

ELECTRICAL DEPARTMENT NEWSLETTER

Message

FROM PRINCIPAL



At the outset I congratulate the initiative of the department to bring out its newsletter. As GEC Sreekrishnapuram is celebrating its silver jubilee the department of EEE which was established only in the year 2016 has left remarkable footprints in the development of the college. Within this short span of inception the department could manage to have a fully equipped independent building. It is also noteworthy that the department is offering UG, PG and PhD programs. Four projects were implemented with TEQIP seed money. The active EMRC of the department bridges the gap between practical and theory. The implementation of solar panel at Kurukkankundu, Attapady under the leadership of Dr Vinitha Chellappan utilising CORaL fund is a remarkable venture. The dedication of the faculty is reflected in the all of the above achievements. My sincere wishes for the department to gain greater heights and also for its forth coming accreditation

Dr Meenakshy K

Chief Minister Pinarayi Vijayan Inaugurates New Electrical Engineering Block



The Department of Electrical Engineering proudly shifted to its state-of-the-art new block in May 2023, marking a significant milestone in our institution's growth. Spanning an impressive 3734 sq.m., the new block was officially inaugurated on 15th May 2023 by the Honorable Chief Minister, Sri. Pinarayi Vijayan, alongside Dr. P. Bindu, Minister for Higher Education and Social Justice. This occasion also celebrated the completion of new staff quarters, further enhancing the infrastructure of our campus. The inauguration reflects our continued commitment to providing top-tier educational facilities and fostering academic excellence.

Message

FROM HOD



Dear all,

I am delighted to announce a new initiative by our Department: the launch of a newsletter ZoE (ZerO Emissions). The name ZoE, which is also associated with Renault's electric car, reflects our Department's commitment to research in power systems, electric drives, and control systems; aligning with our MTech program's focus on sustainable technologies.

Each year, the student group evolves, but together, we continue to uphold our tradition of pushing the boundaries of knowledge and technology. Our dedicated faculty members are committed to creating a dynamic learning environment, fostering creativity, and encouraging critical thinking among the students.

Our Newsletter ZoE will keep everyone updated on the latest initiatives and developments of the Department which include:

Student and Staff Achievements: We celebrate the achievements of our students, faculty, and technical staff in competitions, competitions, research, and projects. Congratulations to all for your hard work!

Research and Collaboration: Our department is engaged in research in areas related to distributed generation, power electronics and drives, linear/nonlinear control, and optimal path planning. We encourage our students to participate actively in these projects, working alongside faculty to solve real-world problems and contribute to advancements in our field.

Industry-Institute Interaction: Strengthening our ties with industry and other pioneer institutes remains a priority. Collaborations provide students with practical experience through internships, workshops, and research projects.

Infrastructure and Facilities: We have upgraded our laboratories/simulation labs and introduced new state-of-the-art equipment to support academic and research activities, creating more opportunities for hands-on learning.

Workshops, Symposiums, and Seminars: Every year we plan a series of workshops and seminars featuring distinguished speakers from academia and industry, offering insights into the latest trends and technologies in electrical engineering.

As we face the challenges and opportunities, I encourage everyone in our department to stay engaged. Your involvement is key to our success. Let's keep striving for excellence, work together, and positively impact society through our contributions to electrical engineering.

Thank you for your continued dedication and support.

Vinita Chellappan
Head of the Department

VISION

- To become a Centre of Excellence in Electrical Engineering and allied disciplines for the service of the society

MISSION

- To impart high quality education to meet the challenges in the field of Electrical and Electronics Engineering.
- To nurture creativity and transform the young minds to become competent electrical engineers.
- To inculcate a sense of commitment to ethical values and a passion to serve the society.
- To foster research, innovation and entrepreneurship skills.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- To lay a strong foundation in basic sciences, mathematics, electrical engineering and computational technology that would enable the graduates to find solution to engineering problems.
- To strengthen the knowledge of the graduates in other engineering disciplines also, in order to address real-life problems in multi-disciplinary context.
- To foster in the graduates' strong research, design, management, communication, self-learning and teamwork skills coupled with adherence to ethical values.
- To nurture a passion in the graduates for pursuing higher studies and to engage in life-long learning in their profession.

