



# ERODE SENGUNTHAR ENGINEERING COLLEGE

(An Autonomous Institution)

(Approved by AICTE, New Delhi Permanently Affiliated to Anna University - Chennai  
Accredited by NAAC & National Board of Accreditation (NBA), New Delhi.)

PERUNDURAI, ERODE – 638 057



## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

### Vision

- ✦ To provide competent and ethical electrical engineers finding solution to problem related to society, environment and industry using innovative technologies.

### Mission

- ✦ To make a positive difference among electrical and electronics engineering students through innovative teaching learning methods
- ✦ To provide electrical and electronics engineering knowledge base at large for the upliftment of different background people
- ✦ To instill research oriented mindset and to develop well-furnished electrical and electronics engineering research labs
- ✦ To inculcate the moral and ethical values among students in order to make them competent and quality electrical and electronics engineers

### Program Educational Objectives (PEOs)

- ✦ **CORE COMPETENCE:** To impart fundamental electrical and electronics engineering knowledge through collaborative and case study methods of teaching learning process
- ✦ **BREADTH:** To produce quality electrical and electronics engineering graduates with in-depth technical knowledge including current issues and challenges in this field
- ✦ **LEARNING ENVIRONMENT:** To develop and enhance research based facilities so as to address the industrial issues and challenges
- ✦ **PROFESSIONALISM:** To imbibe effective communication, interpersonal and other managerial skills for the holistic development of EEE students

### Program Outcomes (POs)

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
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.
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.
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.
5. **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.
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.
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.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
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.
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.
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.

### Program Specific Outcomes (PSOs)

**PSO1: Real World Knowledge-** Apply the knowledge in solving the real time problems and solutions to issues and challenges in Electrical and Electronics Engineering technologies.

**PSO2: Interdisciplinary Skill-** Design and develop interdisciplinary and innovative system.

**PSO3: Personality Development** – Imparting effective communication, team work and leadership skills for a successful career in industry and R&D.



## ASSOCIATION ACTIVITIES



Workshop on the topic “Entrepreneurship Skills” was conducted on 28.02.2023. Mr.S.Udhaya Kumar, Founder & CEO, Tech Inventor Udhaya, Salem was the resource person. More than 150 students were participated in this function.



Workshop on the topic “Process Development and Design” was conducted on 06.03.2024. Mr.M. Prabakaran, Administrative Officer, ETS Academy was the resource person. More than 150 students were participated in this function.

## CAREER GUIDANCE ACTIVITIES



Awareness Program on “Higher Education in India & abroad” was conducted on 28.02.2024. Er.K.A. Vijay, Program Analyst, Cognizant Technology solution, Chennai was the resource person. More than 200 students were participated in this function.





Career Development Program on “Virtual Personality and Online Jobs” was conducted on 27.03.2024. Mr.M.Suresh, Assistant Professor/EEE, KEC, Perundurai was the resource person. More than 200 students were participated in this function.

### STUDENTS PARTICIPATIONS IN INTER-INSTITUTE EVENTS

S. No.	Name Of The Student	Year / Semester	Name of the Event	Title of the Paper	Name of the Institution organized	Prize	Date
1	Sabarishwaran D	III/VI	Hidden Heist	-	P.A. College of Engineering and Technology, Pollachi	II Prize	27.02.2024
2	Lohith G T	III/VI	Project Expo	-	Vidyal Welfare Movement, Chennai malai	I Prize	04.02.2024
3	Tamilvanan A	IV/VII I		-		I Prize	
4	Dharsan M	II/IV		-		III Prize	
5	Rohith P	II/IV		-		III Prize	
6	Ganesh P	IV/VII I	International	An Enhanced Mppt	ASET College of Science	I Prize	24.01.2024 & 25.01.2024

			Conference	Control for PV with grid Connected EV Charging Station	Technology, Chennai		
7	Karthikeyan S	IV/VII I	International Conference	DC to DC converter for universal EV charging	ASET College of Science Technology, Chennai	II Prize	24.01.2024 & 25.01.2024
8	Tamilarasan R						
9	Mohankumar S						

S. No.	Name Of The Student / Year / Semester	Name of the Event	Title of the Paper	Name of the Institution organized	National/International	Date
1	Nithees Kumar M G Thomas Raj A Santhosh M Rohith P Dharsan M Srihariharn V Arinseyan A Elan Kumar G Saravanakumar C II/III	Workshop	Workshop – Electric Vehicle and Fuel Cell Technology	Thiagarajar College of Engineering, Madurai.	National	07.03.2024
2	Udhayakumar R Vishnukumar K Sivasakthivel M	Workshop	Workshop – EV Assembly	Sri Krishna College of Technology, Coimbatore.	National	08.03.2024 & 09.03.2024



