



BUILDERS ENGINEERING COLLEGE

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

ISO 9001:2015 Certified Institution & Accredited by NAAC with B++ Grade

Erode Road, Nathakadaiyur, Kangeyam, Tirupur - 638 108, Tamil Nadu.

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

NEWS LETTER



Genesis:

The Department of Electrical and Electronics Engineering was started in the year 2010 and offers BE EEE programme in tune with the syllabi of Anna University. The department aims to develop electrical engineers who are innovative, entrepreneurial, and equipped to become global leaders in research and technology. The department has well qualified faculty members who are specialists in the fields of Power Electronics and Drives, VLSI Design, Applied Electronics and Power Engineering and Management. The faculty team includes a doctorate serving for the betterment of the students. The department has well equipped laboratories. The department provides an environment to students in such a way that they will be able to understand the core concepts including Electrical machines, Circuits and Networks, Power systems, Power Electronics, Electromagnetic theory, Instrumentation, Microprocessors and Microcontrollers and Electron Devices & Circuits.

Highlights:

- ◆ Facilitating students to acquire core competency in the field of electrical and electronics engineering
- ◆ Well Equipped Laboratories
- ◆ Well Equipped KGI's Tech Center
- ◆ Well Qualified and Experienced Faculty team
- ◆ One to one Mentoring for Professional Developments
- ◆ Internship with Stipend
- ◆ MOU's with Leading Industries
- ◆ Collaborating with Industry to provide Engineering solutions
- ◆ Excellent Placement record in Core & IT
- ◆ Smart Class Rooms
- ◆ Academic Incentives for Toppers

Vision:

To become a front-runner in moulding the students globally competent, knowledgeable electrical engineers also as performers in the roles of innovators, researchers and entrepreneurs.

Mission

To nurture the students with sound technical knowledge to meet the upcoming challenges in electrical domain and to enhance competitiveness of the graduates for higher studies.

Program Educational Objectives (PEOs):

- ◆ Shall flourish in their professional careers, further education, research, or as entrepreneurs.
- ◆ Must always learn new things and hone existing abilities to create solutions that have a big impact and are cutting-edge in terms of energy use.
- ◆ To create and build practical, multidisciplinary solutions that are technically sound, commercially viable and socially acceptable, graduates must have strong communication skills, a professional demeanour and ethical behaviour.

Programme Specific Outcomes (PSO):

- ◆ To understand the concepts of Electrical and Electronics Engineering and fundamental sciences to analyze and implement in research field.
- ◆ To take up roles in interdisciplinary projects, develop managerial skills and contribute towards the electrical community globally.

Events:

- ◆ Association Activities - AEEE - KRATU (The Power)
- ◆ Students Activities
 - Co - Curricular
 - Extra - Curricular

About the Institution

Builders Engineering College (Formerly known as Erode Builder Educational Trust's Group of Institutions) was established by Erode Builder Educational Trust (EBET) in the year 2009 as an integrated campus and presently functioning as a technical campus. It offers six UG Programmes (BE - Civil, CSE, ECE, EEE, Mechanical and B.Tech - AI&DS) with an intake of 330 students and four PG Programmes (ME - CEM, STR, CSE and MBA) with an intake of 114 students. Stepping into the fourteenth year of service, the Management, CEO, Principal and faculty members are committed to elevating the lives of budding rural aspirants through academics and research. The Chief Patrons are the pioneers in the field of infrastructure and construction all over India.

Vision

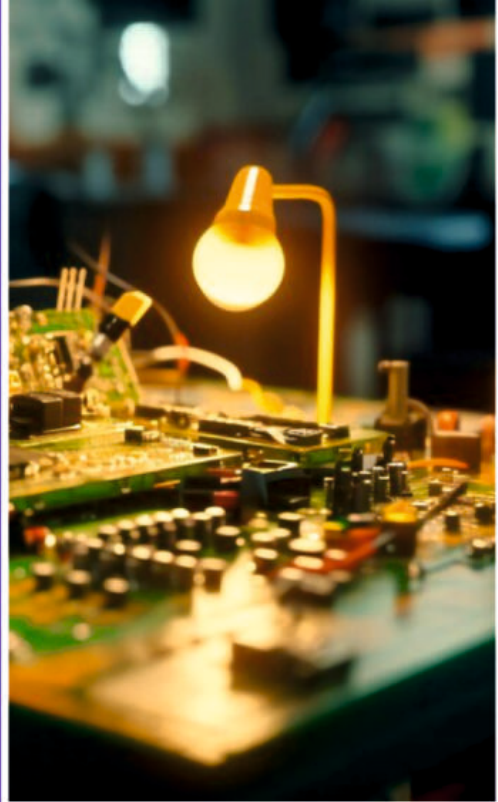
To be the most preferred knowledge provider.

