

PANIMALAR ENGINEERING COLLEGE

An Autonomous Institution

Affiliated to Anna University, Chennai (JAISAKTHI EDUCATIONAL TRUST)



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

INNOVATRONIX

2023 - 2024

NEWS LETTER

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MESSAGE

Dr. P. Chinnadurai, M.A., Ph.D. Secretary & Correspondent

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





Dr. C. Sakthi Kumar, M.E., Ph.D. Director

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

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. Saranyasree Sakthi Kumar, B.E., M.B.A., Ph.D. Director

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 **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 news letter and series of such letters keep us all continuously informed about all the developments 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. Prof. & HOD / 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 semester along with the incredible achievements of our students and staff. We humbly 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: R.ROSHAN (II 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 the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: 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.

PO3: 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.

PO4: 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.

PO5: 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.

PO6: 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.

PO7: 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.

PO8: Ethics:

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

PO9: Individual and team work:

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

PO10: 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.

PO11: 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.

PO12: 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: 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



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 of excellence 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, post graduate 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 ACHEIVEMENTS

- 1.Mr. M.Arun, Assistant Professor, ECE mentored the project Violation Detection and Sustainability Design for Vehicles using IoT and AI that Won 500 \$ & First Prize in An international talent show, IEEE YESIST 12 (Youth Endeavours for Social Innovation using Sustainable Technology)(SS12) at Arab Academy for Science, Technology & Maritime Transport (AASTMT), Alexandria, Egypt on 03.09.2023.
- 2.Dr. R.Rajalakshmi, Associate Professor ECE Department, received Certificate of Appreciation for action as Session Chair in ELITECCOM-2023 in 2nd National Level Symposium on Recent Trends in Electrical, Information & Technology, Electronics & Communication, And Computers, organized by IETE Chennai Centre, on September 21, 2023.
- 3.Dr. C Ramesh Kumar, Associate Professor ECE Department, received Certificate of Appreciation for action as Session Chair in ELITECCOM-2023 in 2nd National Level Symposium on Recent Trends in Electrical, Information & Technology, Electronics & Communication, And Computers, organized by IETE Chennai Centre, on September 21, 2023.
- 4.Dr. D. Nithya, Associate Professor ECE Department, received Certificate of Appreciation for action as Session Chair in ELITECCOM-2023 in 2nd National Level Symposium on Recent Trends in Electrical, Information & Technology, Electronics & Communication, And Computers, organized by IETE Chennai Centre, on September 21, 2023.
- 5.Dr.M.Priyadharshini, Assistant Professor ECE Department, received Certificate of Appreciation for action as Session Chair in ELITECCOM-2023 in 2nd National Level Symposium on Recent Trends in Electrical, Information & Technology, Electronics & Communication, And Computers, organized by IETE Chennai Centre, on September 21, 2023.
- 6.Dr.M. Premkumar, Professor ECE Department, received Certificate of Appreciation for action as Session Chair in ELITECCOM-2023 in 2nd National Level Symposium on Recent Trends in Electrical, Information & Technology, Electronics & Communication, And Computers, organized by IETE Chennai Centre, on September 21, 2023.
- 7.Mr. M. Arun, Assistant Professor, ECE delivered a talk on Roadmap of IEEE for Engineering Community at Prince Shri Venkateshwara Padmavathy Engineering College on 29.09.2023.
- 8.Mr. M. Arun, Assistant Professor, ECE delivered a Talk on IEEE YP- A Big Picture in IEEE Egypt YP Meetup at Arab Academy for Science, Technology & Maritime Transport, Egypt on 04.09.2023.
- 9. Mr. M. Arun delivered a Talk on IEEE YP- A Big Picture in IEEE WIE MAS Leadership Conclave 2023 at Sri Sairam Engineering College on 19.08.2023.
- 10.Mr. M. Arun, Assistant Professor, ECE delivered a Talk on IEEE in Real Life at Saveetha Institute of Medical and Technical Sciences on 16.08.2023.

STUDENT ACHEIVEMENTS



ECE department students Won Second Prize in Volley Ball Tournament organized by Chennai Institute of Technology on 8 & 9 September 2023.



D.Sandhiya, K.Taniya, MedhaDevi.R, ECE, Won the Best Paper Award & Rs. 1000 Cash Prize for the Paper title An IoT Based System for well being of Fisheries in EITECCOM2023 - Symposium Organized by IETE Chennai Centre during 21, September 2023.



Nithyasri S, K.L.Rakshana, Ranjanashree.K, ECE, Won the Best Paper Award & Rs. 1000 Cash Prizefor the Paper title Gas Leakage Detection And Automatic On/Off Using NODEMCU And IOT's in EITECCOM2023 -Symposium Organized by IETE Chennai Centre during 21, September 2023.

