

PULSE



SAKTHI POLYTECHNIC COLLEGE
(AICTE Approved || Government Aided Institution)
(NBA Accredited – Civil, Mech., ECE, EEE and Metallurgy)
SAKTHI NAGAR – 638 315



EDITORIAL BOARD

<u>Chief Editor</u> Dr.S.SENTHILARASU Head of the Department	<u>Staff Editor</u> Mrs.R.CHITRA WORKSHIP INSTRUCTOR	<u>Student Editors</u> M.KOWSALYA S.ABDULVADUTH
--	---	--

Volume - 1
Issue -1

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION
ENGINEERING**



NEWS LETTER 2023-2024 – ODD SEM

PULSE



SAKTHI POLYTECHNIC COLLEGE
(AICTE Approved || Government Aided Institution)
(NBA Accredited – Civil, Mech., ECE, EEE and Metallurgy)
SAKTHI NAGAR – 638 315

**EDITORIAL BOARD**

<u>Chief Editor</u> Dr.S.SENTHILARASU Head of the Department	<u>Staff Editor</u> Mrs.R.CHITRA WORKSHIP INSTRUCTOR	<u>Student Editors</u> M.KOWSALYA S.ABDULVADUTH
---	---	--

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

NEWS LETTER 2023-2024 – ODD SEM



Padma Bhushan
Arutselvar Dr. N.Mahalilingam, B.Sc., F.I.E.
Founder – Sakthi Polytechnic College.

Arutselvar DR. N.Mahalilingam a legendary Gandhian by principle, a patriotic and proud son of the soil, Dr. N.Mahalilingam was a man of pious living. His exemplary social contributions in numerous fields of socio-economic spectrum have benefited scores of institutions and individuals inspired by him during his long career. The government of India duly recognized his meritorious deeds and honored him with the prestigious Civilian Award - PADMA BHUSHAN. Dr. N. Mahalingam is also a recipient of many awards and titles conferred upon him by various educational, social and cultural institutions. As an industrialist he has several important positions and has played major roles fostering the development of agricultural, industrial, human resource and institutional development at the State and National levels. He is the Pioneer of sugar industry. He has rendered notable literary contributions. His social and humanitarian considerations took his journey beyond the boundaries of industries and scholarly tents he nurtured.

**CHAIRMAN****Dr. M. MANICKAM, M.sc., M.B.A.**

Dr. M. Manickam, the eldest son of Arutchelvar Dr N Mahalingam, is an industrialist, educationalist and an outstanding administrator with an M.B.A from the University of Michigan, U.S.A. He is the chairman of NIA educational institutions and Vice- Chairman of Sakthi Sugars. Under his capable guidance and stewardship, Sakthi Sugar Mills has expanded and set-up institutions in many places. Through his constant efforts, Sakthi Auto Components Ltd has modernized and expanded. He had been the President of the "All India Sugar Manufacturers Association" and currently he is the President of Indian Sugar Technologists Association. He was awarded an Honorary Doctorate Degree by Tamil Nadu Agricultural University. He evinces keen interest in the development of Good Infrastructure in the technical institute.

**CORRESPONDENT****THIRU.G MUNIASAMY, B.TECH., MBA**

Sakthi Polytechnic College is an Institution with a difference, started with the mission of providing quality technical education to rural youth at affordable cost. It is the vision of our beloved Founder Chairman Arutchelvar Dr. N Mahalingam, to empower the rural youth with technical knowledge and skills to train them as the most suited manpower to meet the needs and demands of the growing industrial scenario. We ensure that with the vast potentials for growth and avenues for development, Sakthi Polytechnic College will enhance the capabilities and nurture the latent talents of youth to emerge as entrepreneurs rather than job seekers.

**Dr.N.THANGAVELU M.E.,Ph.D.,MISTE.,****PRINCIPAL**

Technology is the need of the hour. In this era of Globalization when there is a need for an enormous number of technically qualified personnel, Polytechnics play a vital role in supplying the Industries, the inputs of their choice. Keeping this in mind our beloved Founder Arutselvar Padma Bhusan Dr N. Mahalinam established Sakthi Polytechnic College with a foresight and vision in this predominantly rural and agricultural area of Sakthi Nagar. The main aim of this Institution is to bring technical education within the reach of the rural youth. We ensure that our Institution with its excellent infrastructure, well qualified staff and conducive atmosphere for learning will go a long way in motivating the rural students to become leaders of technology in future. With Sakthi to lead them, Technical Education is no longer a distant dream for rural youth but very much a reality within their reach.

