

# PANIMALAR ENGINEERING COLLEGE

**An Autonomous Institution** 

Affiliated to Anna University, Chennai (JAISAKTHI EDUCATIONAL TRUST)



# DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

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# Message



Dr. P. Chinnadurai, M.A., Ph.D.

Secretary & Correspondent, Panimalar Group of Institutions

Success is all about respecting the past and creating the future.

Success is all about respecting the past and creating the future. I wish the Panimalar group of institutions the very best in delivering quality education to all walks of the society.



Dr. C. Sakthi Kumar M.E., Ph.D. Director, Panimalar Group of Institutions

As we speak, technology around us changes. Innovation has become the buzzword. We at Panimalar group of institutions, create and carve out a niche for the students, and we make them believe that "education for life" rather than "education for living".



Mrs. C. Vijayarajeswari
Director, Panimalar Group of Institutions

One of the greatest challenges and opportunities in the modern day is preparing today's students for tomorrow's needs. We tutelage the students to embrace the change and move forward in this competitive environment.



Dr. Saranya Sree Sakthi Kumar B.E., M.B.A., Ph. D. Director, Panimalar Group of Institutions

At Panimalar, we identify student's potential, convert them into talent and elevate the talent to infinite possibilities. We condition the students for the challenges ahead and groom them to be responsible citizens.

# Message



Dr. K. Mani, M.E, Ph.D. Principal

I am pleased to share with you the newsletter from Department of ECE, Panimalar Engineering College. You will be delighted to go through this volume that will connect you to the many activities of this dynamic department. Let this newsletter and series of such letters keep us all continuously informed about all the developments of the department in the years to come. I wish the Head of the Department, all the staff and students of the department for having taken the best initiatives in bringing out this Newsletter.

# Dr. S. Rajakumar M.E, Ph.D. Professor & Head of the Department, ECE



On behalf of the Department of ECE, Panimalar Engineering College, it gives us immense pleasure in presenting this newsletter. It was exhilarating being the editors of this issue. This newsletter focuses on the happenings of the academic year along with the incredible achievements of our students and staff. We hope that this newsletter will be giving you an excellent insight on the various achievements by the members of our department.

FACULTY EDITOR: Dr. S. SHIBU, M.E, Ph.D

STUDENT EDITOR: ROSHANR (IV ECE)

# VISION

To provide world class quality education and excelling research activities in Electronics and Communication Engineering with strong ethical values and social challenges.

# MISSION

M1: To impart high quality technical education by investing in faculty development and resources.

M2: To adapt best teaching and learning process with strong state of art facilities for academic and research activities.

M3: To enhance national and international collaborative activities for evolving indigenous technological solutions to meet social needs, nurture leadership and entrepreneurship qualities with ethical means.

M4: To facilitate partnership with leading core industries and R&Ds for global outreach.

# PEOs Of The ECE Program



## PEO1: Core Competencies

To prepare the graduates in fostering Electronics and Communication Engineering principles to provide socially relevant and sustainable engineering solution.

## PEO2: Professional Integrity

To gain adequate knowledge to become good professional in Electronics and Communication Engineering associated industries, higher education and research.

## PEO3: Research & Global Responsibilities

To prepare graduates in an area of specialization, ethically develop innovative and research oriented methodologies to enhance the adaptability of technological and social challenges.

# Program Outcomes (POs)

### PO1: Engineering Knowledge:

Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.

### PO2: Problem Analysis:

Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)

### PO3: Design/Development of Solutions:

Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)

### PO4: Conduct Investigations of Complex Problems:

Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8)

### PO5: Engineering Tool Usage:

Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6)

### PO6: The Engineer and The World:

Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7)

### PO7: Ethics:

Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)

### PO8: Individual and Collaborative Team work:

Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.

### PO9: Communication:

Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences.

### PO10: Project Management and Finance:

Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.

### PO11: Life-Long Learning:

Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

# Program Specific Outcomes (PSOs)

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PSO1: Graduates should demonstrate an understanding of the basic concepts in the primary area of Electronics and Communication Engineering, including: analysis of circuits containing both active and passive components, electronic systems, control systems, electromagnetic systems, digital systems, computer applications, and communications.

