ERODE SENGUNTHAR
ENGINEERING COLLEGE

(An Autonomous Institution)

PERUNDURAI , ERODE - 638057

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Magazine

JULY - AUG (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 in students and serve the society through research.

MISSION

- Create Learning Environment to serve the societal needs.
- Provide high quality ethical engineers for the Benefit of the Society.
- Impart State of art Technical Education to groom engineers with high professional standards.
- Promote innovative ideas and augment research to improve the quality of life through application of technology.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOS)

- Impart the learners, an ability to understand and analytical, academic use and communication skills effectively with special emphasis to fulfill societal needs.
- Inspire the beginners to enrich their skills throughout career by learning about emerging technologies, adapting and accepting the changes to achieve leadership position in industry or academia.
- Prepare graduates to innovate products/solutions through research to real life problems for boosting the economy of the region and the nation.
- Prepare graduates to work effectively as a team and practice ethics in the profession
- with a sense of social responsibility.

PROGRAM SPECIFIC OUTCOMES (PSO)

- PSO 1: Interpretation Skills: Acquire skills to design, verify and validate electronic functional elements for a variety of applications.
- PSO 2: 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.

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.

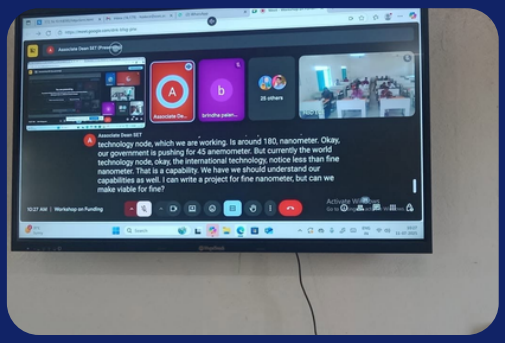
Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

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.

ASSOCIATION ACTIVITIES

The department of ECE is organizing a Webinar on "Funded Project Preparation and Opportunities at National and International Levels" on 11.07.2025 at 9.30 a.m in ECE Seminar Hall. The resource person for the event is Dr. D. Nirmal, Associate Dean, Engineering and Technology, Karunya Institute of Technology and Science and IEEE EDS R10 SRC Chair. The objective of this program is to identify potential funding agencies and to boost academic, research, or entrepreneurial journey with global collaboration



The Department of Electronics and Communication Engineering, in association with the Career Guidance Cell, organized a One-Day Seminar on "Pave Your Path to Success: CAT and Competitive Exams" on 24 July 2025 for the third-year students. The session was delivered by Mr. Thiagarajan Thirunavukkarasu, Director, T.I.M.E Institute, Erode & Salem. The seminar created awareness about higher education, career opportunities, and various competitive examinations, while guiding students on effective preparation strategies to achieve their academic and professional aspirations.

The Department of Electronics and Communication Engineering organize a seminar on "Think, Build, Launch : Entrepreneurship for the Next Generation" on 24.07.2025, 2 P.M at ECE Seminar Hall. The Chief Guest for the event is Mr. T. Gobinath, Project Associate, Startup TN, Erode. The objective of the programme is to inspire and empower students with the mindset, knowledge, and practical tools needed to embark on an entrepreneurial journey.

The Department of Electronics and Communication Engineering organized the ECE Association Inauguration cum Seminar on 30 July 2025 with the theme "Revolutionizing Defence Systems with High-Efficiency Power Electronics: Enabling Reliable and Sustainable Military Platforms." The session was delivered by Dr. S. Suresh Seetharaman, Educationalist, Career Analyst, YouTuber, and Co-Founder & CEO of Trident Digitals, Coimbatore. The seminar highlighted the role of advanced power electronics in modern defence systems, emphasizing enhanced performance, reliability, and sustainability in mission-critical applications. The programme inspired students to explore emerging technologies and innovative solutions in the field of defence electronics.

ASSOCIATION ACTIVITIES

A Seminar on "Bridging the Gap with Core Electronics (Integrated Product Design and Development)" was organized on 23 July 2025. The session was delivered by Mr. Ashok, Chief Executive Officer, SSI Technical Training Institute, Coimbatore. The seminar provided students with valuable insights into integrating core electronics concepts with real-world product design and development. It enhanced their understanding of industry practices, product development processes, and emerging career opportunities in the core electronics sector.

A Hands-on Workshop on "From Specification to Silicon: A Hands-on Cadence Workshop on VLSI Design Flow" was organized on 31 July 2025. The workshop provided participants with practical exposure to the complete VLSI design flow using industry-standard Cadence EDA tools. Through hands-on sessions, students gained valuable insights into the transition from design specifications to silicon implementation, strengthening their knowledge of modern VLSI design methodologies and industry practices.

