



SAKTHI POLYTECHNIC COLLEGE

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

NEWS LETTER



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DEPARTMENT VISION

➤ To stand out in imparting knowledge and skills in the field of Electrical and Electronics Engineering to transform Young aspirants into eminent Engineers.

DEPARTMENT MISSION

- 1.To create an environment that facilitates effective learning for the students.
- 2.To encourage the students to do innovative projects to bridge the curricular gaps.
- 3.To Provide adequate facilities & opportunities for the students to develop their social and interpersonal skills.
- 4.To encourage the faculty to attend staff development programs for enhancing their knowledge on the recent developments in the field of Electrical & Electronics Engineering and subsequent dissemination to the students.

EDITORIAL BOARD

1. Dr.S.Chitra - HOD i/c
2. Mr.V.Velu - Lecturer(Sr.Gr)
3. Mr.M.Yuvarasu - Lecturer
- 4.S.Maheen - III EEE
5. S.Tamilarasi - II EEE
6. D.Bharathraj - I EEE

ஆசிரியர் உரை

கற்றல் என்பது தேர்வில் வெற்றி பெறுவதற்காக மட்டுமல்ல, வாழ்க்கையில் சிறந்து விளங்குவதற்கான பயணமாகும். ஒவ்வொரு நாளும் புதிய அறிவை கற்றுக்கொண்டு, திறமைகளை வளர்த்துக் கொண்டு, தன்னம்பிக்கையுடன் முன்னேறுங்கள். உழைப்பு, ஒழுக்கம், விடாமுயற்சி ஆகிய மூன்றும் உங்கள் வெற்றிக்கான உறுதியான படிக்கட்டுகளாக அமையும்.

நமது கல்லூரி மாணவர்கள் கல்வி, தொழில்நுட்பம், வேலைவாய்ப்பு மற்றும் புதுமை ஆகிய துறைகளில் தொடர்ந்து சாதனை படைத்து வருவது பெருமைக்குரிய ஒன்றாகும். இந்த சாதனைகள் ஒவ்வொரு மாணவருக்கும் ஒரு ஊக்கமாக அமைய வேண்டும்.

"இன்றைய முயற்சி நாளை வெற்றி; இன்றைய கற்றல் வாழ்நாள் முழுவதும் உங்கள் பலம்."



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Since 1981

Department News Letter

For the Academic year 2023-2024-ODD Semester

With blessings from our founder

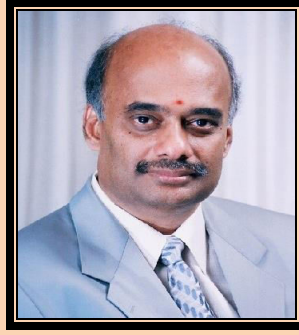


Padma Bhushan

Arutselvar Dr. N. MAHALINGAM, B.Sc., F.I.E.

Founder – Sakthi Polytechnic College.

Arutselvar DR. N. MAHALINGAM a legendary Gandhian by principle, a patriotic and proud son of the soil, Dr. N. MAHALINGAM 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.



PRINCIPAL

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.



**Dr.S.CHITRA M.E. Ph.D.,MISTE.,
Lecturer (Sel.Gr II) / HOD I/c**

We all are well aware of the fact that Electricity plays a pivotal role in the development of all industries which is an indicator of the prosperity of the nation. Hence the field of Electrical Engineering has become a significant branch of Engineering. Our department was established in the year 1981 and since then has produced so many successful engineers and entrepreneurs. The students of our department have secured state ranks many times and every year almost 95% of our students achieve I class & honors. This shows the commitment & dedication of our staff members in molding the careers of the students. We have well qualified staff members with vast experience (well over 25 years). The Non-teaching staffs (Technical Assistants) are equally experienced and knowledgeable to ably guide the students in their practical sessions. We have fully equipped Laboratories which will match those of even engineering colleges with meticulously planned layout & plenty of demonstration boards. Our labs stand out amidst those of plenty of polytechnics due to the erection of working models which can be normally found only in industries. Our department was awarded a grant of Rs 5 Lakhs by Government of India through MODROBS Scheme for setting up a separate CAD Centre for departmental utility. Besides offering Quality education to the students we offer Consultancy Services to the neighboring industries. We conduct exhibitions at periodical intervals on “Awareness on Electrical Safety& Energy Conservation” for general public. Vocational courses on “Servicing of Domestic Appliances” are conducted by us for the students of other branches

OUR FACULTIES

S.No	Name of the Faculty	Designation
1	Dr.S.CHITRA M.E. Ph.D.,MISTE.,	Lecturer (Sel.Gr II) / HOD I/c.
2	Mr. S. SAKTHIVEL B.E. MISTE.	Lecturer (Sel.Gr I)
3	Mrs. S. KASTHURI B.E., MISTE.,	Lecturer (Sel.Gr I)
4	Mr. V. VELU M.E.,	Lecturer (Sr.Gr)
5	Mr. M. YUVARASU M.E.,	Lecturer
6	Mr. R.S. KRISHNAMURTHY I.T.I.,	Workshop Instructor
7	Mr. P. VELUSAMY I.T.I.,	Skilled Asst (Sel.Gr.)
8	Mr. P. PALANISAMY I.T.I.,	Lab Asst.

