



KCG

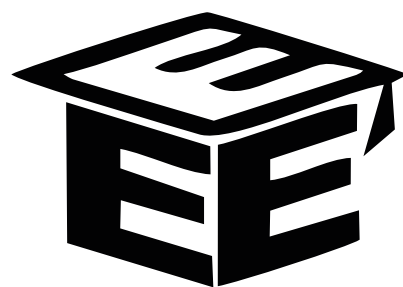
COLLEGE OF TECHNOLOGY

Affiliated to Anna University

AUTONOMOUS

Department of
Electrical and
Electronics Engineering

EnErgizeE



Volume -V

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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. T. Anuradha

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 published a paper titled "An Intelligent Load Balancing Strategy for Energy Cost Minimization in EV Applications" in Taylor & Francis' Electric Power Components and Systems in August 2023. This journal is SCI indexed and has an impact factor of 2.03.
- "Review of islanding detection using advanced signal processing" published in Electrical Engineering on August 2023 (International).
- "Adaptation of Renewable Energy Resources to Wireless EV Charging Using Deep Learning" published in Electric Power Components and Systems held on August 2023 (International).
- "Evaluation of a Wireless Sensor Network for the Detection of Forest Fires" published in IEEE Xplore on August 2023 (International).
- "Artificial intelligence in orthopedic implant model classification" published in Handbook of Research on Advanced Functional Materials for Orthopedic Applications held on October 2023 (International).
- "Analysis of Electroencephalographic Signals to Study the Behaviour of Brain Frequencies for the Study of Academic Stress" published in IEEE Xplore on December 2023 (International).
- "Pattern Recognition and Modelling in Electrocardiogram Signals: Early Detection of Myocardial Ischemia and Infraction" published in IEEE Xplore on December 2023 (International).
- "Voltage-Fed single stage inverter for generating systems with Multi-Input inverter using Pulse Width Modulation" was published internationally in Elsevier- Sustainable Energy Technologies and Assessments on December 12, 2023.
- "An attack resistant physical unclonable function smart optical sensors for internet of things for secure remote sensing," which appeared internationally in Measurement: Sensors in October 2023.
- "Handbook of Research on Advanced Functional Materials for Orthopedic Applications" with an international publication titled "Artificial intelligence in orthopedic implant model classification," also in October 2023.
- "Simulation of the Electrical Control Unit (ECU) in Automated Electric Vehicles for Reliability and Safety Using On-Board Sensors and Internet of Things," was published internationally on IEEE Xplore on July 21, 2023
- "Optimized Hybrid CNN-LSTM Based Islanding Detection of Solar-Wind Power System" was published in Taylor & Francis' Electric Power Components and Systems in June 2023. This journal is SCI indexed with an impact factor of 2.03.



Dr. R. Murugan's research on photovoltaics, where he estimated photovoltaic models using an innovative optimization algorithm, highlighted in Energy Conservation and Management (Elsevier).

His work is poised to improve the efficiency and accuracy of solar energy systems held on Nov 2023.



Dr. K. Karthikeyan brings a unique perspective to health and ergonomics with his detailed assessment of sleep postures and load-strength analysis of nylon stripped steel beds, published in Contemporary Innovations in Engineering and Management.

His findings offer vital insights into ergonomic design and its impact on health – Nov 2023.

EVENTS

Seminars and Workshops

PDP-84: Professional Development Programme Recent Trends in Power Systems

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.

Organized on:
24.07.2023 & 25.07.2023

Participants: 30



The department conducted a Professional Development Programme (PDP) on the Recent Trends in Power Systems. Faculty members Dr. T. Anuradha, Dr. G. A. Rathy, and Mr. P. Rajendra Prasad shared their expertise and guided the participants through the advancements in power system technologies.


Intellectual Property Rights (IPR)

-convert Ideas to Patent- A hands on FDP


Recognizing the importance of intellectual property rights, the department organized a hands-on Faculty Development Programme (FDP) on converting ideas into patents. IPR experts provided comprehensive training on the patent filing process and strategies.