HOD's Desk



**Dr.S.SENTHILARASU M.E.,Ph.D.,MISTE.,
HEAD OF THE DEPARTMENT (IN-CHARGE)**

I am pleased to lead the Department of Electronics and Communication Engineering at Sakthi Polytechnic College. Our department is dedicated to imparting quality technical education, with a strong emphasis on innovation, ethics, and practical learning. We aim to develop competent engineers who are industry-ready and socially responsible. To support this goal, we regularly conduct seminars, workshops, industrial visits, and hands-on training sessions. Our focus also extends to soft skills, wellness programs, and entrepreneurial development to ensure holistic student growth. The faculty team is highly committed and plays a key role in guiding and mentoring students. We also encourage strong industry-institute interaction and alumni engagement to bridge the gap between academics and real-world applications. I urge all students to stay motivated, embrace continuous learning, and actively participate in all academic and co-curricular initiatives. Together, let us work towards achieving excellence and building a better future.

VISION OF THE INSTITUTE

To excel in imparting value-based technical education to produce industry-competent engineers and socially responsible citizens.

MISSION OF THE INSTITUTE

M1: To impart transformative technical education through innovative teaching and learning methodologies.

M2: To enhance academia-industry partnership through internships and collaborative projects.

M3: To impart requisite skills to enhance employability and entrepreneurship.

VISION OF THE DEPARTMENT

To become a center of repute and to impart high-quality technical education in the field of Electronics and Communication Engineering to develop highly competent and ethical engineers.

MISSION OF THE DEPARTMENT

M1: To create a learning environment for excellence in the field of Electronics & Communication Engineering.

M2: To provide ethical and value-based education through various activities addressing societal needs.

M3: To instill self and continuous learning attitude, professional ethics, and entrepreneurial skills.

M4: To strengthen the industry-institute partnership through various interactions.**PROGRAM**

EDUCATIONAL OBJECTIVES (PEOs)

PEO1: To prepare the students to take up careers in Communication Networking, Embedded Systems, VLSI Design, and Electronic Manufacturing Industries.

PEO2: To prepare the students to pursue higher education and adopt emerging trends through continuous learning.

PEO3: To prepare the students to become socially responsible and successful entrepreneurs.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Apply the fundamental concepts of Electronics and Communication Engineering in designing various systems and applications in domains like Communication, Networking, Embedded Systems, and VLSI.

PSO2: Simulate, verify, and test electronic circuits using state-of-the-art software tools.

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ECE Department Events Summary

Sl. No.	Date	Details of Events / Activities
1	31-May-2023 to 15-Jun-2023	C-Program Course by CIICP
2	09-Aug-2023	Welcome Party
3	18-Aug-2023	Industrial Educational Visit to Ooty
4	23-Oct-2023	Aayudha Pooja Festival Celebration

C-Program Course by CIICP

- **Date:** 31-May-2023 to 15-Jun-2023
- **Description:** A C Programming course was organized under the CIICP initiative to strengthen students' programming fundamentals and improve their coding skills.



Welcome Party

- **Date:** 09-Aug-2023
- **Description:** A welcome party was organized to greet the first-year students and help them interact with faculty members and senior students.



Industrial Educational Visit to Ooty

- **Date:** 18-Aug-2023
- **Description:** Students visited industries in Ooty to gain practical exposure to industrial processes and manufacturing practices.

