



ERODE SENGUNTHAR ENGINEERING COLLEGE



(An Autonomous Institution)

PERUNDURAI, ERODE - 638057



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

MAGAZINE

SEP - OCT 2025



ABOUT THE DEPARTMENT

The Department of Electronics and Communication Engineering was started in the year of 2000. It offers UG Programme (B.E.) in Electronics and Communication Engineering and PG Programme (M.E.) in Applied Electronics. The Department has also been recognized as a centre for carrying out Ph.D. Programme under Anna University. It has good infrastructural facilities with well- experienced and dedicated team of faculty members. The Department has signed MoU with various companies and has collaboration in Research & Development / Student Projects Consultancy works. The Department organizes National level Students' Technical Symposia and Project Exhibition every year.

VISION

To impart professional excellence, leadership qualities and competence, embedded with character students and serve the society through research.

MISSION

- DM1: Create a Learning Environment to serve the societal needs.
- DM2: Impart state of art Technical Education to groom engineers with high professional standards.
- DM3: Promote innovative ideas and augment research to improve the quality of life through application of technologies
- DM4: Provide high quality ethical engineers for the Benefit of the Society.

PROGRAM OUTCOMES(PO)

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

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.

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.

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.

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

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.

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.

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

Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

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.

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.

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.

PROGRAM SPECIFIC OUTCOMES (PSO)

- **PSO1:** Interpretation Skills: Acquires skill to design, verify and validate electronic functional elements for a variety of applications.
- **PSO2:** Core Competences: Ability to use hardware and software tools to solve complex problems in VLSI, Communication, RF and Embedded Systems.
- **PSO 3:** Attitude: Develop an attitude of lifelong learning for sustained career advancement and adapt to the changing multidisciplinary profession.



ASSOCIATION ACTIVITIES

Teacher's Day was celebrated on 04 September 2025 with great enthusiasm and gratitude. Students expressed their respect and appreciation for the faculty by presenting handmade crafts and heartfelt wishes, making the occasion truly memorable. The celebration recognized the invaluable role of teachers in inspiring, guiding, and shaping the future of students while strengthening the bond between faculty and students.



An Extension Activity was organized at Thaimai Anbu Karangal Orphanage, Kananakurichi, Salem, on 12 September 2025. The II Year ECE 'B' students actively participated by contributing groceries worth ₹5,000 and spending quality time with the children, spreading love, care, and happiness. The activity instilled the values of empathy, compassion, and social responsibility among the students while encouraging them to make meaningful contributions to society.

An Extension Activity was organized at Bharathiyar & Sandhi Illayam, an old-age home in Bannari, on 16 September 2025. Faculty members and II Year ECE 'A' students actively participated by sponsoring and serving an afternoon meal worth ₹6,000 to the residents. The activity fostered compassion, social responsibility, and a spirit of community service among the students while providing care and support to the elderly residents.



ASSOCIATION ACTIVITIES

A One-Day Guest Lecture on "Industry-Ready PCB Design Skills for Future Electronics Engineers" was organized on 17 September 2025. The session was delivered by Dr. B. Jaishankar, Professor, Department of Electronics and Communication Engineering, KPR Institute of Engineering and Technology, Coimbatore. The lecture provided valuable insights into industry-standard PCB design practices, real-world design methodologies, and emerging career opportunities in electronics. It enhanced students' practical knowledge and equipped them with the skills required to meet the evolving demands of the electronics industry.



A One-Day Hands-on Training on "The Future of Digital Entrepreneurship: Emerging Models, Tech Innovations & Entrepreneurial Challenges" was organized on 19 September 2025. The session was conducted by Mr. K. Santhosh Kumar, Business Development Zonal Manager, Accent Techno Soft, Coimbatore. The programme provided participants with valuable insights into emerging digital business models, technological innovations, and the challenges of modern entrepreneurship. It encouraged students to develop an entrepreneurial mindset while enhancing their understanding of technology-driven business opportunities and innovation.

An ANRF Sponsored Five-Day National-Level Workshop on "One-Round Encrypted Fusion for Distributed Intrusion Detection in Privacy-Sensitive Industrial IoT Systems for Collaborative Learning" was organized from 06–10 October 2025. The workshop provided participants with expert insights, hands-on learning, and practical knowledge of secure Industrial IoT systems, privacy-preserving intrusion detection, and collaborative learning technologies.