PROGRAM SPECIFIC OUTCOMES (PSOs)

- Design and implement electrical and electronic circuits and systems using state-of-the-art tools and techniques to address emerging real-life problems and provide solutions for sustainable development.
- Acquire managerial, technical and entrepreneurial skills leading to employment in industry related to power, energy, electrical drives, control, and software development

MAJOR STUDENT ACHIEVEMENTS

FIRST PRIZE ON STATE LEVEL IDEATHON

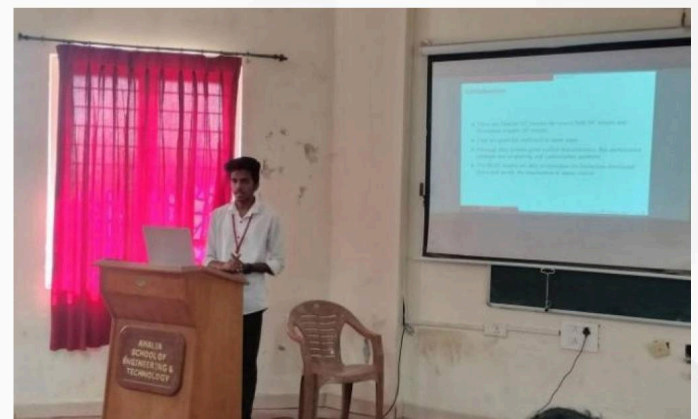
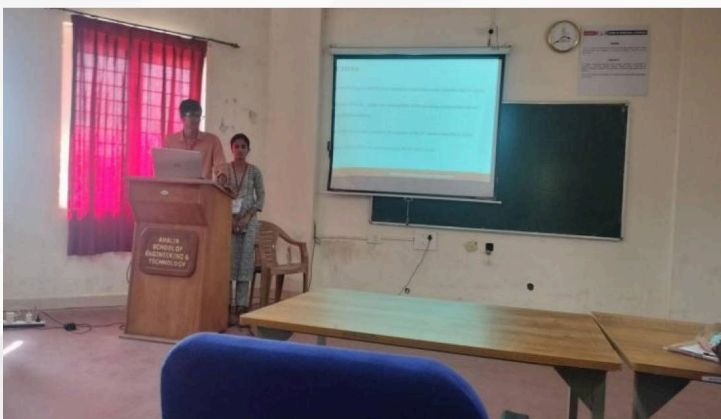


The Engineering Department proudly announces that the 2k20 batch students of the Electrical and Electronics Engineering (EEE) program have achieved remarkable success at the Freedom Fest'23. Competing in the IDEATHON segment, our students secured the prestigious first prize at the state level for their innovative solutions on the

topic of 'Sustainable Cities and Communities.' The winning team comprised Rishikesh Prem an, Rithul T, Sneha V S, Avani K V, and Akshara Thrivi C. Their outstanding performance has not only showcased their exceptional skills but has also brought great honor to our college. Congratulations to the winners for their exemplary achievement!

PAPER PRESENTATION AT PESGRE 2023 AND KETCON

We are thrilled to share that students from the 2k19 EEE batch made an impressive mark at the 2023 IEEE International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE 2023), held from December 17-20, 2023, in Thiruvananthapuram. Their paper, titled “Real-time Monitoring and Detection of Abnormal Activities in Distribution Line,” received significant attention for its innovative approach and practical relevance. The team, comprising Shijin Varghese, Mizaja Parveen K, Mohammed Saleh A, and Adharsh K, showcased their research prowess on an international stage, reflecting the high caliber of talent nurtured within our department. Congratulations to the team for their exceptional contribution to the field of power electronics and smart grids.



We are pleased to announce that Mr. Arjun, a BTech student, and Mr. Sahad, an MTech student, represented our department at KETCON 2024, where they presented their research papers. Their participation in this conference underscores the department's commitment to advancing knowledge in our field and highlights the impressive work being done by our students. Congratulations to both Arjun and Sahad for their contributions and dedication to their research.

PROJECT PRESENTATION AT POWER CONFERENCE



Students from the 2k18 batch, Rasmi K R, Drishnya K V, and Sulaiman J, presented their project titled "Single Phase Inverter Fed by a Closed Loop Isolated Boost Converter for Domestic Applications" at the prestigious National Power Conference 2022. The event, organized by KSEBOA and In-SDES, took place on December 15, 2022. Their innovative work, aimed at enhancing domestic energy solutions, was well-received by attendees and showcased the technical expertise and dedication of the team.

Vasudevan K R and Vishnu P K, students from the 2k18 batch, presented their project titled "An Improved Method to Alleviate Voltage Sag and Phase Jump Using a Dynamic Voltage Restorer" at the National Power Conference 2022. The conference, organized by KSEBOA and In-SDES, was held on December 15, 2022. Their work, which focuses on enhancing power quality and stability, received significant attention and highlighted their strong technical capabilities and innovative approach.



