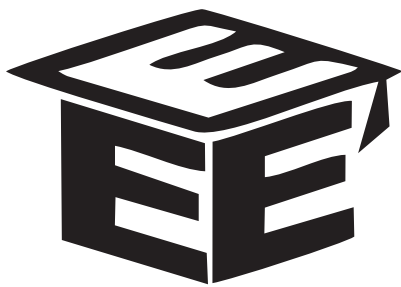




KCG

COLLEGE OF TECHNOLOGY

AFFILIATED TO ANNA UNIVERSITY | AUTONOMOUS



Department of
Electrical and
Electronics Engineering

EnErgize

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VISION

KCG College of Technology aspires to become a globally recognized centre of excellence for science, technology & engineering education, committed to quality teaching, learning and research while ensuring for every student a unique educational experience which will promote leadership, job creation, social commitment and service to nation building.

MISSION

- Disseminate knowledge in a rigorous and intellectually stimulating environment.
- Facilitate socially responsive research, innovation and entrepreneurship.
- Foster holistic development and professional competency.
- Nurture the virtue of service and an ethical value system in the young minds.

KCG College of Technology was founded in 1998 to fulfill the Founder-Chairman, Dr. KCG Verghese's vision of **"To Make Every Man a Success and No Man a Failure"**. It is a Christian minority institution, affiliated to Anna University (Autonomous), Chennai and approved by AICTE, New Delhi.

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

VISION

The Department of Electrical and Electronics Engineering aims to be a centre of excellence recognized for high quality teaching, learning and research, producing competent professionals to serve the nation.

MISSION

- Impart quality technical education in Electrical and Electronics Engineering domain
- Nurture industrial collaboration in research and development activities
- Maintain state-of-the-art facilities to provide opportunities for knowledge up-gradation
- Invoke the desire and ability of life-long learning in the students for a successful career

EDITOR'S DESK

Welcome to the first issue of EnErgizE, the official newsletter of the Department of Electrical and Electronics Engineering at KCG College of Technology. This publication reflects our department's milestones, from academic achievements to innovative research contributions. It highlights the dynamic and industrious spirit of our faculty and students as they contribute to the world of technology.

Chief Editor	Dr. T.Anuradha
Editor	Dr. R.Murugan
Faculty coordinator	Dr. B.BrindhaSakthi
Students representatives	1. Kanishq Harshini.P-II YEAR 2. Abhiranjan Kumar-II YEAR 3. Anamika Mohanan-II YEAR 4. A.Afreen Sulthana-III YEAR 5. Alwin Tennyson.K-III YEAR 6. Priyadarshini.J-III YEAR 7. Arjun.S-III YEAR 8. Ilakkiya.C.S-IV YEAR 9. Snega.K -IV YEAR 10. Suraj.B-IV YEAR 11. Alen Thomas-IV YEAR

RESEARCH ACTIVITIES



Faculty Research Publications

Dr. Anuradha's research has garnered international attention, with her contributions published in prestigious journals and recognized across global platforms. Her innovative approaches not only contribute to advancements in energy and technology but also resonate with the global community, underlining her role as a thought leader in shaping sustainable futures.

- **Dr. T. Anuradha:** "Conceptualization of a Cardiac Monitoring System via Bluetooth Communication Protocol to Mobile Devices," 2024 2nd International Conference on Intelligent Data Communication Technologies and Internet of Things (IDCIoT), REVA University, Bengaluru, January 2024, IEEE Xplore, DOI: 10.1109/IDCIoT59759.2024.10467457.
- **Dr. T. Anuradha & Ms. A V Suganya:** "Development of a Grid-Connected Microinverter Based on the Integration of the CUK Converter with a Switchgear Structure," 2024 2nd International Conference on Intelligent Data Communication Technologies and Internet of Things (IDCIoT), REVA University, Bengaluru, January 2024, IEEE Xplore, DOI: 10.1109/IDCIoT59759.2024.10468042.
- **Dr. T. Anuradha:** "Traffic Sign Detection Problems using Convolutional Neural Techniques in Image Processing," 2024 International Conference on Intelligent Systems for Cybersecurity (ISCS), The Northcap University, May 2024, IEEE Xplore, DOI: 10.1109/ISCS61804.2024.10581183.
- **Dr. T. Anuradha:** "Thyroid Nodule Classification Model from Scintigraphy Images using Convolution Neural Networks," 2024 5th International Conference on Innovative Trends in Information Technology (ICITIIT), Indian Institute of Information Technology (IIIT) Kottayam, March 2024, IEEE Xplore, DOI: 10.1109/ICITIIT61487.2024.10580411.