ASSOCIATION ACTIVITIES

A Two-Day Hands-on Training Programme on "Designing Interactive Dashboard in Power BI" was organized on 24–25 September 2025. The programme provided participants with practical exposure to designing interactive dashboards using Power BI, enhancing their data visualization, analytics, and business intelligence skills through hands-on learning and expert guidance.



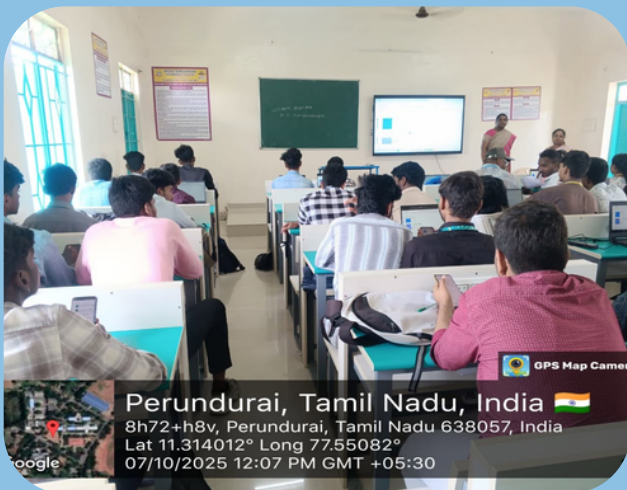
A Guest Lecture on "Designing the Future: Quantum Computing for Engineers" was organized on 25 September 2025. The session provided participants with valuable insights into the fundamentals of quantum computing and its emerging applications in engineering and technology, enhancing their understanding of next-generation computing paradigms.

Ayudha Pooja was celebrated on 28 September 2025 with great enthusiasm and traditional spirit. Faculty and students participated in the celebration, offering prayers and decorating the department to mark the auspicious occasion. The event fostered unity, gratitude, and respect for cultural traditions, making the celebration memorable.



ASSOCIATION ACTIVITIES

A Hands-on Training on "Real-Time Threat Detection with Privacy Guarantees" was organized on 06 October 2025. The session provided participants with practical exposure to real-time cyber threat detection techniques while emphasizing data privacy and security, enhancing their knowledge of modern cybersecurity practices.



As part of the ANRF Sponsored Five-Day National-Level Workshop, a Day 2 session on "Use Cases in IoT, Smart Grids, and Cloud System" was conducted on 07 October 2025 by Dr. R. Padmavathy, Assistant Professor, Department of Electronics and Communication Engineering, Dr. N.G.P. Institute of Technology, Coimbatore. The session provided valuable insights into real-world IoT applications, smart grid technologies, and cloud-based systems, enriching participants' understanding of secure and intelligent Industrial IoT solutions.

As part of the ANRF Sponsored Five-Day National-Level Workshop, a Day 3 session on "Key Features of Cyber Security Solutions and Evaluating the Effectiveness of Zero Trust Architecture" was conducted on 08 October 2025 by Mr. M. Pranesh, Technical Consultant, Accent Techno Soft, Coimbatore. The session provided participants with valuable insights into modern cybersecurity solutions, Zero Trust Architecture, and advanced security strategies for Industrial IoT systems.



ASSOCIATION ACTIVITIES

As part of the ANRF Sponsored Five-Day National-Level Workshop, a Day 4 session on "Practical Implementation of IoT" was conducted on 09 October 2025 by Mr. M. Yuvaraj, Lead Technical, SAN Technologies Pvt. Ltd., Perundurai. The session provided participants with hands-on exposure to IoT applications, real-time use cases, and their implementation in industrial systems, enhancing their practical understanding of Industrial IoT technologies.



As part of the ANRF Sponsored Five-Day National-Level Workshop, the Day 5 session on "Secure Data Fusion and Collaborative Learning in Industrial IoT Systems" was conducted on 10 October 2025 by Mr. G. Pradeep Kumar, Assistant Professor (Senior Grade), Department of Electronics and Communication Engineering, KPR Institute of Engineering and Technology, Coimbatore. The session provided valuable insights into secure data fusion and collaborative learning techniques for Industrial IoT systems. The workshop concluded with a valedictory ceremony, during which certificates were distributed to all participants, marking the successful completion of the programme.