3	Rohith P Sanjai K Ananthi K Shandhu P Rajashree N Geetha V Udhayadhevak S Sethupathi K K II/III	Workshop	Workshop – Robotic Embedded C Programmin g For Micro Controller Applications	Dr.NGP Institute of Technology, Coimbatore.	National	04.03.2024 & 05.03.2024
4	Vignesh G Anbrasan K Dhanush A Dhinesh A Dhinesh S Karthikeyan S Kavin S Kharal Thavabala M Kumaravel K Madhan kumar S L Poovendiran P Praveenkumar M Ramesh S Sakthivel A Saravanan A Sathya Prasanna B Seenivasan R Suybashmathi P Tamilmani S Anuj Shankar Suman Kumar Thakur Gokul K Gowtham B Pradeep N Prakash C III / VI	Workshop	Workshop – on ECLAT- An Entrepreneu rial Odyssey	SRM Institute of Science and Technology Chennai	National	08.03.2024

5	Geetha V II/IV	Workshop	Workshop – on Integrating Arduino with labview and IoT Solution	Karpagam College of Engineering Coimbatore	National	15.03.2024 & 16.03.2024
6	Arun Kumar C Vishnukumar K III/VI	Workshop	Workshop – PCB Designing	PSG Institute of Technology and Applied Research Coimbatore	National	15.03.2024 & 16.03.2024
7	Udhayakumar C Subendrarajan R Subasri P Ajaykannan M A Abishek S III/VI	Workshop	Workshop – High on Electric Vehicles	PSG Institute of Technology and Applied Research Coimbatore	National	15.03.2024 & 16.03.2024

### FACULTY PUBLICATIONS

S.No.	Name of the Faculty	Title of the Paper	Journal Name	Publication Details
Academic Year 2023-24				
1	Dr. A. Johny Renoald	Electricity Theft Detection in IoT Based Smart Grids Using a Parameter Tuned Bidirectional LSTM with Pre- Trained Feature	Electrical Engineering	Volume 106, pages 5987– 6001, (2024) Published: 29 March 2024 <a href="https://doi.org/10.1007/s00202-024-02342-7">https://doi.org/10.1007/s00202-024-02342-7</a>

		Learning Mechanism		
2	Dr. A. Johny Renoald	Optimizing Energy Utilization in the Weaving Industry: Advanced Electro-kinetic Solutions with Modified Piezo Matrix and Super Lift Luo Converter	Electric Power Components and Systems	Published online: 09 Oct 2023. <a href="https://doi.org/10.1080/15325008.2023.2262458">https://doi.org/10.1080/15325008.2023.2262458</a>
3	Dr. A. Johny Renoald	<u>A Symmetric Solar Photovoltaic Inverter to Improve Power Quality Using Digital Pulse width Modulation Approach</u>	Wireless Personal Communications	<a href="https://doi.org/10.1007/s11277-023-10372">https://doi.org/10.1007/s11277-023-10372</a>
4	Dr.L.Anbarasu	Performance Analysis of AI Based Interleaved Boost Converter under PV Partial Shaded Conditions	IEEE conference ( <u>IC EMCE</u> ) (Scopus)	<a href="https://ieeexplore.ieee.org/abstract/document/10434141">https://ieeexplore.ieee.org/abstract/document/10434141</a>
5	Dr.L.Anbarasu	Synergy of Robotics and IoT Monitoring in Industries Using Deep Resnets	IEEE conference ( <u>R MKMATE</u> ) (Scopus)	<a href="https://ieeexplore.ieee.org/abstract/document/10369296">https://ieeexplore.ieee.org/abstract/document/10369296</a>
6	Dr.L.Anbarasu	Wireless IOT Based Solar Power Plant	Journal of Emerging Technologies	Volume 10   Issue 6   June 2023.



		Monitoring System	and Innovative Research	<a href="https://www.jetir.org/papers/JETIR2304735.pdf">https://www.jetir.org/papers/JETIR2304735.pdf</a>
7	Ms.K.Preetha	Enhanced Outdoor Delivery Service: Mobile Robot Navigation Strategies And Challenges	Educational Administration : Theory and Practice	2024,30(4), 4300-4308 ISSN:2148-2403 DOI: <a href="https://doi.org/10.5355/5/kuey.v30i4.200">https://doi.org/10.5355/5/kuey.v30i4.200</a>
8	Ms. S. Tamil Selvi	Differential Private Motion sensor and wasted Energy in building energy management system	International journal of new innovations in engineering and Technology	Vol. 24(1), 2179–2188 (2022).

