been granted to **Ms. RANJEETA YADAV** for an invention entitled “**IOT BASED SOLAR POWERED PLANT HEALTH MONITORING DEVICE**”.

## 3.4 Certification

- **Ms. GEETANJALI RAJ** has received certificate of Completion on 7th February 2025 from **UDEMY** for the Course “**Arduino Step by Step: Getting Serious**”.
- **Ms. GEETANJALI RAJ** has received certificate of Completion on 8th February 2025 from **UDEMY** for the Course “**Arduino Step by Step: Getting Started**”.
- **Dr. MANIDIPA ROY** has successfully completed **NPTEL** online certification course on the “**CLOUD COMPUTING**” in the tenure Jan 25 to April 25.
- **Ms. ANUPAM** has received certificate of Completion on 11th February 2025 from **Simplilearn** for the Course “**Introduction to Artificial Intelligence**”.
- **Ms. ANUPAM** has received certificate of Completion on 10th June 2025 from **Simplilearn** for the Course “**Introduction to Generative AI**”.
- **Mr. MUDIT SAXENA** has successfully completed **NPTEL** online certification course on the “**ANIMAL PHYSIOLOGY**” in the tenure Jul 24 to Oct 24.
- **Dr. RITU AGGARWAL** has successfully completed **NPTEL** online certification course on the “**NBA Accreditation and Teaching and Learning in Engineering (NATE)**” in the tenure Jan 25 to April 25.



## 4. STUDENT ACHIEVEMENTS

### 4.1 Technical Achievements



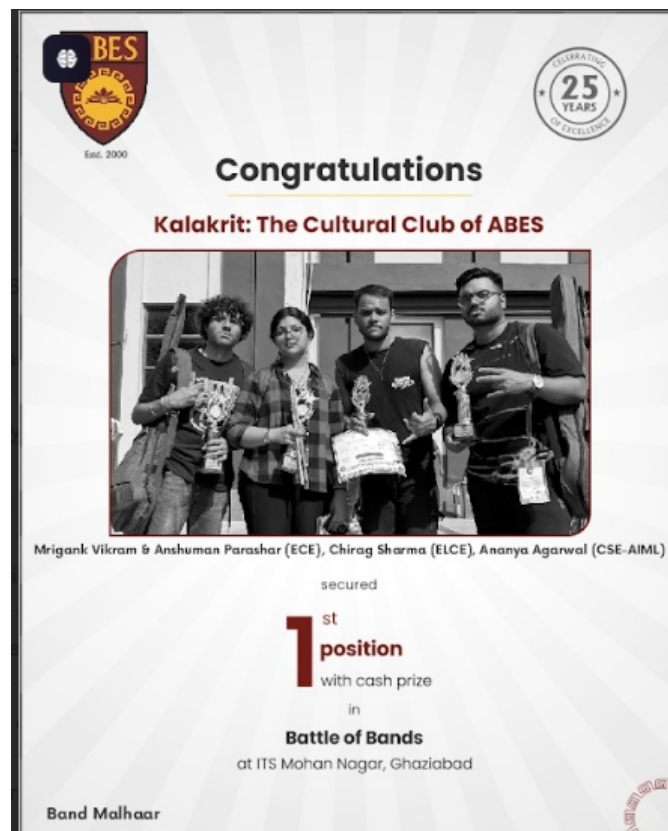
- **Mr. AAYUSH SINGH & Mr. Harshit Kr. Pandey** of B.Tech Third Year (Batch 2022-2026) has participated in a workshop on “**Robotics Product:- ROS & Start – up Funding**” held from 27th February 2025 to 6th March 2025. The workshop was jointly organized by INurture Incubation Foundation, Department of Electronics & Communication Engineering and Department of Electrical & Computer Engineering at ABES Engineering College.