INDUSTRIAL VISIT



Industrial Visit - Retech Pvt. Ltd., Chennai, II - Year Students 02/09/2023



Industrial Visit - Retech Pvt. Ltd., Chennai, III - Year Students 05/08/2023



Industrial Visit - Retech Pvt. Ltd., , Chennai, III - Year Students 10/07/2023

CLUB ACTIVITIES



CRYSTAL CLEAR TECHNOLOGY AND INNOVATIONS
01.06.2023



INAUGURATION OF RADIO CLUB 19.07.2023



RADIO CLUB MOU SIGNING 19-07-2023



LOGO DESIGN CONTEST 24.07.2023



INAUGURATION & SEMINAR ON
MACHINE LEARNINGAND ITS APPLICATIONS
27.07.2023



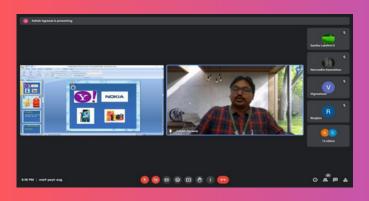
INAUGURATION OF AI CLUB 28.07.2023

SOCIETY

IEEE

IEEE is the world's largest leading professional association for the advancement of technology. IEEE and its members inspire a global community through IEEE's highly cited publications, conferences, technology standards, and professional and educational activities. IEEE offers a wide range of learning, career enhancement, and employment opportunities within the engineering sciences, research, and other technology areas.

IEEE Student branch at Panimalar Engineering College was established in the year 2013 and is one of the vibrant Sections in R10, Madras Section. Over the years the strength of the section has grown steadily and currently the Section membership stands close to 100. Student Branch aims at helping students recognize real world challenges and Nurture innovative ideas of students by mentoring their implementation approach. The Chapters carry out focused activities in the respective area by way of conducting technical talks under DLT, Conference, Seminars, Tutorials, Short term Courses, workshops, Paper contest, Technical Colloquium, Project contest etc.,



PLACEMENT READINESS ENHANCEMENT PROGRAM 12.07.2023



WEBINAR ON ECONOMIC IMPACT OF THE RISE OF CRYPTO CURRENCY 13.07.2023



WEBINAR ON COMMUNICATION 16.07.2023



WEBINAR ON IMPACT ON EMERGING TECH FOR ENTERPRISES 17.07.2023

WORKSHOP AND HANDS ON TRAINING

SI. No.	Type of Collaborative Activity	Name of the Collaborating Agency with Contact Details	Duration	Nature of the Activity	Number of the Participa nt
1	Hands on Training	Mr.Ranjith Kumar Director,CCTI, Coimbatore.	29.05.23 - 01.06.23 (4 Days)	Workshop on loT using Adruino with Real time projects	50
2	Hands on Training	Mr.Shanmuganandan.T.P, Director, 360 Ripples Solutions, Chennai.	31.05.23 - 02.05.23 and 27.07.23- 28.07.23 (5 Days)	JAVA Bootcamp	70
3	Hands on Training	Mr. A.Vignesh Kumaran and Embedded System Engineer, Pantech e Learning, Chennai	10.08.23 & 11.08.23	Workshop on Robotics Design (Robobout Club)	87
4	Hands on Training	Mr.KarthickThangadurai, data science specialist, GUVI	18.08.23	Workshop on "Exploring the Frontiers of Generative Al; From theory to Applications"(Al Club)	49
5	Hands on Training	Mr.Kesavan, CEO of Qriocity	30.08.23 & 31.08.23	Workshop 1- Mastering ML algorithms(IR Club)	50

6	Hands on Training	Mr.KarthickThangadura, data science specialist, GUVI	08.09.23	Workshop 2- Getting started with ML powered recommendations (IR Club)	45	
7	Hands on Training	Mr.Ranjith Kumar Director, CCTI, Coimbatore.	20.09.23- 22.09.23 (5Days)	Advanced PCB Design and Fabrication	60	
8	Hands on Training	Mr.Ranjith Kumar Director, CCTI, Coimbatore.	25.09.23 - 27.09.23 (5Days)	Advanced PCB Design and Fabrication	60	
9	Hands on Training	DR.E.ARUN KUMAR VICE PRESIDENT RETECH SOLUTIONS PVT LTD	25.09.23 - 27.09.23	Workshop on Real Time Signal Processing using Raspberry Pi (Signal Processing Club)	57	
10	Hands on Training	Mr.Naveen, Robotics Archietect, Pragrobotics Pvt limited	26.09.23 - 27.09.23	Workshop on Learn Machine Learning with KNIME" (AI Club)	43	
TOTAL						