Mission

Builders Engineering College endeavors to prepare rural students for successful career through academic and applied research.

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Head of the Department

Dr. R. Palanisamy
Associate Professor

STUDENT EDITORS

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IV Year

Mr. S.S. Sakthivel
IV Year

Ms. S. Saranya
III Year

Mr. C. Arunkumar
III Year

Ms. S. Divyabharathi
II Year

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Builders Engineering College,
Nathakadaiyur, Kangeyam Tk., Tirupur Dt.,
Tamilnadu, India - 638 108.

Electrifying the
Next-gen **ENGINEERS**



From **PRINCIPAL'S DESK**

Dear Students, Faculty, and Staff,

As we embark on another exciting semester here at Builders Engineering College, I am filled with a sense of optimism and anticipation for the possibilities that lie ahead. It is my pleasure to welcome both returning members of our community and those who are joining us for the first time.

As we continue to navigate the challenges posed by the ongoing global situation, I want to express my gratitude to each and every one of you for your resilience, adaptability, and unwavering commitment to excellence in education. Your dedication to learning and growth amidst adversity is truly commendable, and it serves as a testament to the strength of our Builders Engineering College community.

This semester, we remain steadfast in our commitment to providing a safe and supportive learning environment where all students can thrive academically, socially, and emotionally. Our faculty and staff are here to support you every step of the way, whether you are engaging in virtual learning, hybrid instruction, or in-person classes.

I encourage each of you to take full advantage of the myriad opportunities available to you at Builders Engineering College. Whether it's participating in student organizations, conducting research with renowned faculty members, or exploring new academic interests, there is something for everyone to discover and pursue.

As we embark on this journey together, let us remember the importance of kindness, compassion, and understanding towards one another. Let us embrace diversity and inclusion as fundamental values that enrich our community and broaden our perspectives.

I am confident that with your continued hard work, dedication, and passion for learning, we will achieve great things together. Let us approach this semester with enthusiasm, determination, and a shared sense of purpose.

Thank you for being an integral part of the Builders Engineering College community. I wish you all a successful and fulfilling semester ahead.

Warm regards,

Dr. S. Gopalakrishnan
Principal



From **HoD's DESK**

Dear EEE Community,

Greetings from the forefront of innovation! As we embark on another exciting journey in the realm of Electrical and Electronics Engineering, I'm thrilled to connect with you all through this newsletter.

In our ever-evolving field, the boundaries of what's possible are constantly being pushed. From groundbreaking research to revolutionary technological advancements, our department is at the forefront of shaping the future.

I'm immensely proud of the passion and dedication demonstrated by our faculty, staff, and students. Together, we continue to explore new frontiers, challenge conventions, and inspire change.

As we navigate the complexities of today's world, let's harness the power of collaboration, creativity, and ingenuity to address the challenges and opportunities that lie ahead. Let's strive to make meaningful contributions to society and leave a lasting impact on the world around us.

Thank you for your unwavering commitment to excellence and innovation. Together, let's continue to illuminate the path towards a brighter, more electrifying future.

With enthusiasm and optimism,

Dr. S. Saravanan

HoD

From **EDITOR's DESK**

Dear Readers,

Welcome to the latest edition of our newsletter! As we dive into the stories, updates, and insights featured in this issue, I am thrilled to connect with you once again and share the latest happenings from our community.

In today's fast-paced world, staying informed and connected is more important than ever. Through this newsletter, we aim to provide you with valuable information, thought-provoking content, and engaging stories that reflect the diverse interests and achievements of our community.

From spotlighting inspiring individuals and showcasing innovative projects to sharing important announcements and upcoming events, our newsletter serves as a platform to celebrate our collective successes and foster meaningful connections.

I would like to express my gratitude to all our contributors, writers, editors, and designers who have dedicated their time and expertise to bring this newsletter to life. Your passion and dedication are truly commendable, and I am grateful for the opportunity to work alongside such talented individuals.