### 4.2 GATE Achievements

- **Mr. RIZWAN KHAN** of B.Tech Final Year (Batch 2021-2025) had successfully qualified GATE-2025 Examination with AIR–373.
- **Mr. SHIVAM GUPTA** of B.Tech Final Year (Batch 2021-2025) had successfully qualified the GATE-2025 Examination with AIR–330.
- **Mr. DRIPENDRA KUMAR GAUTAM** of B.Tech Final Year (Batch 2021-2025) had successfully qualified GATE-2025 Examination with AIR–315.
- **Mr. ARYAN UPADHYAY** of B.Tech Final Year (Batch 2021-2025) had successfully qualified the GATE-2025 Examination with AIR–229.
- **Mr. YASH CHAKERTI** of B.Tech Third Year (Batch 2022-2026) had successfully qualified the GATE-2025 Examination with AIR–350.



## 4.3 Cultural Achievements



## 4.4 Sports Achievements





## 5. PLACEMENT

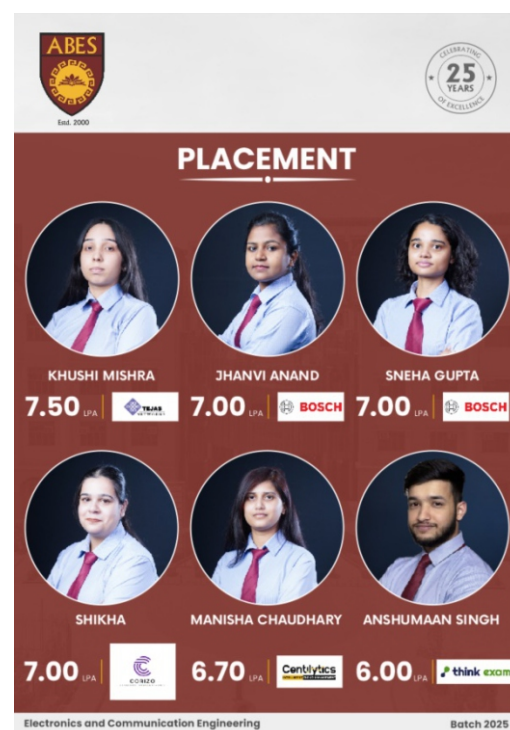
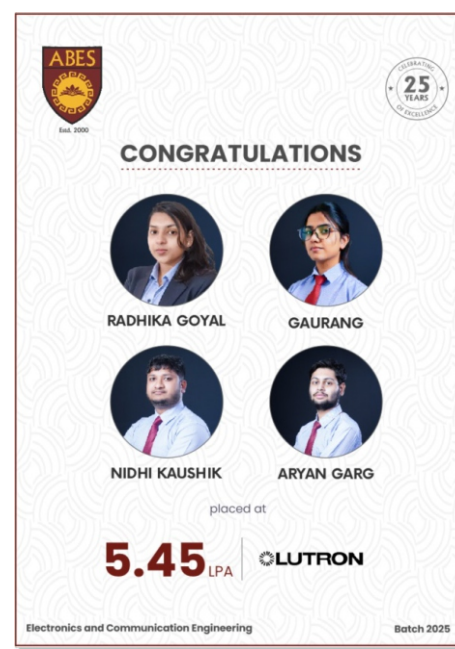
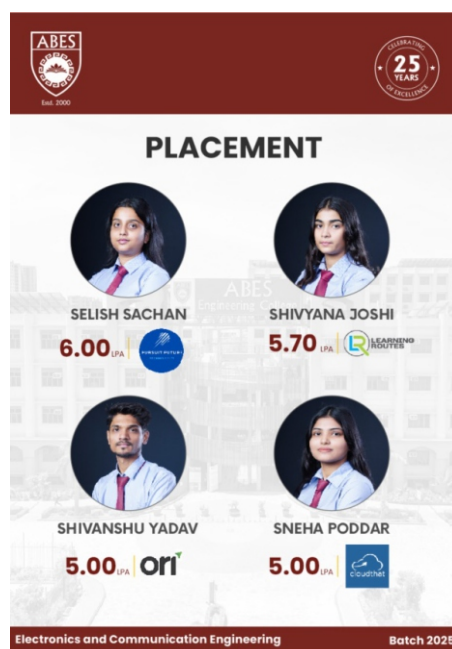
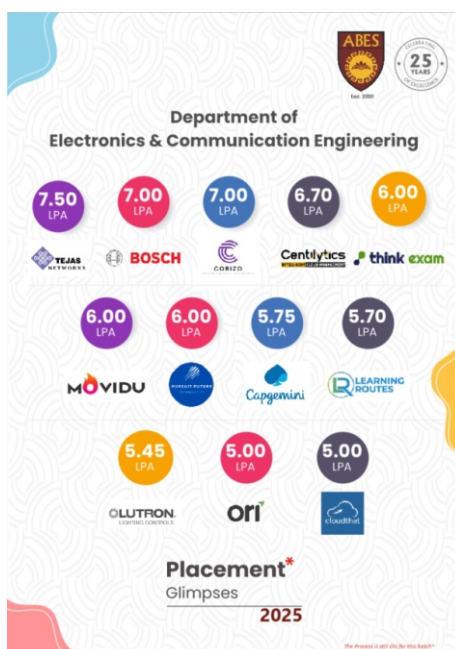
B.Tech.(ECE), 2021-2025