Organized on:
04.08.2023 to 08.08.2023

Participants: 40

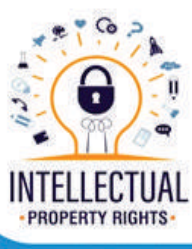


KCG
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IPR Cell & IQAC of KCG College of Technology

Presents
Five Days (Hybrid)
Faculty Development Program
on
Intellectual Property Rights (IPR)
Convert Ideas to Patents
- A Hands-on FDP
04 to 08 August 2023



**INTELLECTUAL
PROPERTY RIGHTS**

About IPR Cell

- The IPR Cell of KCG College of Technology looks after the activities related to the Intellectual Property of the Institution and also to create awareness among faculty members, research scholar and the students of the Institution. The IPR Cell promotes the novel ideas of the students & Researchers and hand them to the patent process and develop their inventions into product. About 201 patents have been filed by the faculty and students as the inventor out of which 73 patents & copyrights granted, 64 patents got published & 64 patent filed.
- KCG College of Technology is ranked in NIRF band of 11-50 for Innovation among Top Higher Educational Institute in India. KCG College of Technology have been selected as awardees of the "National Intellectual Property Awards 2021 & 2022" under the Special Citation for Institution Innovation Council. According to the Annual Report published by "The Office of The Controller General of Patents, Designs, Trademarks and Geographical Indications India", our college "KCG College of Technology" occupied the 10th Position under the category of "Top 10 Indian Applicants for patents from Institutes and Universities" during the fiscal year 2017-2018.

Premised Sessions

- IPR Filing procedures and forms
- IP Laws & Policies
- Design thinking
- Technology Transfer Process
- Patent Drafting methods
- Patent Examination process
- Patent search databases and hands on training
- Case Studies

For further queries contact
Convener: **Ms. B. Brindha Sakthi**
Co-ordinators: **Dr. M. Vignesh Kumar | Dr. Safa Naveed**


Registration Fees: Rs. 500 /- Per participant

Bank Account No	: 526301010000010
Bank Name	: Union Bank of India
Branch	: SSI Guindy
Type of Account	: CA
IFSC Code	: UBIN0552631
Account name	: KCG College of Technology.

Kindly mention the Participant's name, College & Program Name as "IPR FDP" while making payment

Contact: +91 9500544197

Registration Link:
<https://tinyurl.com/FDP-IPR>



www.kcgcollege.ac.in

Two-Day FDP on Mathematics using MATLAB



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.

Organized on: 30.08.2023 to 31.08.2023

Participants: 35

Awareness Programme on Intellectual Property Rights (IPRs) Practices & Policies

The department organized an awareness session on Intellectual Property Rights (IPRs) to educate students and faculty on the importance of protecting their innovations and creative works. Mr. Vinoth Nagarajan, a senior patent engineer, was the guest speaker for this informative event.

Organized on: 08.09.2023

Participants: 60

KGC25
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AUTONOMOUS

NEA NIRF
TNEA Code 1311

Department of Electrical and Electronics Engineering
Organises
Awareness Program on
Intellectual Property Rights (IPRs) Practices & Policies

NIPAM Certificates will be provided for the Participants

Resource Person
Mr VINOTH NAGARAJAN
Senior Patent Engineer
Registered Indian Patent Agent IN/PA - 4783.

8th September 2023 11:00 AM to 12:30 PM G01 Seminar Hall
www.kgccollege.ac.in

OBE-CO and PO attainment Process



The department conducted a workshop on the Outcome-Based Education (OBE) framework, focusing on the Course Outcomes (CO) and Program Outcomes (PO) attainment process. Dr. S. Gobinath, the NBA Coordinator from KCG College of Technology, guided the participants through the implementation of OBE.

