

VISION

Department of Electrical and Electronics Engineering is committed to produce high profile, **competent** and **disciplined** Engineers with **technical knowledge**, ethical leadership and **entrepreneurship** quality to contribute towards social transformation and nation building.

MISSION

M1: To make our graduates **highly competent** and experts in practical problem solving with abstract thinking skills.

M2: To endow students with high quality **technical knowledge** of electrical sciences through innovative teaching and research practices.

M3: To empower students with leadership and **entrepreneurship** quality, capable of providing their professional mettle with excellent communication skills.

M4: To encourage **cross border research** with innovative ideas and to impart the quality of life-long learning based on ethical values.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1 :Graduates will be able to use broad knowledge of basic sciences and electrical engineering for ongoing learning, and to become a pioneer in providing solutions for technical problems.

PEO2 :Graduates will be able to use creative and critical reasoning skills to solve technical problems, ethically and responsibly, as a service to society.

PEO3 :Graduates will be able to adapt themselves to the constantly evolving technologies by pursuing higher studies in engineering and management.

PEO4 :Graduates will be able to demonstrate commitment while working with diverse groups and lead the organization competitively.

PEO5 :Graduates will be able to become an entrepreneur or be part of product and service based industries pertaining to electrical engineering .

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Able to utilize the knowledge of Power Electronics and Drives, Embedded systems, and Power Systems in an innovative, dynamic, and challenging environment.

PSO2: Can explore the scientific theories, ideas, and methodologies in renewable energy engineering, and use this erudition in their professional development and gain sufficient competence to solve the present and future energy related issues globally.

PSO3: Can understand and apply modern software tools for design, simulation, and analysis of electrical and electronic principles to model, install, test, and maintain power system enterprise and electrical vehicle applications.

Knowledge and Attitude Profile (WK)

WK1: A systematic, theory-based understanding of the natural sciences applicable to the discipline and awareness of relevant social sciences.

WK2: Conceptually-based mathematics, numerical analysis, data analysis, statistics and formal aspects of computer and information science to support detailed analysis and modelling applicable to the discipline.

WK3: A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline.

WK4: Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline; much is at the forefront of the discipline.

WK5: Knowledge, including efficient resource use, environmental impacts, whole-life cost, re-use of resources, net zero carbon, and similar concepts, that supports engineering design and operations in a practice area.

WK6: Knowledge of engineering practice (technology) in the practice areas in the engineering discipline.

WK7: Knowledge of the role of engineering in society and identified issues in engineering practice in the discipline, such as the professional responsibility of an engineer to public safety and sustainable development.