PSO2: Graduates should demonstrate the ability to utilize the mathematics and the fundamental knowledge of Electronics and Communication Engineering to design complex systems which may contain both software and hardware components to meet the desired needs.

PSO3: The graduates are capable of excelling in Electronics and Communication Engineering industry/Academic/Software companies through professional careers.

# ABOUT THE DEPARTMENT

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Panimalar Engineering College affiliated to Anna University, Chennai, was established in the year of 2000. The Department of Electronics and Communication Engineering offers the following programs.

B.E. – Electronics and Communication Engineering (4 Years)

M.E. – Communication Systems (2 Years)

Ph.D. – Electronics and Communication Engineering (Full time / Part time)

The main focus of the ECE department is to impart technical education that meets international standards in the field of Electronics and Communication for the benefit of the society. The department has three centres of excellence to promote research and development with industry collaboration.

Centre of excellence in Robotics and IoT helps to foster innovation and develop industrial automation solutions. Centre of Excellence in Drones helps to train and upskill students for the future of unmanned aerial vehicle technology to make them industry ready and empower their technical skills in the drone technology space. Centre for Research on Reconfigurable Wireless Technologies is developed to promote research and publications in various domains spanning from basics of circuits to emerging 6G wireless technologies.

Undergraduate students, Postgraduate students and Research scholars of the department are well qualified to meet the demands of the Industry and Research Organization. Our department is equipped with eminent faculty members who are expertise in various technical domains. The total strength of regular teaching faculty members in the department is 72, of which 33 of them are doctorates and all the remaining staff members are qualified with Masters Degree. The research activities are carried out by a group of expert research members.

### The overall focus of the department is to

- Emphasis elemental knowledge of the subjects.
- Provide exposure to the emerging technologies.
- Inculcate strong research and development activities.

Our department has various technical and non-technical clubs that provide opportunities for students to explore their interests, develop leadership skills, and engage in community service. We also emphasize soft skills training, including communication and personality development, ensuring that our students are well prepared for the professional world.



# STAFF ACHIEVEMENTS



Dr.T.Suguna, Associate Professor, ECE acted as reviewer for IEEE International Conference on Emerging Technologies in Engineering Applications (ICETEA 2025) organized by Sri Manakula Vinayagar Engineering College, Puducherry, India on 5-6 June 2025.



Dr.T.Suguna, Associate Professor, ECE, acted as jury member for the Maker Fair track at YESISIT 12-2025 for the preliminary rounds.



Mr. M. Arun, Assistant Professor, ECE, received the Campus Social Media Star Runner -Up Award for Panimalar Engineering College from Hexaware.



Mr. M. Arun, Assistant Professor, ECE, received the Certificate of Appreciation for Mentoring a Finalist Team in Hexaware Premium League hosted by Hexaware.



Mr. M. Arun, Assistant Professor, ECE, delivered an Expert Talk on "Exploring IEEE Scholarships and Funding Opportunities" at Velammal Institute of Technology, Panchetti on 20.08.2025.



Mr. M. Arun, Assistant Professor, ECE, received the Vibrant Pilot Award for Panimalar Engineering College from IEEE YESIST 12 at Universiti Kebangsaan Malaysia, Malaysia on 23.08.2025 & 24.08.2025



Mr. M. Arun, Assistant Professor, ECE, served as Session Chair of the Maker Fair Track IEEE YESIST 12 at University Kebangsaan Malaysia, Malaysia on 23.08.2025 & 24.08.2025.



Mr. M. Arun, Assistant Professor, ECE, delivered a Keynote Session on "IEEE V-Tools Reporting" at the upcoming IEEE MAS Hub Congress 2025, at PSG Institute of Technology and Applied Research, Coimbatore on 13.09.2025.