A One-Day Guest Lecture on "How to Build and Launch Any Application with Artificial Intelligence" was organized on 14 August 2025. The session was delivered by Mr. D. Prakashraj, Digital Marketing Executive, Baasu Consultants Pvt. Ltd., Chennai. The lecture provided participants with valuable insights into developing AI-driven applications, covering the process from idea generation to application deployment. It inspired students to leverage Artificial Intelligence for innovation, entrepreneurship, and real-world problem-solving while enhancing their understanding of emerging AI technologies.

A Two-Day Hands-on Training Programme on "Integrated Mobile Phone Hardware and Schematic" was organized on 19–20 August 2025 in association with New Technology Technical and Software Training Institute. The programme provided participants with practical exposure to mobile phone hardware integration, schematic analysis, troubleshooting, and repair techniques through hands-on sessions. It enhanced students' technical competency in mobile hardware technology and equipped them with industry-relevant skills for real-time service and maintenance applications.

ASSOCIATION ACTIVITIES

A One-Day Seminar on "2D Materials Beyond Graphene: Driving the Future of Flexible Electronics, Electric Vehicles, and Communication Systems" was organized on 25 August 2025. The session was delivered by Dr. A. Leggins, Assistant Professor (Senior Grade), Sri Ramakrishna Engineering College, Coimbatore. The seminar provided valuable insights into next-generation 2D materials and their applications in flexible electronics, electric vehicles, and advanced communication systems. It enhanced participants' understanding of emerging materials and their role in shaping smart, sustainable, and innovative electronic technologies.

FACULTY ACHIEVEMENT

Faculty Patent

The Head of the Department published a patent titled "A Method of Photocatalytic Treated Dye Water Sludge into Sustainable Paver Blocks for Smart Village Construction" (Patent No. 202541069290A). The patent was filed on 21 July 2025 and published on 25 July 2025, recognizing the department's commitment to innovative research and sustainable engineering solutions for smart village development.

Scopus Publication

Dr. V. Thamizarasan published a Scopus-indexed research paper titled "FPGA based design and performance evaluation of 32-bit hybrid carry select adder architecture" in the International Journal of Electronics. This publication highlights his significant contribution to VLSI and digital system design research, enhancing the department's academic and research excellence.

Paper Presentation

Ms. S.V. Saveeithaa presented her research paper titled "A Hybrid Lightweight Model for Realtime Pedestrian Perception and Motion Forecasting in Autonomous Driving" at the IEEE International Conference on Intelligent Communication, IoT and Cyber-Physical Systems (ICSCDS-2025) held at Erode Sengunthar Engineering College from 06–08 August 2025. Her presentation showcased innovative research in intelligent transportation systems and autonomous driving, reflecting the department's commitment to advanced research and technological innovation.

STUDENTS PARTICIPATION

HACKATHON & PROJECTS PARTICIPATION

Iniyavan.V, Ranjith.P, and Dinesh.A participated in the National-Level Hackathon presenting their model "Aquasense" organized by Majestronicz on August 16, 2025. Dinesh.R also represented the department by presenting the model "Aquasense" at Kongu Engineering College, Perundurai on August 6, 2025.

Ashwin.J.K secured the First Prize (with a cash award of ₹3000) in the National-Level "Hackathon FPD Racing" organized by Vellalar College, Thindal on August 20, 2025. He also won the Second Prize (with a cash award of ₹2500) for "Hackathon Swarm Drone for Precised Agriculture" hosted by Kongu Engineering College, Perundurai on August 6, 2025.

Abirami.V.G participated in the National-Level Pitch to Prototype event titled "START-A-THON" hosted by PSG College of Arts & Science on August 26, 2025.

Kavin.P.S participated in the Project Presentation event "PRASIDHI-25" organized by Kongu Engineering College, Perundurai on August 6, 2025.

WORKSHOP

Manjith.P, Ganesh Kumar.M, Kanimozhi.P, Keerthana.R, Karisni.C.S, Mangayarkarasi.N, Ganeshwaran.C, Kaviya.E, Dharshini Priya.J, Ammu.V, Bavithra.S, Daniel Vibin.C, Dineesh Kumar.K.S, Ishwarya.S, Kanishka.P, Giri Sudhan.K, and Karthikeyan.S represented the department by participating in the two-day National-Level Workshop on "Integrated Mobile Phone Hardware and Schematic Training Programme" organized by ESEC on August 19 & 20, 2025.

EDITORIAL BOARD

Ms.V.SAVIEETHA, AP/ECE
Coordinator

Grateful to have been part of the Magizine 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.

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THANK YOU