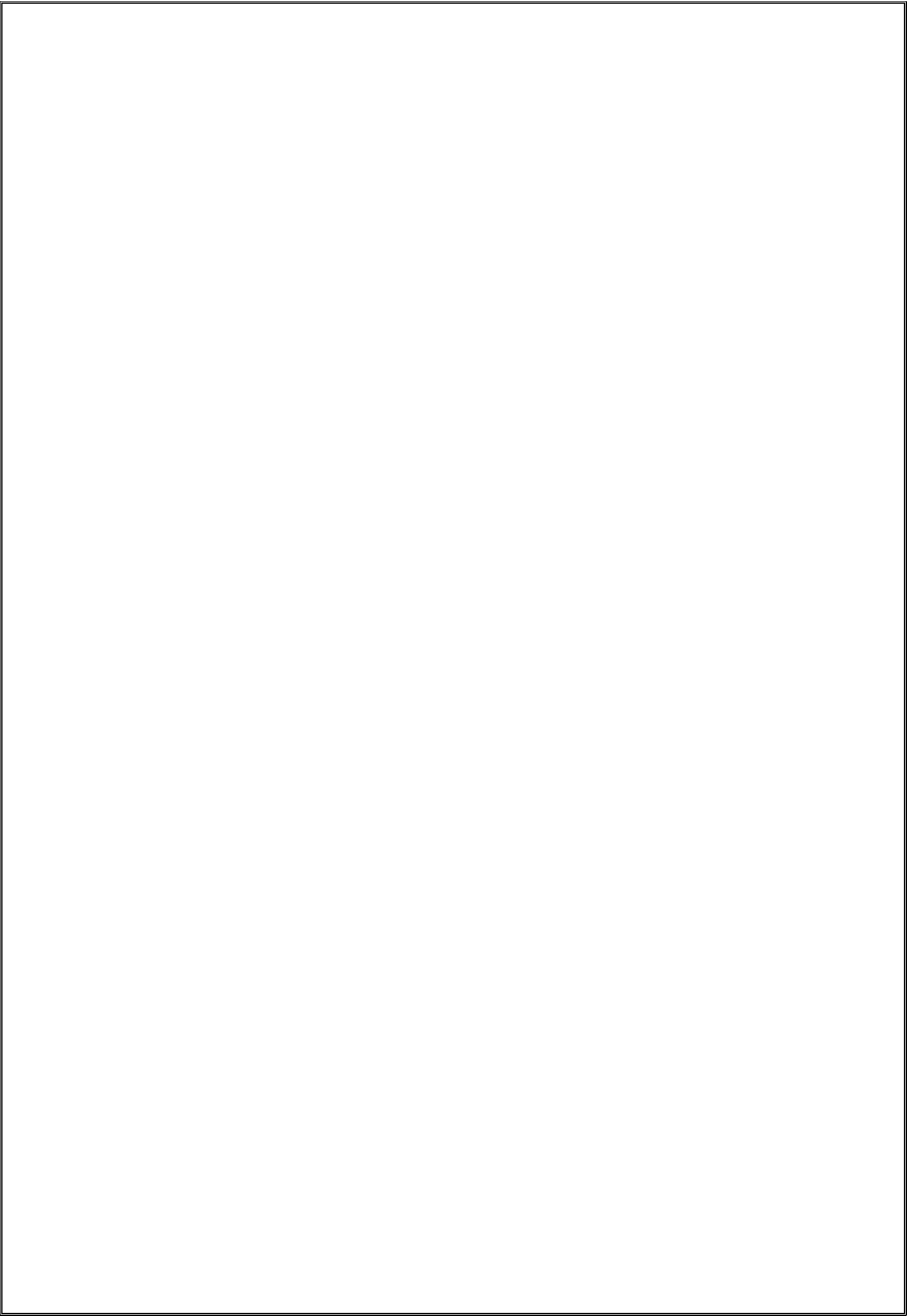
WK8: Engagement with selected knowledge in the current research literature of the discipline, awareness of the power of critical thinking and creative approaches to evaluate emerging issues.

WK9: Ethics, inclusive behavior and conduct. Knowledge of professional ethics, responsibilities, and norms of engineering practice. Awareness of the need for diversity by reason of ethnicity, gender, age, physical ability etc. with mutual understanding and respect, and of inclusive attitudes.

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

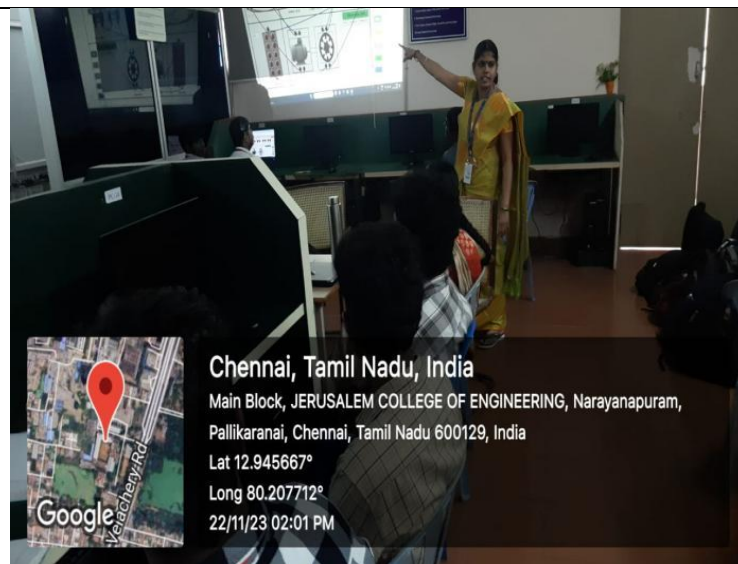
- PO1: Engineering Knowledge:** Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.
- PO2: Problem Analysis:** Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)
- PO3: Design/Development of Solutions:** Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)
- PO4: Conduct Investigations of Complex Problems:** Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8)
- PO5: Engineering Tool Usage:** Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6)
- PO6: The Engineer and The World:** Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7)
- PO7: Ethics:** Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)
- PO8: Individual and Collaborative Team work:** Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.
- PO9: Communication:** Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences.
- PO10: Project Management and Finance:** Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.
- PO11: Life-Long Learning:** Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)