Dr. K. Karthikeyan has broadened his expertise through several professional development activities. These include training on Intellectual Property (NIPAM), a webinar on power electronics using MATLAB (ISIE India), an FDP on machine learning applications in engineering (Hindustan Institute of Science and Technology), an online FDP on solar power systems (NIELIT CALICUT), and an online workshop on power electronics applications using OPAL-RT (OPJindal University).



Dr. R. Murugan's enhanced his understanding of intellectual property rights by participating in a hands-on FDP focused on converting ideas into patents, held at KCG College of Technology.



Mrs. Jitha Varghese has been actively developing her skills in several key areas. She participated in FDPs on machine learning applications in engineering (Hindustan Institute of Science and Technology and NITTTR Chennai), a national workshop on advanced research methodology (SRM Institute of Science and Technology), and an FDP on power system protection (NPTEL). She also focused on research and publication skills through an FDP at KCG College of Technology and enhanced her expertise in research data management through an online program with the Association of Commonwealth Universities (ACU) and VIT Vellore.

- "FLC Control Based Sepic for Power Factor Correction," 2024 5th International Conference on Innovative Trends in Information Technology (ICITIIT), Indian Institute of Information Technology (IIIT) Kottayam, March 2024, IEEE Xplore, DOI: 10.1109/ICITIIT61487.2024.10579988.

Mrs. A.V. Suganya has participated in a variety of professional development activities to enhance her knowledge in key areas. Her focus has included power systems (workshop at IIT Madras), intellectual property rights (FDP at KCG College of Technology), research methodology (national workshop at SRM Institute of Science and Technology), sustainable energy and electric vehicles (FDP at SRM Institute of Science and Technology), innovation (online course with AICTE-MoE Innovation Cell), control and instrumentation (virtual lab at NITK Surathkal), and green energy (ENERGATHON workshop).



Mrs. B. Brindha Sakthi has been actively involved in professional development, focusing on research methodology (national workshop at SRM Institute of Science and Technology), sustainable energy (ENERGATHON workshop), machine learning applications (online FDP with NITTTR), research data management (online training with ACU and VIT), and innovation (IIC Regional Meet).

Mrs. M. Lavanya has broadened her skills through professional development activities focused on teaching methodologies (FDP at KCG College of Technology), the electric vehicle revolution (national seminar at KCG College of Technology), industrial automation (FDP at NITTTR-Chennai), and control and instrumentation (virtual lab at NITK Surathkal).

Mr. S. Balaji has been actively engaged in professional development, focusing on several key areas. His activities include a national workshop on research methodology (SRM Institute of Science and Technology), an FDP on electric vehicle technology and manufacturing (TANSAM), a national seminar on the electric vehicle revolution (KCG College of Technology), an FDP on power electronics (OP Jindal University), an online program on solar power systems (NIELIT CALICUT), a training program on intellectual property (NIPAM), an online FDP on emerging technologies (IIT PALS), and a workshop on power system trends (IIT Madras).





Ms. Ramya has been actively developing her skills in several areas, including sustainable mobility and automotive mechatronics (FDP at KCG College of Technology), intellectual property rights (FDP at KCG College of Technology), research publication and funding (FDP at KCG College of Technology), the electric vehicle revolution (national seminar at KCG College of Technology), electric vehicles (FDP with the Tamil Nadu State Government and GCE, Salem), and teaching learning processes (FDP at KCG College of Technology).