As we continue to evolve and grow, I encourage you to share your feedback, ideas, and suggestions with us. Your input is invaluable in shaping the future direction of our newsletter and ensuring that it remains a valuable resource for our readers.

Thank you for your continued support and enthusiasm. Together, we can make our newsletter an even more vibrant and engaging platform for sharing stories, ideas, and insights that matter.

Happy reading!

Warm regards,

Mr. A. Jesurajavenis **Mr. S.S. Sakthivel**

IV- EEE

IV- EEE

Ms. S. Saranya

III - EEE

Mr. C. Arunkumar

III - EEE

Ms. S. Divyabharathi

II - EEE

Association **ACTIVITIES**

WEBINAR

- ♦ On June 1, 2020, the event "Industrial Automation and Robotics" featured Mr. G. Rajesh, a technical mentor and consultant from ETFIX Technologies in Chennai, as the guest speaker. The event focused on the topic of Automation and Robotics, providing valuable insights and expertise to the students.
- ♦ On June 4, 2020, an informative session on "Grid Connected and Islanded Microgrid Design using Homer Pro" was conducted by Mr. L. Balakumar, a senior power system and microgrid engineer specializing in power projects based in Chennai. The session centered around the topic of Microgrid design and operation using advanced software like Homer Pro.
- ♦ On June 6, 2020, a seminar on "Telecom Power Systems" was held, featuring Mr. S. Yuvaraj, a technical expert from ZTE Corporation in Bangalore. The event delved into the critical topic of power systems in the context of the telecommunications industry.
- ♦ On June 12, 2020, an informative session titled "IoT Trends in Industry" was conducted, with Mr. U. Periasamy, Senior Manager of Business Development and Marketing from Lakshmi Machine Works Ltd, Machine Tool Division in Coimbatore, as the guest speaker. The session highlighted the latest trends and applications of IoT (Internet of Things) in the industrial sector.
- ♦ On June 27, 2020, from 11:00 AM to 12:00 PM, an instructional session on "Control System-Based Motor Controls" was conducted, featuring Mr. R. Johnson, Head of Business Development at JOVE Multisystems (P) Limited in Chennai. The session provided insights into motor control systems and their applications.
- ♦ On June 27, 2020, from 3:30 PM to 4:30 PM, an informative session on "Business Process Management" was conducted, with Ms. P. Priyadharshini, an Associate Technical Consultant from Vuram Technologies in Trichy, as the speaker. The session focused on the principles and practices of effective business process management.
- ♦ On July 24, 2020, an event titled "Successful Leadership in a Rapidly Changing Environment" took place. The speakers for this event were Mr. S. Ganesh Chakaravathi, General Manager of S. Kumar Garments in Erode, and Mr. J. Mohan, Managing Director of Mohan Electrical Service Centre in Arachalur. The event focused on leadership strategies in the face of rapidly changing circumstances and was centered around the field of management.

Students CORNER

நண்பர்கள்

நண்பர்கள் நிறைந்த தானியங்கள்,
ஒன்றும் சிறப்பாக இல்லை என்று அறியும் மாதர்கள்.
கருவியின் அமைதியை கொண்டு,
கண்ணீர் புழுக்கும் துணையைக் கொண்டு,
நட்பு என்ற அலையை வாயிலாக கொண்டு,
நண்பர்கள் நினைவுகளின் வரைபடத்தில் பாயும் கடல்.

படர்கள் வெள்ளையில் பார்க்கும் காட்டின் மேல்,
அடைக்கும் படம் போல ஒன்றாக இருக்கும் குடியில்,
பார்த்ததும் மகிழ்ந்து பேசும் காலங்கள்,
நண்பர்களின் அன்புக்கு விளங்கும் வெளிச்சம்.

நண்பர்கள் நம் வாழ்க்கையின் பக்கங்கள்,
கோபம், சுகம், வெள்ளம், கருமம்,
என்னை புரிந்துகொள்வது மற்றொரு சூழ்நிலை,
நான் என்று அறிந்திருக்கும் அன்பின் உலகம்.