ACTIVITIES

During the academic year 2023-2024 we have conducted the following activities.

1. Industrial Visits
2. Guest Lecture
3. Students Activities

GUEST LECTURE ON "AN OVERVIEW OF ELECTRICAL ENGINEERING IN ABROAD"

The Department of Electrical and Electronics Engineering, Sakthi Polytechnic College, organized a Guest Lecture on "An Overview of Electrical Engineering in Abroad" on 18 July 2023 under the Electrical Engineering Forum. The programme was conducted to provide students with valuable insights into higher education, career opportunities, and the latest technological developments in the field of electrical engineering across foreign countries.

The session was delivered by Mr. Dhanapal Mani, Senior Executive, Texas, USA, who shared his professional experience and highlighted the growing demand for skilled electrical engineers in international industries. He explained the career prospects, advanced technologies, required technical competencies, and the importance of communication skills for students aspiring to work or pursue higher education abroad. The speaker also emphasized the need for continuous learning, innovation, and professional certification to succeed in the global engineering sector.



Guest Lecture on An Overview of Electrical Engineering in Abroad

INDUSTRIAL VISIT-1

The Department of Electrical and Electronics Engineering (EEE), Sakthi Polytechnic College, organized an Industrial Visit to Seshasayee Paper and Boards Ltd. (SPB), Erode, on 25 July 2023 for the II and III Year EEE students. The visit was arranged with the objective of providing students with practical exposure to industrial operations and enhancing their understanding of electrical engineering applications in process industries.

During the visit, the students observed the complete paper manufacturing process, from raw material preparation to the final paper production. The industry experts explained the functioning of electrical machines, transformers, motors, generators, switchgear, and control panels used in the plant. Students also gained knowledge about industrial automation, motor control systems, power distribution, energy conservation practices, and the safety measures followed in a large-scale manufacturing industry.

The interaction with industry professionals enabled students to relate classroom concepts with real-time industrial practices. The visit provided valuable insights into modern manufacturing technologies, preventive maintenance, and the importance of efficient electrical systems in continuous process industries.



Industrial Visit to Seshasayee Paper and Boards Ltd. (SPB), Erode

INDUSTRIAL VISIT-2

The Department of Electrical and Electronics Engineering (EEE), Sakthi Polytechnic College, organized an Industrial Visit to the Kundah Hydro Electric Power Station on 26 July 2023. The visit was arranged to provide students with practical exposure to hydroelectric power generation and to enhance their understanding of power plant operations and electrical engineering applications.

During the visit, students gained firsthand knowledge of the various stages involved in hydroelectric power generation, including water storage, penstock operation, turbine functioning, generator operation, and power transmission. The engineers at the power station explained the working principles of hydro turbines, alternators, transformers, switchgear, protection systems, and control panels. Students also learned about load management, grid synchronization, and the safety measures followed in power generation stations.



Industrial Visit to Kundah Hydro Electric Power Station, Ooty

INDUSTRIAL VISIT-3

The Department of Electrical and Electronics Engineering (EEE), Sakthi Polytechnic College, organized an Industrial Visit to Current Electro Mech Private Limited on 10th August 2023. The visit aimed to provide students with practical exposure to industrial manufacturing processes and modern electrical engineering practices. A total of students and faculty members actively participated in the visit.

During the visit, the students were taken through various production units where they observed the manufacturing, assembly, testing, and quality control of electrical motors, industrial equipment, and automation components. The technical experts explained the working principles of electrical machines, winding techniques, motor testing procedures, industrial safety practices, and preventive maintenance methods. Students also gained valuable insights into production planning, inventory management, and quality assurance systems followed in the industry.



Industrial Visit to Current Electro Mech Private Limited, Erode.

INDUSTRIAL VISIT-4

The Department of Electrical and Electronics Engineering (EEE), Sakthi Polytechnic College, organized an Industrial Visit to Mettur Thermal Power Station (MTPS) on 13th August 2023. The visit was arranged to provide students with practical exposure to thermal power generation and to enhance their understanding of large-scale power plant operations.