Mr. M. Arun, Assistant Professor, ECE, served as the Moderator for the Panel Discussion on "Research, Publications and Patent: Leveraging IEEE Resources" at the IEEE MAS Hub Congress 2025, at PSG Institute of Technology and Applied Research, Coimbatore on 13.09.2025.





#### INTEND 2.0



INTERNATIONAL CONFERENCE ON INFORMATION TECHNOLOGY ENABLERS FOR PERSONS WITH

DISABILITY (PERSONS WITH DISABILITIES) WITH ASSISTIVE TECHNOLOGIES EMPOWERING DIVYANGJAN

#### CERTIFICATE OF APPRECIATION

This is to certify that Mrs. S. Saranya of Panimalar Engineering College has served as a Session Chair in the International Conference on Information Technology Enablers for Persons with Disability (INTEND 2.0) Empowering Divyangian (Persons with Disabilities) with Assistive Technologies organized by IETE Chennai Centre in association with National Institute for Empowerment of Persons with Multiple Disabilities at Jerusalem College of Engineering, Chennai on 19.09.2025 & 20.09.2025.









Mrs. S. Saranya, Assistant Professor, ECE served as a Session Chair in the International **Conference on Information Technology Enablers** for Persons with Disability (INTEND 2.0) **Empowering Divyangjan organized by IETE** Chennai Centre in association with NIEPMD at Jerusalem College of Engineering, Chennai on 19.09.2025 & 20.09.2025.

Mr. M. Arun, Assistant Professor, ECE served as a Session Chair in the International Conference on Information Technology Enablers for Persons with Disability (INTEND 2.0) Empowering Divyangjan organized by IETE Chennai Centre in association with NIEPMD at Jerusalem College **Engineering**, Chennai on 19.09.2025 20.09.2025.





Dr. S. Sathiya Priya, Professor, ECE served as a Session Chair in the International Conference **Information Technology Enablers** for **Disability (INTEND** Persons with 2.0)Empowering Divyangjan organized by IETE Chennai Centre in association with NIEPMD at Jerusalem College of Engineering, Chennai on 19.09.2025 & 20.09.2025.



Dr. I. Poonguzhali, Professor, ECE served as a Session Chair in the International Conference on Information Technology Enablers for Persons with Disability (INTEND 2.0) Empowering Divyangjan organized by IETE Chennai Centre in association with NIEPMD at Jerusalem College of Engineering, Chennai on 19.09.2025 & 20.09.2025.



Mrs. R. Prathipa, Associate Professor, ECE served as a Session Chair in the International Conference on Information Technology Enablers for Persons with Disability (INTEND 2.0) Empowering Divyangjan organized by IETE Chennai Centre in association with NIEPMD at Jerusalem College of Engineering, Chennai on 19.09.2025 & 20.09.2025.

# STUDENT ACHIEVEMENT





Mr. Praveen. B. B, Mr. Praveen Kumar. R, Mr. NaveenKumar. R. K of I ECE Won the runner Award in the IDEABLITZ'25 a startup event conducted by STARTUP-TN event at Easwari Engineering College on 02.04.2025.

# DEPARTMENT EVENTS

## HACKATRONICS-2K25



The Department of Electronics and Communication Engineering and Radio club, Panimalar Engineering College in association with UNO MINDA and powered by PROFENTIAL organized an Intra Department Hackathon – —HACKATRONICS'2K25 on 19th September 2025 at the college campus.

# SEMINAR ON TRANSFORMING EDUCATION, EMPOWERING STUDENTS



Panimalar Engineering College, Department of ECE in association with Radio Club organized an informative seminar titled Transforming Education Empowering Students on 24.07.2025 from 9:30 am in ECE AV Hall. The session featured P.Murali /Business Development Manager & Pramod Damodaran / Managing Director, Headstream Technologies Pvt Ltd.

# GUEST LECTURE ON SKILLS REQUIRED FOR TODAY'S DYNAMIC INDUSTRIES



The Department of Electronics and Communication Engineering, Panimalar Engineering College organized a "Guest Lecture On Skills Required For Today's Dynamic Industries" on 16th September 2025 at the college campus. The Speaker Mr. Jaison Deepak A., is an Alumni of ECE Department/ Panimalar Engineering College, He is currently playing the role of Strategy and Planning Analyst at Global Foundries, one of the world leaders in the semiconductor industry.