FIRST PRIZE FOR KETCON PAPER PRESENTATION



The KETCON paper presentation held at Ahalya College of Engineering was a moment of pride for our institution as two of our teams were honored with Best Paper Presentation awards. The First Prize was awarded to Deepak, Mibin, Gouri, and Aditya from the 2k20 EEE Batch for their outstanding research. The Second Prize went to Karthik, a student from the MTech program, for his remarkable work. These accolades highlight the academic excellence and innovative spirit of our students, further cementing our college's reputation for producing top-tier research.

CAPTION WRITING WINNER

Congratulations to Raveena P from the 2k20 Batch for winning QAPTION'22, a caption writing competition organized by IEEE ComSoc SBC Ponnar in collaboration with WIE AG CE Ponnar. Raveena's creativity and skill in crafting compelling captions earned her the top spot in this competitive event, bringing recognition to her talent and to our college.



STUDENT ACHIEVEMENTS IN SPORTS

WOMEN'S HANDBALL CHAMPIONS



Congratulations to the students from the 2021, 2022 and 2023 batch for their outstanding achievement in handball! They have been crowned champions in both the Interzone and E-zone tournaments, showcasing their exceptional skills and teamwork. This victory highlights their dedication and talent in sports, adding another feather to their cap. We are proud of their accomplishment and look forward to their continued success in future competitions.

E-ZONE CRICKET SEMIFINAL

Sanal Kumar, an Electrical and Electronics Engineering (EEE) student from the 2020-24 batch, showcased his cricketing skills by competing in the KTU E-zone Cricket Tournament. His team made it to the semifinals, demonstrating strong performance and determination.



WOMEN'S HANDBALL INTERZONE



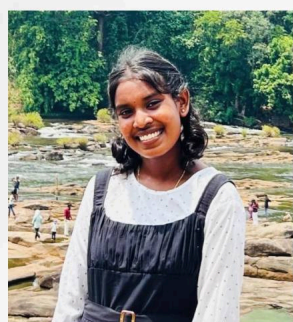
Akshara Balakrishnan, an Electrical and Electronics Engineering (EEE) student from the 2020-24 batch, showcased her athletic prowess by competing in the KTU E-zone Women's Handball Tournament. Her team advanced to the Interzone level, reflecting her dedication both on the field and in academics.

VOLLEYBALL QUARTERFINAL

Rishikesh, an Electrical and Electronics Engineering (EEE) student from the 2020-24 batch, proudly represented our college in the KTU E-zone Volleyball Tournament. Demonstrating exceptional teamwork and skill, his team advanced to the quarterfinals, showcasing both athletic and academic excellence.



SELECTED TO UNIVERSITY HANDBALL TEAM



It is with great pride that we announce **Jayasree Kanagalakshmi A P** from the 2021 batch has been selected for the University Handball Team. Her exceptional performance and dedication were evident as she represented the university in the KTU Interzone Women's Handball Tournament, where her team secured the runner-up position. This accomplishment highlights her skill and commitment to the sport, bringing pride to our department. Congratulations to Jayasree and her team on their impressive achievement!

HANDBALL EZONE RUNNERS



Congratulations to Nived K and Abhiram Karthik, both from the 2nd year EEE, 2k22 Batch, for securing the Runner's Up position in the Ezone Handball competition. Their dedication and teamwork have brought pride to the department, showcasing their talent and sportsmanship.

FACULTY ACHIEVEMENTS

RESEARCH AND DEVELOPMENT ACHIEVEMENTS UNDER TEQIP II FUNDS

The Department proudly announces the completion of several significant R&D projects in June 2023, funded under TEQIP II Four Funds. These projects reflect the department's ongoing commitment to innovation and excellence in research, covering areas such as renewable energy, electric vehicles, and smart metering technologies. The successful completion of these projects not only advances our academic and research capabilities but also contributes valuable solutions to contemporary engineering challenges.



Dr MEENAKSHY K WON THE WIE VOLUNTEER AWARD BY IEEE



Dr. Meenakshy K, Professor in the Department of Electrical Engineering, has been honored with the prestigious Outstanding WIE (Women in Engineering) Volunteer Award by the IEEE Kerala Section for the year 2023. This award recognizes her exceptional contributions to the field of engineering and her dedicated efforts in promoting gender diversity and inclusion within the engineering community. Dr. Meenakshy's achievement brings pride to the institution and inspires students and faculty alike.