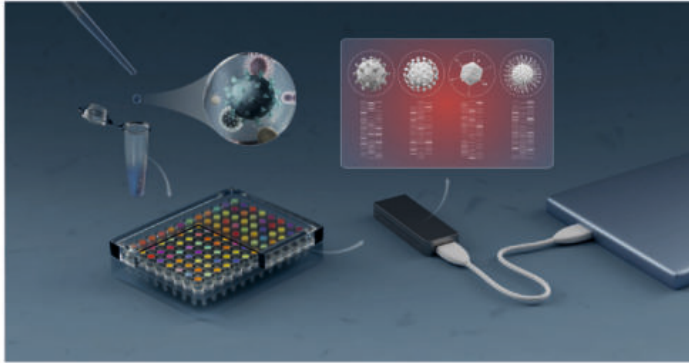
நண்பர்கள் நானே அல்ல, எங்கேயும் இல்லை,
உன்னைக் காணும் அனைத்து மக்களும் நண்பர்கள்,
கூடுவார்கள், பரிந்துரைகள், பகிர்வார்கள்,
என் நெஞ்சில் வாழும் அன்புக்கு அறிவு கொண்டு.

அதற்கு முன்னாள் மூலம் என்னும் உண்மையில்,
அன்புள்ள நண்பர்கள் மட்டுமே என்று அறிவோம்.

- Mr. M. K Naveen

Role of Electrical Engineering in COVID-19

by *Mr. S.S. Sakthivel, IV Year*



The COVID-19 pandemic has presented unprecedented challenges to societies worldwide, straining healthcare systems, disrupting economies, and altering daily lives in profound ways. Amidst these challenges, the field of electrical engineering has emerged as a crucial player in the fight against the virus, contributing innovative solutions and technologies to combat the pandemic on multiple fronts.

Medical Devices and Equipment: Electrical engineers have been at the forefront of designing, developing, and enhancing medical devices and equipment essential for diagnosing and treating COVID-19 patients. Ventilators, respirators, patient monitors, diagnostic imaging systems, and infusion pumps are just a few examples of critical medical equipment that rely heavily on electrical engineering principles for their functionality and performance.

Telemedicine and Remote Monitoring: With the need to minimize physical contact and reduce the strain on healthcare facilities, telemedicine and remote monitoring have become invaluable tools in managing COVID-19 cases. Electrical engineers have played a key role in developing and optimizing telemedicine platforms, wearable sensors, and remote monitoring devices, enabling healthcare providers to remotely assess patients, monitor vital signs, and deliver care from a distance.

Biomedical Sensors and Instrumentation: Electrical engineers have contributed to the design and implementation of biomedical sensors and instrumentation for detecting and monitoring COVID-19-related biomarkers, such as temperature, heart rate, respiratory rate, and blood oxygen saturation. These sensors are vital for early detection, diagnosis, and

COVID-19 infections, as well as for monitoring the health status of patients in real-time.

Data Analysis and Modeling: Electrical engineers with expertise in signal processing, data analysis, and machine learning have been instrumental in developing algorithms and models for analyzing large datasets related to COVID-19. These analytical tools help in predicting disease spread, identifying high-risk areas, optimizing resource allocation, and guiding public health interventions, enabling more informed decision-making by policymakers and healthcare professionals.

Digital Health Solutions: The pandemic has accelerated the adoption of digital health solutions, including mobile apps, wearable devices, and remote monitoring platforms, aimed at facilitating contact tracing, symptom tracking, and vaccination management. Electrical engineers have played a crucial role in developing these technologies, ensuring their reliability, security, and interoperability to support public health efforts and empower individuals to take control of their health.

Infrastructure Support: Electrical engineers have provided essential support for critical infrastructure systems, including power generation, transmission, and distribution, to ensure uninterrupted electricity supply to healthcare facilities, research laboratories, and essential services during the pandemic. They have also worked on improving the resilience, efficiency, and sustainability of infrastructure systems to meet the evolving demands and challenges posed by the crisis.

In conclusion, the role of electrical engineering in addressing the challenges of COVID-19 cannot be overstated. From medical devices and telemedicine solutions to data analysis and infrastructure support, electrical engineers have leveraged their expertise and ingenuity to develop innovative technologies and systems that have helped mitigate the impact of the pandemic and save lives. As the world continues to navigate the uncertainties of COVID-19 and prepares for future health crises, the contributions of electrical engineering will remain indispensable in shaping a more resilient and prepared global healthcare infrastructure.