Organized on: 27.12.2023

Participants: 15

Industrial Visit

5th International Trade Fair & Conference (Wind Energy Expo)

The department organized a visit to the 5th International Trade Fair & Conference on Wind Energy Expo. This event allowed the students to engage with industry leaders, explore the latest trends in renewable energy technologies, and gain valuable exposure to the wind energy sector.

Organized on: 6.10.2023

Participants: 27



120 MLD STP Plant, Kodungaiyur



The students visited the 120 MLD Sewage Treatment Plant in Kodungaiyur, Chennai. This field trip enabled them to witness the practical implementation of water treatment technologies, enhancing their understanding of sustainable infrastructure and environmental engineering.

Organized on: 9.9.2023

Participants: 33 (2024 Batch EEE)

STUDENT ACHIEVEMENTS

Shaik Althaf (EEE/III Year)

- Top 100 in KPIT Sparkle 2023
- Participated in TANSAM

Arjun S (EEE/III Year)

- First Position in National Level Students Symposium "JET POTENTIAL"
- Participated in Knowledge Quiz Series on Electric Vehicles - VI & VII
- 1st Prize in SIH 2023 - Hardware Edition
- Participated in IDE Bootcamp at Sri Ramakrishna Engineering College, Coimbatore
- Participated in Swachh Bharat Camp under Swachh Sagar Surakshit Sagar Campaign
- Participated in Beach Cleaning under Swachh Sagar Surakshit Sagar Campaign

Surya V, Nithish Kumar (EEE/III Year)

- First Position in National Level Students Symposium "JET POTENTIAL"

Joan Minalini Rodriguez L, Afreen Sultana A, Alwin Tennyson (EEE/III Year)

- Runner-up in National Electric Tractor Design Competition

Manoj Devabh Raj S D, Newton Raja K, Rahul G, Suganthi M S (EEE/III Year)

- First Place in Overall Mechanical Design in National Electric Tractor Design Competition

Snega V (EEE/IV Year)

- Won Virtusa Women's Scholarship 2023 worth Rs. 50,000

Rahul G (EEE/III Year)

- First Prize in National Level Technical Symposium STROM23
- First Prize in Young Professionals in Sustainability



Rahul G (EEE/III Year)

Suraj, lilakkiya, Indhira, Kishore, Manoj, Mahendran, Alwyn Jerisha (EEE/IV, III, II Year)

- Completed NPTEL - Stress Management

Alwin Tennyson K (EEE/III Year)

- Completed Linguaskills Test conducted by Cambridge English

Jeffy Hepziba Joan G (EEE/III Year)

- Strong Contender and Top 10 team in Quest Global Ingenium 2023

AWARDS RECEIVED BY FACULTY & DEPARTMENT

Contribution for Research Project Fund

Date: 06.09.2023

The department's commitment to research and innovation has been acknowledged with a special award for contributing to research project funding. **Mr. S. Balaji and Ms. Brindha Sakthi** were recognized for their efforts in securing research grants and driving the department's research agenda.

Completion of 10 Years in KCG

Date: 06.09.2023

Dedication and loyalty are the hallmarks of great institutions, and **Ms. M. Ramya's** 10 years of service at KCG College of Technology have been celebrated with a special award. Her unwavering commitment to the department and the institution has been duly recognized.

Best Research Department - II Prize

Date: 06.09.2023

The **EEE Department** has been awarded the Second Prize for Best Research Department at KCG College of Technology. This accolade is a testament to the department's excellence in research, innovation, and the impactful contributions of its faculty members.



Best Teacher Award

Date: 09.09.2023

Recognizing exceptional teaching prowess, **Dr. K. Karthikeyan** has been honoured with the Best Teacher Award by Gleneagles Global City. This prestigious award acknowledges his dedication, innovative teaching methodologies, and the positive impact he has had on his students.



Award for Teaching Contribution

Date: 24.09.2023

Dr. T. Anuradha, the Head of the EEE Department, has been recognized for her outstanding teaching contributions by the Lions Club of Chennai Golden Sun. This award highlights her commitment to nurturing the next generation of engineers and her invaluable role in shaping the academic landscape.