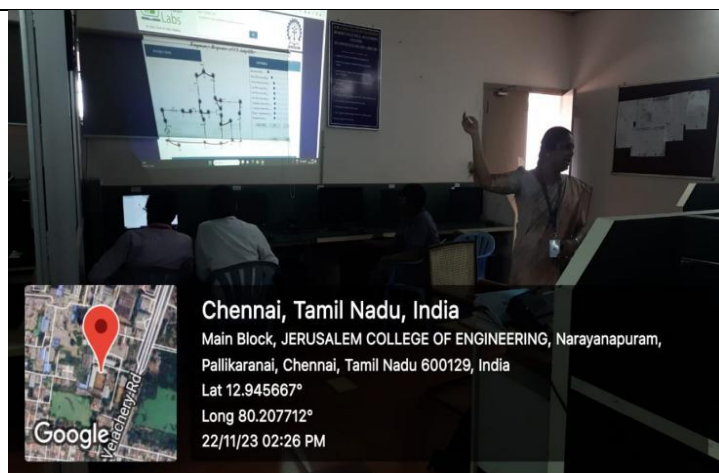
+DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING- JULY TO DECEMBER 2023



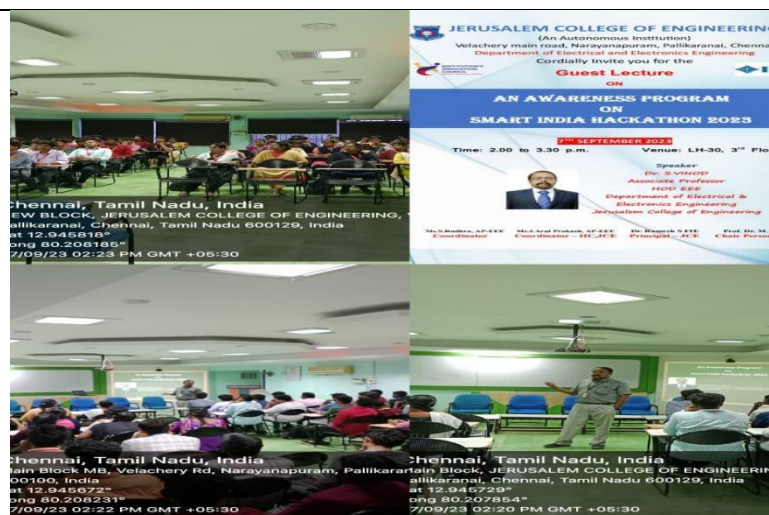
National level Technical Symposium - **EEE SPARKZ 2K23** for the students-EEE on 13.10.2023. **Mr.S.Vijin Jenius, Group Director (RQA-SISC)** was the resource person. **Ms.D.Usha** was the staff organizer.



Hands on Training on “**Modelling of Electreical Machines-VLabs**” for the EEE students on 22.11.2023. **Ms.S.Rudra, Assistant Professor, EEE Department** was the resource persons. **Mr.J Arul Prakash** was the staff coordinator.



Hands on Training on ' **Electronic Devices and PLC-VLabs**’ for the EEE Students on 22.11.2023. **Ms.Sivajothi Kavitha, Assistant Professor, EEE Dept,JCE** was the resource persons. **Ms.D Usha** was the staff coordinator.



Guest Lecture on the topic “**An Awareness Program on Smart India Hackathon 2023**” for the EEE students on 07.09.2023. **Dr.S.Vinod, Associate Professor, HOD-EEE** was the resource persons.



An Alumni Guest Lecture on “Trends, Challenges & Opportunities in Online Job Applications” for the students on 08.09.2023. Mr.S.Ignesh, HR & Admin Executive - Sterling VDR was the resource person..



An Alumni Orientation Program on "Tips to Crack the GATE Exam" for the EEE students on 14.09.2023. Mr.S.Shriram, Technical Lead, ABB India Limited, Bangalore was the resource person.



Guest lecture titled “Smart India Hackathon Themes” for EEE students on 15.09.2023. Mr.J. Arul Prakash, Assistant Professor -EEE was the resource person.