A Motivational Seminar on "Be the Boss of Your Mind" was organized on 14 October 2025. The session was delivered by Ms. J. A. Prathieebha, Psychotherapist, PoSH Trainer, and EAP Facilitator, Coimbatore. The seminar focused on mental well-being, self-confidence, emotional resilience, and positive thinking, motivating students to develop a healthy mindset for achieving personal and professional success.



ASSOCIATION ACTIVITIES

The III Year ECE 'B' students visited SRG Power Solutions, Karumathampatti, Coimbatore, on 30 October 2025 as part of an industrial visit. The students gained practical exposure to power system design, fabrication, Power Control Boards, Variable Frequency Drives (VFDs), and PLC-based automation systems. The visit enhanced their understanding of industrial practices and bridged the gap between theoretical concepts and real-world applications.



An Extension Activity was organized at Paavai Foundation, Ramalingapuram, Coimbatore, where the III Year ECE 'B' students donated groceries worth ₹3,000 to support the care and welfare of girl children. The activity promoted compassion, social responsibility, and community service, encouraging students to contribute meaningfully towards the well-being of society.

FACULTY ACHIEVEMENTS

S.V. Savieetha published a patent titled "Self Calibrating EDGE-AI Airflow Control in HVAC Ducts using Micro Pulse System Identification" (Patent No. 202541080078 A / 36-2025). The patent was applied on 23 August 2025 and published/granted on 05 September 2025, recognizing her valuable contribution to research and innovation in the field of Electronics and Communication Engineering.

The Head of the Department (HoD) published a patent titled "Machine Learning-Enabled System for Monitoring Faculty Behavior and Optimizing Teaching Effectiveness in Higher Education" (Patent No. 202521086616A). The patent was applied on 12 September 2025 and published on 17 October 2025, recognizing the HoD's significant contribution to research and innovation in higher education.

Ms. S.V. Saveethaa presented a research paper titled "Machine Learning-Driven Multi-Layered Nanoelectronic Architecture for Energy Efficient Wireless Sensor Networks" at the IEEE International Conference on Computational Electronics, Communication and Signal Processing (ICCECS 2025) organized by PPG Institute of Technology from 28–30 October 2025. The presentation highlighted her research contribution and reflected the department's commitment to advancing innovation in emerging technologies.

FACULTY PARTICIPATION

The faculty members Dr. S. Bharathidasan (HoD/ECE), Dr. V. Thamizharasan (ASP/ECE), and Mr. S. Gladson (AP/ECE) participated in an Industrial Visit on 19 September 2025 to Enthu Technology Solutions India Pvt. Ltd., Sara Controls & Automation, and the PCB Centre of Excellence at KPR Institute of Engineering and Technology, Coimbatore. The visit provided valuable exposure to emerging technologies, industrial automation, IoT applications, and PCB fabrication techniques, while strengthening industry–institute collaboration and enhancing practical knowledge for teaching, research, and innovation.



STUDENTS PARTICIPATIONS

PAPER PRESENTATION

Praveena S participated in the National-Level Paper Presentation Competition organized by Karpagam Academy of Higher Education on 19 September 2025, showcasing technical knowledge and presentation skills.

Jayashree M, Deepitha M, and Bharanidharan R participated in the National-Level Paper Presentation Competition organized by Sengunthar Engineering College on 25–26 September 2025, demonstrating their research aptitude and presentation skills.

Sivaneshwaran G and Devigarani B.S participated in the National-Level Paper Presentation Competition organized by KPR Institute of Engineering and Technology on 26–27 September 2025, enhancing their technical presentation and analytical skills.

Iswarya I participated in the National-Level Paper Presentation Competition organized by KPR Institute of Engineering and Technology on 09 October 2025, showcasing technical knowledge and presentation skills.

Bharanidharan R and Esakiganeshan R participated in the National-Level Paper Presentation Competition organized by KPR Institute of Engineering and Technology on 24 October 2025, strengthening their research and presentation skills.

Lakshana V, Ishwaraya S, Dineesh Kumar K.S, Daniel Vibin C, and Bavithra S participated in the National-Level Paper Presentation Competition organized by Hindusthan Institute of Technology on 15 October 2025, gaining valuable exposure to technical research and presentation.

Hariharan G, Charunethra A.B, and Dharshini E participated in the National-Level Paper Presentation Competition organized by PPG Institute of Technology on 15 October 2025, enhancing their technical knowledge and presentation skills.