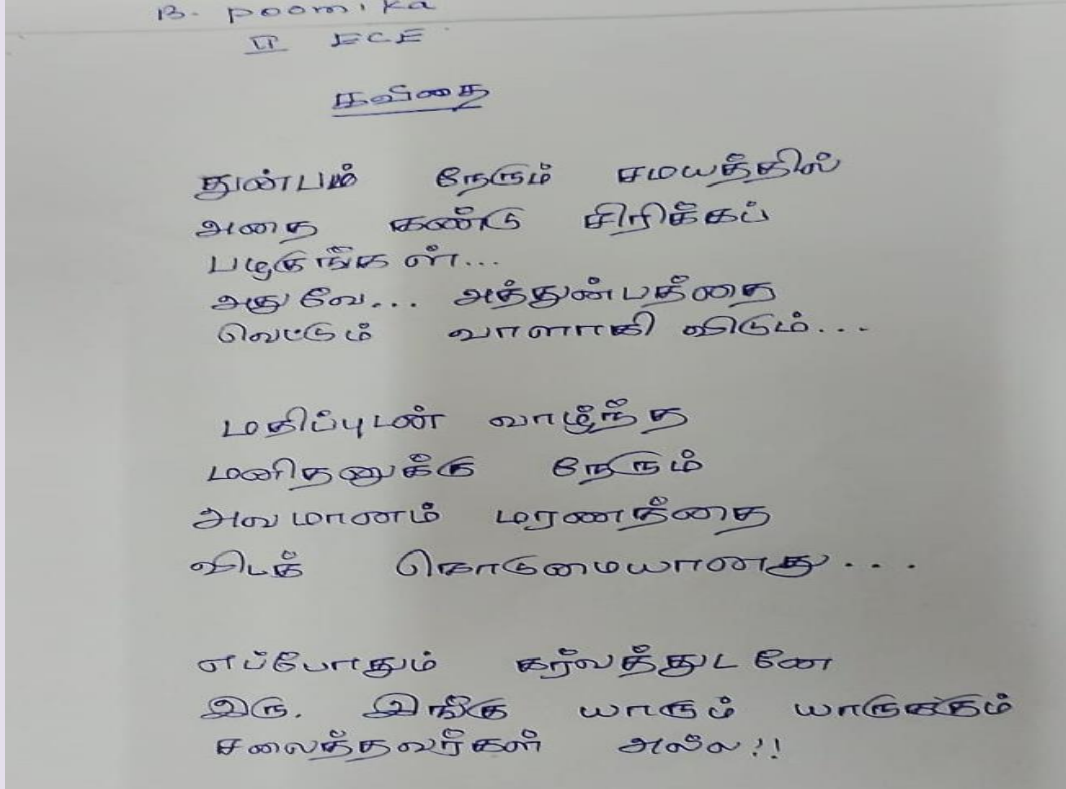


ayudha Pooja Festival Celebration

- **Date:** 23-Oct-2023
- **Description:** The department celebrated Aayudha Pooja to promote cultural values and express gratitude for tools, equipment, and learning resources.



STUDENT CORNER



ARTICLE

5G Technology: Connecting the Future

The world is witnessing a new era of communication with the introduction of **5G (Fifth Generation) wireless technology**. Designed to provide ultra-fast internet speeds, low latency, and reliable connectivity, 5G is transforming the way people live, work, and communicate. It is not just an upgrade from 4G—it is a technological revolution that supports the growing demands of a digital society.

One of the biggest advantages of 5G is its **high-speed data transfer**, which can be up to 100 times faster than 4G. This allows users to download large files within seconds, stream high-definition videos without buffering, and enjoy seamless online gaming and video conferencing. The technology also offers extremely low latency, enabling real-time communication for applications where every millisecond matters.

5G plays a vital role in the development of **smart cities** and the **Internet of Things (IoT)**. It enables millions of devices, such as smart traffic systems, security cameras, wearable devices, and home automation systems, to communicate efficiently. Industries are also adopting 5G for automation, robotics, and remote monitoring, leading to improved productivity and operational efficiency.

The healthcare sector is benefiting from 5G through advanced telemedicine, remote patient monitoring, and AI-assisted medical services. In education, students and teachers can experience interactive virtual classrooms, cloud-based laboratories, and immersive learning using augmented and virtual reality technologies. Agriculture, transportation, and manufacturing are also embracing 5G to improve efficiency and sustainability.

In India, the rollout of 5G marks a significant milestone in the nation's digital transformation. It is expected to boost innovation, create new employment opportunities, and support emerging technologies such as Artificial Intelligence (AI), autonomous vehicles, and smart infrastructure. While challenges such as infrastructure development and cybersecurity remain, continuous advancements are making 5G more accessible and secure.

As technology continues to evolve, 5G will serve as the foundation for future innovations, connecting people, devices, and industries like never before. By enabling faster communication and smarter solutions, 5G is shaping a more connected, intelligent, and digitally empowered world.

A.K. GOWTHAMI
LECTURER/ECE

துறை சார்ந்த நிறைவுரை

"மின்னணுவியல் மற்றும் தகவல் தொடர்பியல் துறை மாணவர்கள், ஆசிரியர்கள் மற்றும் முன்னாள் மாணவர்கள் இணைந்து கல்வி, ஆராய்ச்சி மற்றும் புதுமையில் தொடர்ந்து சிறந்து விளங்க வாழ்த்துக்கள்."

இறுதி கையொப்பம் (Newsletter Closing)

அன்புடன்,
ஆசிரியர் குழு (Editorial Board)
மின்னணுவியல் மற்றும் தகவல் தொடர்பியல் துறை
கல்வியாண்டு : 2023-2024

"அறிவால் உயர்வோம் • புதுமையால் முன்னேறுவோம் •
தொழில்நுட்பத்தால் உலகை மாற்றுவோம்."