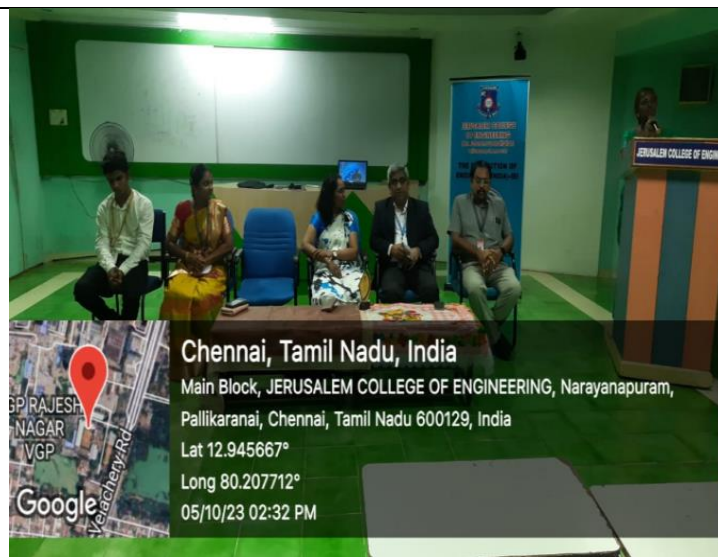
Inauguration of Association of AEEE and Guest lecture for EEE students on 21.09.2023. Ms.M.Arunadevi, Senior Systems Engineer, Jasmine Infotech, Chennai was the resource person.



An Alumni Guest Lecture on “Trends, Challenges & Opportunities in Online Job Applications” for the students on 08.09.2023. **Mr. S. Ignesh, HR & Admin Executive - Sterling VDR** was the resource person..



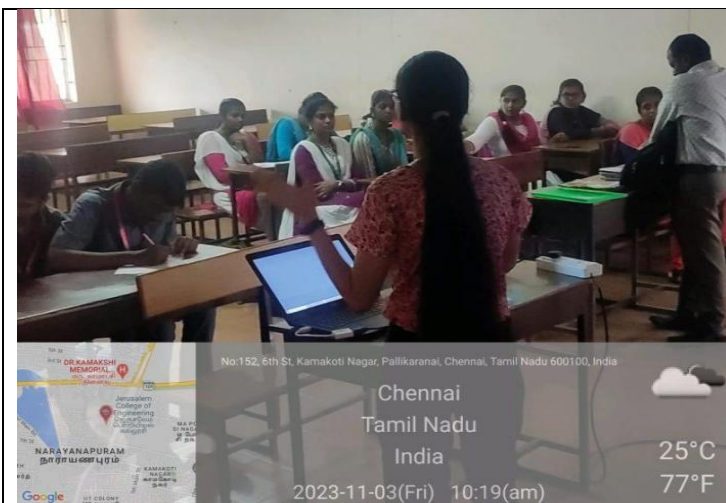
An Alumni Orientation Program on “Tips to Crack the GATE Exam” for the EEE students on 14.09.2023. **Mr. S. Shriram, Technical Lead, ABB India Limited, Bangalore** was the resource person.



World Habitat Day was organized by “The Institution of Engineers (India)”, Kanchepuram local centre in association with the Department of Electrical and Electrical Engineering. The department organized a Guest lecture titled “Resilient Urban Economics Cities as Drivers of Growth and Economics” on 05.10.2023. **Dr. Mahalakshmi Ganapathee, Head (R&D), Evnexus Pvt Ltd., Nanganallur, Chennai** was the resource person.



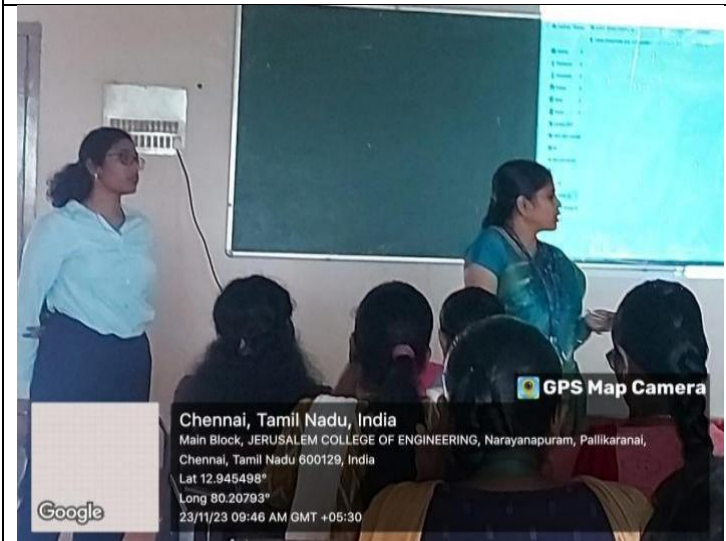
Guest lecture titled “Refrigeration Systems” for EEE students on 27.10.2023 **Dr. S. Vinod, Associate Professor, HOD-EEE** was the resource person.