## FACULTY PRESENTATION IN NATIONAL / INTERNATIONAL CONFERENCE

S. No.	Name of the faculty	Name of the Conference	Paper presented on (Topic)	Venue	Date
Academic Year 2023-24					
1	Dr.P. Selvan	IEL-TLC Sponsored International Conference On Emerging Trends In Engineering Science And Technology	Smart Mirror	K.Ramakrishnan College of Engineering, Trichy, Tamilnadu, India.	23.05.2024-24.05.2024
2		International Conference On Design, Materials Metaheuristic Algorithm For	Low Cost and Highly Efficient Automated Agrobot For	Jai Shriram Engineering College, Tirupur,	24.04.2024

		Engineering(ICD MME-2024)	Plant Disease Analysis and Control Using IoT	Tamilnadu, India.	
3	Dr.P. Selvan	8th International Conference On Engineering Technology And Science (ICETS'24)	A Smart System Based Energy Generation Using Waste Noise for Household Applications	Muthayam mal College of Engineering, Rasipuram, Tamilnadu, India.	20.03.2024
4	Dr.P. Selvan	8th International Conference On Engineering Technology And Science (ICETS'24)	Design and Implementation of Cascaded Multilevel Using Switched Capacitor Technique"	Muthayam mal College of Engineering, Rasipuram, Tamilnadu, India.	20.03.2024
5	Dr.L.Anbarasu	IEI-TLC sponsored International Conference on Emerging Trends in Engineering Science and Technology – ICETEST 2024	Vehicle to Vehicle Communication using LiFi-Technology by Arduino System	K.Ramakrishnan College of Engineering (Autonomous) Tiruchirappalli.	23.05.2024 24.05.2024
6	Dr. A. Johny Renoald	8th International Conference On Engineering Technology And Science (ICETS'24)	ANN based controller for effective utilization of energy from traction power supply system	Muthayam mal College of Engineering, Namakkal.	20.03.2024
7	Ms.N.Jothipriya	8th International Conference On Engineering Technology And Science	Design of DSTATCOM with electrical vehicle for the voltage	Muthayam mal College of Engineering,	20.03.2024



		(ICETS'24)	compensation techniques.	Namakkal.	
8	Ms.K.Preetha	International Conference on Emerging Trends in Engineering, Science and Technology ICETEST - 2024	Internet of Things: Smart Cities	K.Ramakrishnan College of Engineering, Samayapuram.	23.05.2024 – 24.05.2024
9		International Conference on Emerging Trends in Engineering, Science and Technology ICETEST - 2024	Zero Voltage Derivative Switching for Resonant Converters with reduction of ripple	K.Ramakrishnan College of Engineering, Samayapuram.	23.05.2024 – 24.05.2024
10		International Conference on Emerging Trends in Engineering, Science and Technology ICETEST - 2024	IOT based control of BLDC motor using Pulse width Modulation Technique	K.Ramakrishnan College of Engineering, Samayapuram.	23.05.2024 – 24.05.2024
11	Mr.P.Karthikeyan	International Conference on Emerging Trends in Engineering, Science and Technology ICETEST - 2024	Flying Electric Generator As Alternate Source of Future Electric Systems	K.Ramakrishnan College of Engineering, Samayapuram.	23.05.2024 – 24.05.2024
12		8th International Conference On Engineering Technology And Science(ICETS'24)	Current Alleviation in Solar Energy Conversion Improving Power Quality.	Muthayammal College of Engineering, Namakkal.	20.03.2024
13	Ms.S.Tamilselvi	National conference on Innovations and	A design of Electric vehicle	KPR Institute of	27.04.2024

		Advancements in Electrical Sciences NCIAES 24	battery charger using modified dynamo with boost converter.	Engineering and Technology, Coimbatore.	
14	Ms.S.Tamilselvi	8th International Conference On Engineering Technology And Science (ICETS'24)	Differential private motion sensor and water energy in building energy management system.	Muthayammal College of Engineering, Namakkal.	20.03.2024
15	Mr.E.Immanuvel Bright	National conference on Innovations and Advancements in Electrical Sciences NCIAES 24	A Design of Electric Vehicle Battery charger using Modified Dynamo with Boost Converter	KPR Institute of Technology, Coimbatore	27.04.2024
16		8th International Conference On Engineering Technology And Science(ICETS'24)	Synergistic Energy Integration : power Generation, Biofuel production and Methane Pyrolysis.	Muthayammal College of Engineering, Namakkal.	20.03.2024

**Dr P Selvan and Dr L Anbarasu**

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