## 5.1 Star Performers

| S.No. | Name                     | Company                                  | Package |
|-------|--------------------------|------------------------------------------|---------|
| 1     | SHIKHA                   | Corizo Edutech                           | 700000  |
| 2     | MAAHI TYAGI              | PlanetSpark                              | 650000  |
| 3     | ANSHUMAAN SINGH          | Think Exam                               | 600000  |
| 4     | SELISH SACHAN            | Pursuit Future Technologies              | 600000  |
| 5     | DEEPANSHI UPADHYAY       | TraviYo                                  | 500000  |
| 6     | ISHITA BHATNAGAR         | Colorplast                               | 500000  |
| 7     | ABHISHEK SHARMA          | Accenture                                | 450000  |
| 8     | ADITYA ASTHANA           | Accenture                                | 450000  |
| 9     | ANNUSHKAA SHUKLA         | Accenture                                | 450000  |
| 10    | ANUSHA AGRAWAL           | Accenture                                | 450000  |
| 11    | ANUSHKA VERMA            | Novnex Corporation Pvt. Ltd.             | 450000  |
| 12    | ARJUN SINGH              | Accenture                                | 450000  |
| 13    | ARNAV MEHTA              | Accenture                                | 450000  |
| 14    | DIVYA GUPTA              | Accenture                                | 450000  |
| 15    | INDR SHARMA              | Accenture                                | 450000  |
| 16    | PRATIBHA JHA             | Accenture                                | 450000  |
| 17    | RITIKA YADAV             | IntrnForte                               | 450000  |
| 18    | RITU RAJ                 | Accenture                                | 450000  |
| 19    | SAKSHAM SRIVASTAVA       | Accenture                                | 450000  |
| 20    | SWATI SHARMA             | Accenture                                | 450000  |
| 21    | TANU RAI                 | Accenture                                | 450000  |
| 22    | INDRANIL SUBIR MUKHERJEE | TATA Consultancy Services Limited (TCSL) | 441929  |
| 23    | ADITYA PANDEY            | HCL Tech                                 | 425000  |
| 24    | AISHWARYA SONI           | capgemini                                | 425000  |
| 25    | ASHISH RAI               | HCL Tech                                 | 425000  |
| 26    | SAHIL SHARMA             | HCL Tech                                 | 425000  |
| 27    | AKANSHA BHARDWAJ         | Cognizant                                | 400000  |
| 28    | AYUSH KUMAR RAI          | Yazaki india pvt ltd                     | 400000  |
| 29    | DEEPANSHI TRIPATHI       | Cognizant                                | 400000  |
| 30    | DIVYANSH AGARWAL         | Tech Mahindra                            | 400000  |
| 31    | MAYANK SONI              | Cognizant                                | 400000  |
| 32    | CHAHAK                   | Infosys                                  | 360000  |
| 33    | HARSHIT JAISWAL          | Congurex                                 | 360000  |
| 34    | ISHAN JINDAL             | Infosys                                  | 360000  |
| 35    | KHUSHI SHARMA            | Infosys                                  | 360000  |
| 36    | PRASHANT KUMAR MISHRA    | Congurex                                 | 360000  |
| 37    | RAUNAK SAXENA            | Congurex                                 | 360000  |
| 38    | ROUNAK KUMAR SINGH       | Congurex                                 | 360000  |
| 39    | SHUBH GOEL               | Congurex                                 | 360000  |
| 40    | SHUDDHATM GAUR           | Congurex                                 | 360000  |
| 41    | VAISHNAVI ASTHANA        | Infosys                                  | 360000  |
| 42    | Akash Singh              | Exelique Solution                        | 335000  |
| 43    | ANIKET GIRI              | Exelique Solution                        | 335000  |
| 44    | ADITYA KAUSHIK           | Oppo                                     | 300000  |
| 45    | BADAL SINGH              | Oppo                                     | 300000  |