DEPARTMENT PROGRAMS

SUBSTATION VISIT



On March 2, 2024, the 2021 batch of students visited the 220 kV Kanjikode Substation in Palakkad as part of an industrial visit coordinated by faculty members Sajitha M and Dr. Mini V. The visit, organized in collaboration with Kerala State Electricity Board (KSEB), provided 65 students with valuable insights into high-voltage power distribution and substation operations. This hands-on experience was instrumental in enhancing their understanding of practical applications in the field of electrical engineering.

ARDUINO WORKSHOP



The Department of Electrical Engineering at GEC Palakkad, in collaboration with EMRC, successfully conducted a two-day Arduino workshop on February 22 and 23, 2024. Led by

Dr. Johnson Mathew, Professor and Head of the Department at RIT Kottayam, the workshop focused on Arduino programming and embedded design. This event provided participants with hands-on experience and in-depth knowledge in these key areas, enhancing their skills and understanding of practical applications in electronics and programming.



2K21 BATCH AT THE ARDUINO WORKSHOP

BUCK CONVERTER WORKSHOP



On March 26 and 27, 2024, a program on the "Design to Implementation of a Buck Converter for Solar Charge Controllers" was conducted under the coordination of Vidhun M and Dr. Vinita Chellappan. The class, led by Mr. Abhinav Rajeev from the CS Square Innovation Lab at IIT Palakkad, provided 42 students from the S8 and S6 batches with practical insights into designing and implementing efficient buck converters for solar applications. This hands-on session was instrumental in bridging theoretical knowledge with real-world applications in solar energy technology.

DEPARTMENT PROGRAMS

POWER ELECTRONICS WORKSHOP



On March 16, 2024, the Department of Electrical Engineering hosted a program on "Design of Power Electronics," coordinated by Vidhun M and Dr. Joseph Peter. The session, conducted by Dr. Avinash Nelson, Assistant Professor at GEC Thrissur, engaged 38 EEE students in exploring advanced concepts and practical techniques in power electronics design. This initiative provided valuable hands-on experience, enhancing the students' understanding of key design principles and their applications in modern electronic systems.

CORAL IMMERSIVE INTERNSHIP PROGRAMME



We are excited to share that the installation of solar panels at Attappady Kurukkankundu, Mundanpara, was successfully completed on April 29-30, 2024. This initiative was spearheaded by Dr. Vinita Chellappan, Professor Vidhun M, Dr. Joseph Peter, Navaneeth M S, and Dr. Dhanya K M, with the support of the CORAL immersive internship project sponsored by GEC Palakkad.

The project aimed to enhance sustainable energy solutions in the region, demonstrating our commitment to renewable energy and community development..



The CORAL Immersive Internship Project by IEEE is pleased to announce its latest initiative, the "Assessment of Solar Panel at Attappady Galezy Hamlet," scheduled for January 18-19, 2024. This project will be coordinated by an esteemed team of faculty members, including Dr. Vinita Chellappan, Professor Vidhun M, Navaneeth M S, and Dr. Dhanya K M. The program aims to evaluate the potential and performance of solar panel installations in the Attappady Galezy Hamlet, contributing to sustainable energy solutions in the region. Through this initiative, participants will gain hands-on experience and valuable insights into renewable energy technologies, making a meaningful impact on the community.

CORAL ATTAPPADY INTERNSHIP 2023



DEPARTMENT PROGRAMS

The CoRAL Immersive Internship Programme, held on the 2nd and 3rd of February 2023, provided students with an invaluable opportunity to engage with rural communities at Attappady Grama Panchayat. The program was coordinated by Dr. Vinita Chellappan (SIGHT Advisor and IEEE SB Counselor), Prof. Navaneeth M S (TBI Coordinator), and Prof. Vishnu Prasad K (CERD Coordinator). Through hands-on experiences and community interactions, participants gained deep insights into the challenges and opportunities within rural development, empowering them to contribute meaningfully to societal progress.

PRODUCT LAUNCH BY 2K18 BATCH



Product Launch by Zeal infotech
AUTOMATIC TOKEN DISPENSER

On August 5, 2022, the Zeal Group, comprised of talented students from the 2k18 batch, proudly launched their debut product, "An IoT-based Automated Token Dispenser." This innovative solution is designed to enhance crowd management and maintain social distancing in hospitals and other public facilities. The dispenser is set to make a significant impact by streamlining operations and ensuring safety in high-traffic areas.

EFFECTIVE TECHNICAL COMMUNICATION AND G.D.