Hari Ram R participated in the National-Level Paper Presentation Competition organized by St. Anne's College of Engineering and Technology on 25 October 2025, strengthening his research and communication skills.

Vigneshwaran M participated in the National-Level Paper Presentation Competition organized by Xavier Institute for Research and Development on 25 October 2025, showcasing technical knowledge and presentation skills.

STUDENTS PARTICIPATIONS

TECHNICAL EVENTS

Sridhar E, Karthikeyan S, Tamil Selvan S, Manjith P, and Jejo Andrewraj J participated in the National-Level PIXEL'25 Technical Event organized by Kongu Engineering College on 25 September 2025, gaining valuable technical exposure and practical learning.

Lingeshwaran P participated in the National-Level Zapping Glitch Event organized by Kongu Engineering College on 25 September 2025, showcasing technical and problem-solving abilities.

Thirumurugan S and Selvasezhiyan R participated in the National-Level Reverse Coding Event organized by KSR College of Engineering on 09 October 2025, enhancing their coding and analytical skills.

Elanthiriyar V participated in the National-Level Technical Trivia Event organized by KSR College of Engineering on 10 October 2025, improving his technical aptitude and problem-solving skills.

Harita N participated in the National-Level Neuranexus 2K25 Technical Event organized by KPR Institute of Technology on 09 October 2025, gaining exposure to emerging technologies.

Ramya Devi T participated in the National-Level Spring Fest 2K25 organized by KSR College of Engineering on 09 October 2025, enhancing her technical and creative abilities.

Charunethra A.B and Dharshini E participated in the National-Level Viyugam 2K25 Technical Event organized by PPG Institute of Technology on 09 October 2025, securing the First Prize for their outstanding performance.

Franklin Joyson S participated in the National-Level Tech Olympiad and Circuit Debugging Events organized by Hindusthan Institute of Technology on 15 October 2025, strengthening his technical skills.

Tamil Selvan S participated in the National-Level Festrionix Event organized by K. Ramakrishna College of Technology on 15 October 2025, securing the First Prize.

STUDENTS PARTICIPATIONS

TECHNICAL EVENTS

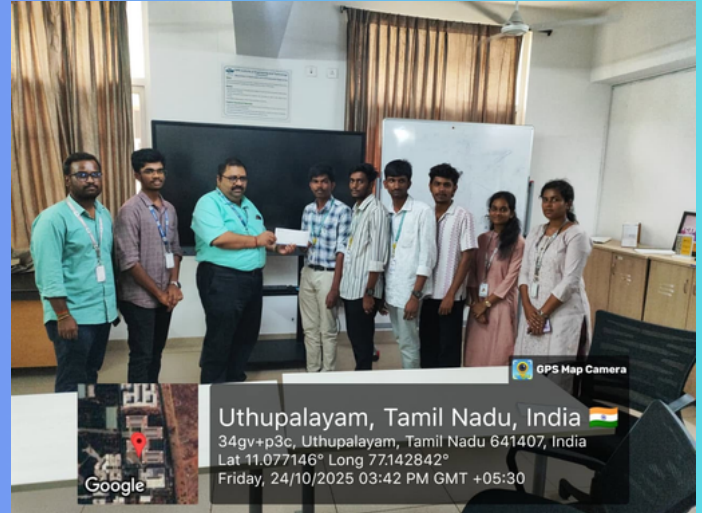
Nivetha Sri E and Priya Dharshini R participated in the National-Level EKNA 2K25 Event organized by Anna University, Coimbatore on 31 October 2025, gaining valuable technical exposure.

Nivetha Sri E also participated in the National-Level Modern Art Event organized by Anna University, Coimbatore on 31 October 2025, showcasing creativity and talent.

STUDENTS ACHIEVEMENTS



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EDITORIAL BOARD



**Ms.V. SAVIEETHA, AP/ECE
Coordinator**

Grateful to have been part of the Magazine creation. My appreciation goes out to the incredible team whose dedication made it possible.

**DR.S.BHARATHIDASAN
HOD/ECE**



Proud to have been part of the magazine's creation. My heartfelt appreciation to the dedicated team whose hard work and creativity made this achievement possible.



**ESAKIGANESHAN R
- EDITOR**

**BHARANIDHARAN R -
CONTENT WRITER**



THANK YOU