|    |                  |                          |        |
|----|------------------|--------------------------|--------|
| 46 | JAI SINGH        | Arihant Electrical       | 300000 |
| 47 | KUNAL GUPTA      | Arihant Electrical       | 300000 |
| 48 | NANDINI BHARDWAJ | Arihant Electrical       | 300000 |
| 49 | NIKHIL MANDOLI   | Arihant Electrical       | 300000 |
| 50 | RATAN SAXENA     | Arihant Electrical       | 300000 |
| 51 | ROHAN CHAUHAN    | Statcon Energia Pvt. Ltd | 300000 |
| 52 | SHIVAM GUPTA     | Arihant Electrical       | 300000 |
| 53 | VIPUL NISHAD     | Statcon Energia Pvt. Ltd | 300000 |



## 5.2 Internships

- **Third Year Student (Batch 2022-26) Mr. Yash Chakervarti** as been offered a paid **6 months Internship (Remote Location)** at **Ripple Healthcare** with stipend Amount of **INR 15k+bonus** as **Embedded Hardware Intern**.
- **B.Tech ECE Third Year (Batch 2022-26)** has been offered a paid internship(Remote Location) at **Sphere.AI**. Sphere.AI specialises in Child Friendly Conversational AI toys that act as the kid's companion. The primary goal of Sphere.AI is to reduce the active screen time of children and make learning a more enjoyable and engaging experience.

| Sr. No. | Name of the Student | Company   | Profile                         | Total Stipend (per month) |
|---------|---------------------|-----------|---------------------------------|---------------------------|
| 1       | Yash Chakervarti    | Sphere.AI | IOT & Hardware Developer intern | Rs. 11,000/-              |
| 2       | Sujal Gupta         | Sphere.AI | AI/ML Intern                    | Rs. 11,000/-              |
| 3       | Sahil Kumar Verma   | Sphere.AI | Full Stack intern               | Rs. 11,000/-              |



## 5.2 Testimonials of Placed Student

### Harshita Sisodia

I am immensely grateful to my esteemed college, Head of Department, faculty members, mentors, and the dedicated Placement Cell-CCPD for their unwavering support and guidance, which have been instrumental in securing my placement at Capgemini Engineering in the VLSI domain. The comprehensive academic curriculum, industry-oriented training, and nurturing environment provided by the Electronics and Communication Department have equipped me with vital skills for the professional world.

CCPD has played a crucial role in shaping my career by consistently updating and coordinating job opportunities. I sincerely appreciate the relentless efforts of the faculty members and placement coordinators for their dedication in motivating students and facilitating job placements. The faculty members of the ECE department have been incredibly supportive, encouraging us to pursue careers in the core domain. Under their guidance, I had the opportunity to publish a review paper and develop an industry-level project, which enriched my technical knowledge. The embracing environment in Idea Lab, kept me engaged in my field of interest and fueled my passion for innovation. Additionally, the core ECE training, provided by the department in collaboration with industry professionals, significantly enhanced my technical proficiency and practical implementation skills. I am deeply grateful to them for strengthening my foundation and enabling me to advance my skills effectively.