Higher Education Orientation Program on the title "**Opportunities in Abroad**" for the EEE Students on 03.11.2023. Ms.U.Mathi, Academic Councillor, Manya Tech, Velachery, Chennai was the resource person.



Guest Lecture on "**Job Opprtunities in Government Sector**" for the EEE Students on 17.11.2023. **Mr.P.Manikandan, Junior Engineer/ Vigilance Cell/ Intelligence Wing/ TNEB Head Qrts, Mount Road, Chennai** was the resource person.



Alumni Guest Lecture on "**Job Opportunities in Embedded Systems**" for the EEE Students on 23.11.2023. **Ms.Divyadarshini, Assistant System Engineer,Jasmin Info Tech PVT Ltd., Chennai** was the resource person.



The Parent-Teacher's Meeting was conducted for the second, third and the final year EEE students on 28.10.2023. All the parents attended the meeting.



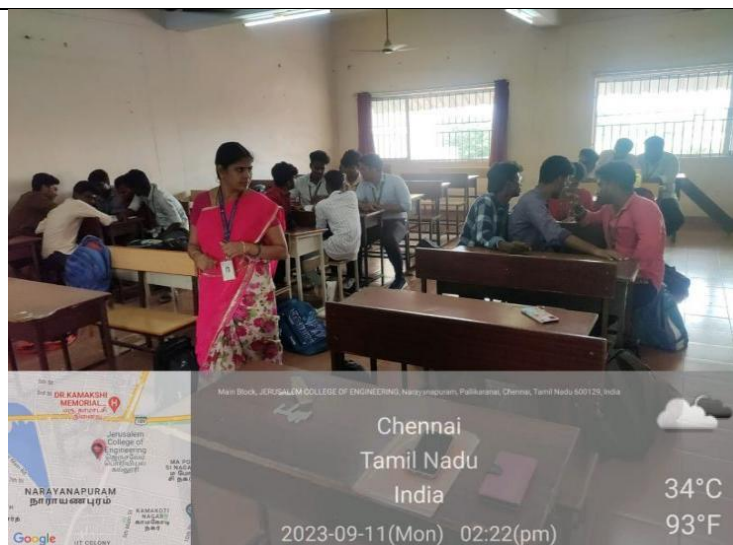
An Industrial Visit to RETECH Solutions, Royappa Nagar, Madanadhapuram, Chennai was organized for EEE students on 17.08.2023. **Mr.Mr.Prabhu,Trainer, RETECH Solutions, Chennai** was resource person for the Industrial Visit.



An Industrial visit to MAPS- Kalpakkam Nuclear Power Plant, Kalpakkam was organized for second, third and final year EEE students on 27.10.2023. **Mr.Kanagaraj,Manager,NIPCIL** was the resource person for the Industrial Visit.



Technical connections under Electronics club was organized for the EEE students on 31.08.2023 at LH-26 by Mr.R.Ezhilarasn and Mr.N.Suryaprakasam ,Third Year EEE,JCE.



Electronics Club-Technical Convention was organized for the EEE students on 12.09.2023 at LH 26 by Mr.R.Ezhilarasan & Ms.J.M.Harani, Third Year EEE, JCE.



IEI Student Chapter-Technical Quiz Competition was organized for the EEE students on 14.11.2023 by Ms.D.Usha, IEI Coordinator-EEE.



Inter Department -Technical Quiz Competition was organized for the school students on 16.11.2023 by MsJ.Harini Third Year EEE.