The III Cell organized a valuable programme on "Effective Technical Communication and Group Discussion" held on June 23-24, 2023. The session was led by Mr. Mohammed Mohzin, Associate Senior Manager - Special Projects at BYJU'S, Bangalore. With his extensive experience, Mr. Mohzin provided deep insights into effective communication strategies essential for technical professionals. The event was coordinated by Prof. Muhammad Farooque E K, ensuring a well-organized and impactful learning experience for all participants.

3-PHASE INVERTER DESIGN WORKSHOP



On March 14-15, 2024, a workshop on "Design and Fabrication of Three-Phase Inverter" was held for the S8 EEE 2020 batch. Hosted by Dr. Nakul Narayan and Dr. Avinash Nelson (AP, GEC TCR), the event provided hands-on experience in inverter design. The workshop was coordinated by Dr. Joseph Peter and Prof. Vidhun M.

DEPARTMENT PROGRAMS

EEE ASSOCIATION 2023-24



The Department of Electrical Engineering at GEC Palakkad celebrated the inauguration of the EEE Association for the academic year 2023-2024 with great enthusiasm. The event took place in the Electrical Block Seminar Hall and brought together students, faculty, and staff for a memorable occasion. Mr. Afthab O H, the newly appointed Association Secretary, led the proceedings, showcasing the association's plans for the year ahead.

Dr. Vinita Chellappan, the Head of the Department, played a pivotal role in guiding the association's vision, emphasizing the importance of collaboration and innovation in the field of electrical engineering. The event was graced by the presence of esteemed faculty members, including Dr. Lissy and Dr. Joseph Peter, whose support was instrumental in the association's formation.

The Principal of GEC Palakkad, Dr. Meenakshy K., also attended the inauguration, highlighting the significance of such associations in fostering a vibrant academic community. The inauguration was not only a formal start to the association's activities but also a platform for students to engage with faculty and peers, building a strong network that will drive the department's success in the coming year.

With a clear focus on advancing the field of electrical engineering, the EEE Association is set to organize various technical events, workshops, and seminars that will enhance the learning experience and provide students with opportunities to showcase their talents. The event concluded with a renewed sense of purpose and excitement among all attendees, setting the stage for a productive and inspiring academic year ahead.



ASSOCIATION INAGURAL PROGRAMS

Placement Training and Talk session hosted by **AKSHARA THRIVI** and **SREEDEVI VIJAYAN**



EMRC (Electrical Maintenance and Research Club)

Introducing EMRC: Bridging the Gap Between Theory and Practice

The Electrical Research and Maintenance Club (EMRC) is a dynamic initiative of the Electrical Engineering Department at GEC Palakkad, dedicated to bridging the gap between theoretical knowledge and practical application. Established with the aim of enhancing hands-on learning, EMRC provides students with opportunities to engage in real-world electrical projects, conduct research, and gain valuable experience in maintenance practices. By actively participating in the club's activities, students can deepen their understanding of electrical engineering concepts while developing essential skills that will serve them well in their future careers. EMRC stands as a testament to the department's commitment to fostering a comprehensive and applied educational experience.

EMRC ACTIVITIES

EMRC Completed Domestic wiring work at Kadambazhipuram

The Electrical Maintenance and Research Club (EMRC) of the Department of Electrical Engineering (EEE) at Government Engineering College Palakkad proudly completed the domestic wiring of a 500 sq. ft. house in April 2023. This initiative, guided by alumni mentors Vishnu P K, Vasudevan K N, and Akhil Krishna K R, along with the dedicated faculty and staff of the EEE Department, was met with high praise from Honorable MLA Sri. K. Premkumar and the Kadambazhipuram Grama Panchayat. On May 15, certificates were awarded to all coordinators and participating students for their commendable efforts. The project was coordinated by Dr. Joseph Peter, EMRC Faculty Coordinator.



Electrical maintenance work in new block



In June 2023, the Electrical Maintenance and Research Club (EMRC) facilitated essential electrical maintenance work in the new block of the Electrical Engineering Department. This included the installation of whiteboards and projectors in classrooms. The task was successfully completed with the volunteer efforts of S4 EEE students Rithin, Yatheesh, Jenil, and Kiran, under the expert guidance of technical staff member Mr. Pradeep P. The initiative further exemplifies the collaborative spirit and technical expertise fostered within the department.

LED bulb and Electrical maintenance workshop in department April 2024



In April 2024, the Department of Electrical Engineering hosted an LED Bulb and Electrical Maintenance workshop, organized by EMRC members in collaboration with the department's staff. This hands-on workshop provided Electrical Engineering students with valuable practical experience, enhancing their skills in essential electrical maintenance and the latest energy-efficient technologies.

EEE FAMILY 2024



ZOE