During the visit, students observed the major sections of the thermal power station, including the boiler, turbine, generator, coal handling plant, ash handling system, cooling system, and control room. The plant engineers explained the complete process of electricity generation, starting from coal combustion to steam production, turbine operation, power generation, and transmission. Students also learned about the importance of energy efficiency, environmental protection measures, and safety practices followed in thermal power plants.

The interactive sessions with experienced engineers helped students understand the real-time operation and maintenance of electrical equipment, generators, transformers, switchgear, and control systems. The visit also provided valuable insights into power system reliability, preventive maintenance, and career opportunities in the power sector.



Industrial Visit to Mettur Thermal Power Station (MTPS), Mettur.

STUDENTS SHINE IN INTERCOLLEGIATE TECHNICAL COMPETITIONS

The students of the Department of Electrical and Electronics Engineering (EEE), Sakthi Polytechnic College, actively participated in various intercollegiate technical competitions during the academic year 2023–2024 and brought laurels to the institution through their outstanding performances.

- On 22nd September 2023, S. Jeevanandham and S. Sathishkumar of III Year EEE participated in the Paper Presentation Competition organized by Chettinad Engineering College, Karur. They presented a paper on "Recent Trends in Hybrid Vehicles" and secured the Second Prize, demonstrating their technical knowledge and presentation skills.
- On the same day, S. Maheen and Asvin Sharath of III Year EEE participated in the Non-Technical Event Competition conducted by Chettinad Engineering College and won the First Prize, showcasing their creativity, confidence, and teamwork.
- Further, on 15th November 2023, A. Raghul and S. Suhaibudheen of II Year EEE participated in Renewable Energy Day–2023, organized by SSM Engineering College, Komarapalayam. They secured the First Prize in the Paper Presentation Competition and were also honored with the prestigious Young Innovator Award for their exceptional performance and innovative ideas.
- In the same event, M. Eniyavan, P. Ganesh, S. Tamilarasi, and M. Divyaprabha of II Year EEE actively participated in the Paper Presentation Competition, gaining valuable technical exposure and enriching their learning experience.

These achievements reflect the department's commitment to promoting technical excellence, innovation, and professional development among students while encouraging them to actively participate in academic and technical forums.

STUDENT ACTIVITIES



-Artwork by Asvin Sharath (II-EEE)

மின்பொறியாளன் கனவு

கம்பிகளில் ஓடும் சக்தி,
கனவுகளில் ஓடும் நம்பிக்கை.
மின்சாரம் போல முன்னேறி,
மின்னல் வேகத்தில் சாதிப்போம்.
அறிவை ஆயுதமாக ஏந்தி,
உலகம் போற்றும் பொறியாளராக உயர்வோம்.

-Written by S. Suhaibudheen (II-EEE)

கல்வியே செல்வம்

புத்தகம் தரும் ஒளி என்றும் அணையாது,
கல்வி தரும் செல்வம் என்றும் குறையாது.
உழைப்பும் ஒழுக்கமும் துணையாக இருந்தால்,
உயர்ந்த இடம் நம்மைத் தேடி வரும்.
இன்று கற்போம்,
நாளை நாட்டை வழிநடத்துவோம்.

-Written by S. Tamilarasi (II-EEE)

Electrical Engineering Innovations During the COVID-19 Pandemic

The COVID-19 pandemic created unprecedented challenges across the world and highlighted the importance of technology in healthcare and public safety. Electrical and Electronics Engineers played a vital role in developing innovative solutions to support hospitals, industries, and communities during this difficult period.

One of the major contributions was the design and production of low-cost ventilators, oxygen concentrator control systems, and contactless medical devices. Engineers developed automated monitoring systems that enabled doctors to observe patients remotely, reducing direct exposure to the virus. Thermal screening systems, automatic sanitizer dispensers, and UV-based sterilization units became common applications of electrical and electronic technologies.

The pandemic also accelerated the adoption of Industrial Automation, Internet of Things (IoT), and Artificial Intelligence (AI). Smart sensors and wireless communication systems helped monitor medical equipment and patient health in real time. Reliable power supply through uninterrupted power systems (UPS) and backup generators ensured continuous operation of hospitals and healthcare facilities.

Another significant development was the increased use of renewable energy and smart power management to maintain essential services during lockdowns. Engineers worked tirelessly to ensure uninterrupted electricity supply despite workforce limitations and increased demand from healthcare institutions.

The COVID-19 pandemic demonstrated that Electrical and Electronics Engineering is not limited to power generation and industrial applications but also plays a crucial role in protecting human lives. The innovations developed during this period continue to improve healthcare systems and inspire future engineers to create technologies that benefit society.

"Engineering is not only about machines and circuits—it is about creating solutions that save lives and build a better future".

-Article by M.Yuvarasu, Lecturer-EEE

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