The holistic education and placement support I have received have played a pivotal role in launching my career. Thank you once again for your invaluable contribution to this achievement.



### Aishwarya Soni



I am immensely grateful to my esteemed college, Head of Department, faculty members, mentors, and the dedicated Placement Cell-CCPD for their unwavering support and guidance, which have been instrumental in securing my placement at Capgemini Engineering in the VLSI domain. The comprehensive academic curriculum, industry-oriented training, and nurturing environment provided by the Electronics and Communication Department have equipped me with vital skills for the professional world.

The faculty members of the ECE department have been incredibly supportive, encouraging us to pursue careers in the core domain. Under their guidance, I had the opportunity to publish a review paper and develop an industry-level project, which enriched my technical knowledge. The holistic education and placement support I have received have played a pivotal role in launching my career. Thank you once again for your invaluable contribution to this achievement.



## 6. ALUMNI CONNECT

### Alumni's Achievements



**2016-2020 batch alumni Ms. Shruti Parashar**, has made significant achievement by securing **AIR 5** in **Short Service Commission (Technical)** entry scheme in the Indian Army. Currently She is under training under Officers Training Academy (OTA) which is a training establishment of the Indian Army that trains officers for the Short Service Commission (SSC).

She also secured **AIR 25 and 59** in **Combined Defence Services (CDS)** Exam. Her other achievement are **Best Cadet U.P. Directorate NCC, Republic Day Camp 2010, Command level best speaker - Central Command** and **Miss India Queen of Hearts 2022**.

## Testimonials of Alumni Student



### Yash Sarin

I graduated with a B.Tech in Electronics and Communication Engineering (ECE) in 2024. During my journey, I explored diverse career paths that allowed me to grow both professionally and personally. At PlanetSpark, I gained valuable experience in sales, where I developed strong communication, negotiation, and relationship-building skills by working across the end-to-end sales cycle. This experience enhanced my confidence, customer-centric mindset, and ability to adapt in dynamic environments.

Currently, I am pursuing Japanese language proficiency and Embedded Software Engineering, with the goal of building a career in Japan. I believe the blend of my technical background, sales expertise, and cross-cultural skills will allow me to contribute meaningfully in a global setting. My journey reflects a constant drive to learn, adapt, and upscale myself, qualities that were first nurtured during my time at college.

### Vaishali Agarwal

I would like to express my heartfelt gratitude to ABES Engineering College for being a strong pillar in my academic and professional journey. I completed my B.Tech in Electronics and Communication Engineering (ECE) in 2024, and the knowledge, skills, and mentorship I received here have been instrumental in shaping my career.

I am delighted to have been placed at Yukinova Battery, an esteemed electronics company, where I work on projects that require both technical expertise and problem-solving skills. The continuous guidance from faculty members, the exposure to hands-on projects, and the encouraging academic environment at ABES have played a vital role in preparing me for this opportunity.

ABES has not only helped me grow technically but also instilled confidence and professionalism, which continue to support me in my corporate journey. I will always remain grateful for the invaluable experiences, memories, and opportunities this institution has provided me.







## TEAM MEMBERS

Patron  
**Sh. Shashwat Goel**  
*General Secretary*

Chief Patron  
**Sh. Neeraj Goel**  
*Chairman*

Patron  
**Prof. (Dr.) Devendra Kr. Sharma**  
*Director*

Chair, Publication  
**Prof. (Dr.) Kimmi Verma**  
*HOD-ECE*

Editor & Compiler  
**Ms. Ranjeeta Yadav**  
Asst. Prof., ECE Dept.

Reviewer  
**Ms. Rakhi Kumari**  
**Ms. Geetanjali Raj**  
**Ms. Kavita Chaudhary**  
**Mr. Kamal Bhatia**

Student Co-ordinators  
**Ms. Sneha Poddar**   **Mr. Utkarsh Kumar**  
**Mr. Arpit Mishra**   **Mr. Prince Rai**

# ABES Engineering College



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