# HANDS-ON WORKSHOP

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## Workshop on "Advanced PCB Design using KiCAD with Proyotype Development and Fabrication"





The Department of Electronics and Communication Engineering, Panimalar Engineering College organized a "Workshop on "Advanced PCB Design using KiCAD with Proyotype Development and Fabrication" on 16.07.2025 – 18.07.2025 (Batch 1), 21.07.2025 – 23.07.2025 (Batch 2) and 28.07.2025 – 30.07.2025 (Batch 3) at the college campus in FLEX Lab. The event was coordinated by Dr. Leones Sherwin Vimalraj. The Trainer Mr. Ranjithkumar, is the Founder and Director of Crystal Clear Technologies and Innovation, Coimbatore.

## Hands-on Workshop on IoT Technology



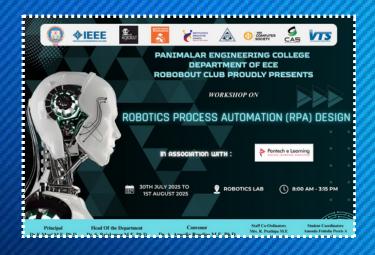
The Department of Electronics and Communication Engineering (ECE), in collaboration with the Design Club and in association with RETECH SOLUTIONS, organized a Two-Day Hands-on Workshop on IoT Technology on 30th and 31st July, attended by 61 participants.

## **Hands-on Workshop on UAV (Drones)**



The Department of Electronics and Communication Engineering, Panimalar Engineering College, in association with the Institution's Innovation Council (IIC) and IEEE Student Branch, organized a Hands-On UAV (Drone) Workshop from 29th July to 1st August 2025 at the college campus. The workshop was conducted by Mr. Solaiyappan Ganesan, Founder of GMS Drone Enterprise, and Mr. Sanathakumar U, Co-Founder of GMS Drone Enterprise, under the coordination of Dr.HariprasathManoharan, Professor, ECE Department.

## Workshop on Robotics Process Automation (RPA) Design





The Department of Electronics and Communication Engineering, in collaboration with the Robobout Club of Panimalar Engineering College, organized a three-day workshop on "Robotics Process Automation (RPA) Design" from 30th July to 1st August 2025.

# PROJECT EXPO

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Signal Processing Club

The Department of Electronics and Communication Engineering and Signal Processing Club Activity, Panimalar Engineering College, organized a "Project Expo 2K25" on 23rd September 2025 at the Microprocessor Laboratory, Lab Block–I, Department of ECE.



Design club

The Department of Electronics and Communication Engineering and Design Club, in association with RETECH Solutions, Panimalar Engineering College, organized a "Project Expo 2K25" on 23rd September 2025 at the Microprocessor Laboratory, Lab Block—I, Department of ECE.



### Tesla Club

The Department of Electronics and Communication Engineering and Tesla Club, Panimalar Engineering College, organized a "Project Expo 2K25" on 24th September 2025 at the Microprocessor Laboratory, Lab Block—I, Department of ECE.

# INDUSTRIAL VISIT

Pantech Solutions - Research & Development





Panimalar Engineering College organized an industrial visit on 12th July 2025 to Pantech Solutions – Research & Development (Pantech Elearning), Chennai, for the students of 3rd Year Electronics and Communication Engineering (ECE), aiming to provide practical exposure to advanced technologies in hardware and software.

## **Retech Lasers Private Limited**





The Department of Electronics and Communication Engineering of Panimalar Engineering College, Chennai, organized an industrial visit to Retech Lasers Private Limited, Selvanagar, Tambaram, on 19th July 2025. This visit was intended to provide third-semester ECE students with "exposure to the practical applications of electronics in advanced laser systems, automation, and embedded technologies used in industrial manufacturing".