EVENTS

Seminars and Workshops

The department actively organized and hosted a variety of seminars and workshops, catering to diverse interests and providing valuable learning opportunities for students and faculty alike. These events fostered knowledge sharing, explored emerging trends, and facilitated hands-on experience in key areas.

Engenius'24



Engenius '24, the premier talent carnival for school students to express their talent and knowledge, was held on 3rd February 2024. A total of about 1100 students from 20 schools across Chennai participated in an array of cultural competitions, technical workshops and exciting events, displaying astonishing talent and enterprise. Our esteemed Chief Guest Mr J. Angelo Irudayasamy, Deputy Director, PTA, Directorate of School Education, distributed trophies and prizes worth INR 1 lakh to the winning students and teams, accompanied by Dr. M. Muthukannan, Principal KCG Tech & Dr. G. Prabhakaran, Dean, KCG Tech.

I LOVE MY EXAMS

A motivational talk held at Don Bosco Matric School, Chrompet, aimed at empowering students to approach exams with confidence and a positive mindset. (January 31, 2024 - 100 participants)

Project Expo

As part of the School Connect Programme, a project expo was held at Olive Public School, Chrompet, showcasing the innovative projects developed by EEE faculty and students. This event served as an inspiration for young minds and promoted interest in engineering. (February 24, 2024 - 100 participants)

Powering Connectivity: Electrical Innovations in Telecom Sector

The department conducted a two-day Faculty Development Programme on the effective use of MATLAB for mathematical applications. Mr. Venkatesan Seetharaman, a training engineer from MathWorks India Pvt. Ltd., facilitated the workshop, helping faculty members enhance their MATLAB skills.



Electrical Innovations in Telecom Sector was organised on 7th March 2024. Mr. K. Ramesh, Deputy General Manager (CRM – DM), TN Circle, Bharat Sanchar Nigam Limited, BSNL, Chennai was the resource person. It covered topics ranging from types of communication and historical evolution to practical insights on cables, logical functions in optical networks, power consumption, and job/internship prospects in BSNL for students and faculty.

A seminar featuring Mr. K. Ramesh, Deputy General Manager (CRM-DM) of the Tamil Nadu Circle, BSNL, Chennai, explored the crucial role of electrical engineering in the rapidly evolving telecom sector. Participants gained valuable insights into the latest advancements and challenges in this dynamic field. (March 7, 2024 - 59 participants)



Expert Talk on Grid Interconnection of Power Park Module



Expert Talk on Grid Interconnection of Power Park Module was organised on 22nd March 2024. Mr K Ramesh Kumar, Asst. Lead Grid Interconnection Engineer, Global Power Plant Solutions, Vestas Technology R&D Chennai Pvt. Ltd., was the resource person.



Industrial Visit

Visit to Schneider Electric Innovation Yatra

Second and Third-year students of Department of EEE visited Schneider Electric Innovation Yatra on 26th February 2024. To mark the 60th anniversary in India, Schneider Electric, a global leader in Energy Management and NextGen Automation solutions, has started Carbon Neutral Yatra to cover 60+ cities with a mission of imparting knowledge around technical advancements in IoT, Electricity 4.0, Digitization & Sustainability within the Energy Management and NextGen Automation Space. It aspires to simplify climate change for the masses by showcasing innovative solutions and create Greener Yodhas, the climate warriors of tomorrow.