Sanctioned Funded Projects

Sl. No	Name of the Investigator	Title	Amount	Year applied
1	Dr.S.Vinod	IDEATN007273-“Proactive Traffic Signal Clearance for Ambulance Service”	Rs.15,00,000/-	July-2023-MSME-Idea Hackathon
2	Dr.S.Vinod	“Empowering School Teachers with Science Teaching Skills”.	Rs,1,91,000/-	DST-2023
3	Mr.J.Arul Prakash	“Design of Smart Residential Drainage Block Remover in Sewage Pipes”	Rs. 2,40,000/-	EDII-Innovation Voucher Program.-2023
4	Ms.S.Rudhra	“Portable Smart Solar Panel telescopic lifting and folding system for rental residential”	Rs.12,00.000/-	IDEA Incubation-2023

Patent Filed:

Sl. No	Name of the Investigator	Title	Amount	Year applied
1	Dr.V.Jamuna, S.Sivajothi Kavitha, D.Usha	Smart Skully Helmet	Application No: 2023410430 12	15.09.2023

2	Dr.S.Vinod and Dr S.Arun	A Novel System For Proactive Traffic Signal Clearance For Ambulance Service”	Application No:2023410 07731	03.07.2023
3	Dr.S.Vinod and Ms.S.Rudhra	“A Machine Learning Based System for detection of Hall Sensor Faults in BLDC Motor Drive”	Patent No: 489141	26.12..2023
4	J.Arul Prakash	Smart Solar Panel Lifting System for Rental Residential House	Application No: 2023410430 29	06.10.2023

Publications of Papers in Journals

Sl. No	Name of the Author	Title	Name of the Journal	Date
1	Dr.V.Jamuna,V.Rekha,, Williams Christopher	Cascaded inner Loop Fuzzy SMC for DC-DC Boost Converter	Journal of Circuits, Systems and Computers	https://doi.org/10.1142/so218126623502699

Faculties as Resource Persons in Conferences

Sl. No	Name of the Resource Person	Title	Name of the Institution	Date
1	Dr.V.Jamuna,Professor Jerusalem College of Engineering	Chair in 35th National Convention of Marine Engineers and National Conference	Institution of Engineers (KLC) in association with TamilNadu State Centre	11.09.2023 & 12.09.2023

Faculties as Chair Persons in Workshop

Sl. No	Name of the Resource Person	Title	Name of the Institution	Date
1	Dr.S.Vinod,Associate Professor,HOD-EEE,JCE	Problem Statement 3- Indusction Stove- Smart India Hackthon 2023 and IDEA Presentation	SriSairam Institute of Technology	11.09.2023
2	Ms.S.Rudhra, Assistant Professor	Hands on Training -Modelling of Electrical Machines using VLABS	Jerusalem College of Engineering	22.11.2023
3	Ms.S.Sivajothi Kavitha, Assistant Professor	Hands on Training - Electronic Devices and PLC using VLABS	Jerusalem College of Engineering	22.11.2023

Faculties as Chair Persons in Seminars

Sl. No	Name of the Resource Person	Title	Name of the Institution	Date
1	Dr.V.Jamuna, Professor, EEE,JCE	Paper Presentation-Jury/ Resource Person	Vivekanada Vidyalaya, Higher Secondary School,Tambaram,Chennai	11.08.2023
2	Dr.S.Vinod,Associate Professor,HOD-EEE,JCE	Student Induction Program-2023	Meenakshi Sundararajan Engineering College	13.09.2023

FDPs Attended by Faculties

Sl. No	Name of the Faculty	Title	Name of the Institution	Date
1	Ms.S.Rudhra, Ms.S.Sivajothi Kavitha,Ms.D.Usha	FDP on NBA SAR Preparation	Jerusalem College of Engineering	23.09.2023 & 24.09.2023

Workshops Attended by Faculties

Sl. No	Name of the Faculty	Title	Name of the Institution	Date
1	Dr.V.Jamuna and D.Usha	International Virtual Workshop- "Affordable Clean Energy for Sustainability"	VIT , Chennai	27.10.2023
2	J.Arul Prakash	Hands on Training on " Design, Fabrication and Testing of Power Electronic Converters"	VIT, Chennai	26.10.2023 to 28.10.2023

Industrial Visits / Educational Tours

Sl. No	Name of the Department	Name of the Company	Year	No of Students
1	EEE	RETECH Solutions, Royappa Nagar, Madanadhapuram, Chennai	II,III and IV Year	54
2	EEE	Kalpakkam Nuclear Power Plant, Kalpakkam	II,III and IV Year	54

Paper Presentation

Sl. No	Name of the Department	Name of the Student	Year	Event/Institution
1	EEE	P.Arthi,D.Kavitha, A.Joshwa Solomon	III Year/V Semester	Paper Presentation , KCG College Of Engineering