Internships

Name of the Student with year (I/ II / III/ IV year)	Name of Institution/ Organization	Duration (in days)	Start Date	End Date
Dinesh S (IV Year)	KIML	90	07.02.2024	7.5.2024
Snega K (IV Year)	SINMEC Engg Services Pvt Ltd	90	19.02.2024	19.5.2024
Sivabalan (IV Year)	K S Electrical Engineer Contractor	90	01.02.2024	30.5.2024
Sri Sivaraman K (IV Year)	Sun Industrial Automation	90	28.02.2024	30.5.2024
Ragulraj B (IV Year)	Soosaley Technologies Pvt Ltd	120	01.03.2024	30.6.2024
Premkumar M (IV Year)	Soosaley Technologies Pvt Ltd	120	01.03.2024	30.6.2024
ILLAKIYA C S (IV year)	Q Max Technologies	30	28.02.2024	31.03.2024
INDIRA C S (IV year)	Q Max Technologies	30	28.02.2024	31.03.2024
SURAJ B (IV year)	Q Max Technologies	30	28.02.2024	31.03.2024
DHINESHRAJ A (IV year)	Q Max Technologies	30	28.02.2024	31.03.2024
JERIN P VARGHESE (IV year)	Q Max Technologies	30	28.02.2024	31.03.2024
JOSHUA STEPHEN A (IV year)	Q Max Technologies	30	28.02.2024	31.03.2024

STUDENT ACHIEVEMENTS

S.No.	Achiever/Year	Department/ Year	Event	Achivement
1	Shaik Althaf	EEE/ III Year	KPIT Sparkle 2023	Top 100
2	Arjun S, Surya V, Nithish Kumar	EEE/ III Year	National Level Students Symposium " JET POTENTIAL"	First position
3	Arjun S/ III Year	EEE/ III Year	Knowledge Quiz Series on Electric Vehicles -VI	Participation
4	Joan Minalini Rodriguez L, Afreen Sultana A Alwin Tennyson	EEE/ III Year	National Electric Tractor Design Competition	Runner -up
5	Manoj Devabh Raj S D Newton Raja K Rahul G Suganthi M S	EEE/ III Year	National Electric Tractor Design Competition - Mechanical Design - CAD	First Place in Overall Mechanical Design
6	Arjun S	EEE/ III Year	Knowledge Quiz Series on Electric Vehicles -VII	Participation
7	Snega V	EEE/ IV Year	Virtusa Women's Scholarship 2023	Won Cash Amount of Rs. 50,000/-
8	Rahul G	EEE/ III Year	National Level Technical Symposium STROM23	First Prize
9	Rahul G	EEE/ III Year	Young Professionals in Sustainability	First Prize Sustainability Star- Winner of the Yong Professionals in Sustainability presentation

STUDENT ACHIEVEMENTS

S.No.	Achiever/Year	Department/ Year	Event	Achivement
11	Suraj, Iilakkiya, Indhira, Kishore Manoj,Mahendran,Alwyn Jerisha	EEE/ IV & III Year/ II Year	NPTEL - Stress Manangement	Completed
12	Shaik althaf	EEE/ III Year	TANSAM	Participation
13	Arjun S	EEE/ III Year	SIH 2023 -Hardware edition	1 st prize
14	Shaik althaf	EEE/ III Year	International Water Conclave Shillong 2024	1 st prize
15	Alwin Tennyson K	EEE/III year	Linguaskills Test conducted by CAMBRIDGE ENGLISH	Completed
16	Arjun S	EEE/III year	Swachh Bharat Camp under Swachh Sagar Surakshit Sagar Campaign by Ministry of Earth Sciences, Government of India	Participation
17	Arjun S	EEE/III year	Beach Cleaning under Swachh Sagar Surakshit Sagar Campaign by Ministry of Earth Sciences, Government of India	Participation
18	Jeffy Hepziba Joan G	EEE/III year	Quest Global Ingenium 2023	Strong Contender and Top 10 team

LEADING THE CHARGE ON SUSTAINABILITY

Shaik Althaf, 3rd Year, EEE & Nafisa B, 3rd Year, Aerospace Engineering won the 1st place with a prize money of INR 1 Lakh at the International Water Conclave Shillong 2024 conducted by Government of Meghalaya. They received the award from the Hon'ble Conrad Sangma, Chief Minister of Meghalaya.



AWARDS RECEIVED BY FACULTY & DEPARTMENT

Event: **CMR HACKFEST 1.0 - 36 Hours National Level Hackathon and Project Expo**

Dates: March 1st - 2nd, 2024

Mentor: **Dr. K. Karthikeyan**

