

VISION OF THE DEPARTMENT

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 OF THE DEPARTMENT

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 use their **broad knowledge of electrical engineering as a foundation for on-going learning**, and to have realized some success early in their professional careers.

PEO2. Graduates use their creative and critical reasoning skills to solve **technical problems, ethically and responsibly, in service to society**.

PEO3. Graduates learn and adapt themselves to the constantly evolving technology by pursuing **higher studies**.

PEO4. Graduates, within few years of graduation, should demonstrate **leadership** and initiative to **organizational goals**, facilitate the **achievements** of others, and obtain substantive results.

PEO5. Graduates, within few years of graduation, should demonstrate a commitment to Teamwork while working with others of **diverse cultural and interdisciplinary research**.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO 1: Able to utilize the knowledge of Power Electronics and Drives in collaboration with power systems in innovative, dynamic and challenging environment, for the research-based teamwork.

PSO 2: Can explore the scientific theories, ideas, methodologies in renewable energy engineering, and use this erudition in their professional envelopment and gain sufficient competence to solve the current and future energy problems universally

PSO 3: The understanding of technologies like PLC, PMC, process controllers, transducers and HMI one can analyze, design electrical and electronics principles to install, test, maintain power system and applications.

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

- PO1: Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2: Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3: Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO4: Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO5: Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- PO6: The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO7: Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9: Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10: Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- PO11: Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- PO12: Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

JERUSALEM COLLEGE OF ENGINEERING
(An Autonomous Institution, Affiliated to Anna University)
PALLIKARANAI, CHENNAI -100

NEWSLETTER-JULY 2022 to DECEMBER 2022

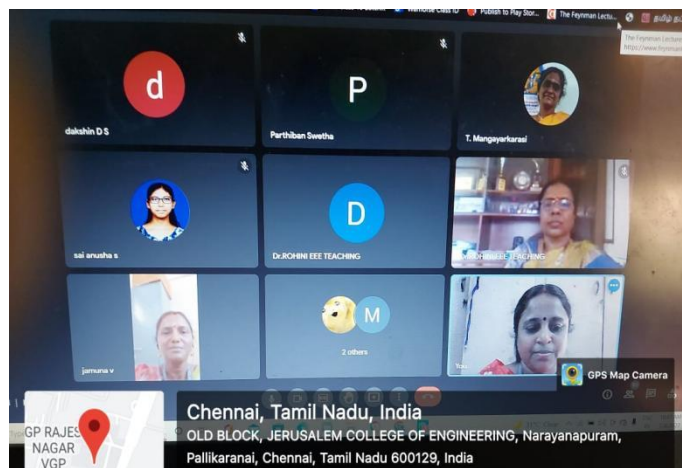
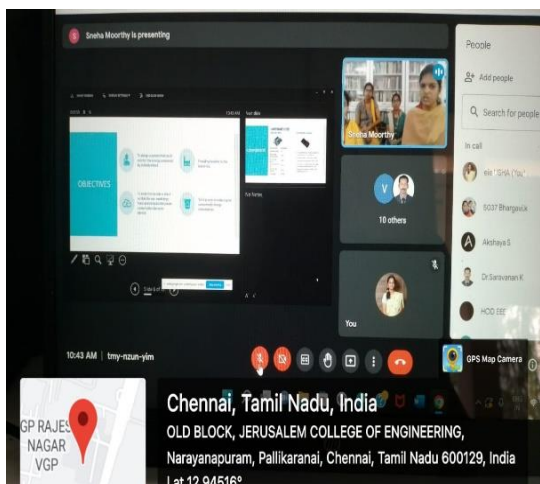
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

- Symposia**



National level Technical Symposium-EEE **POTENZ 2k22** for the students-EEE & EIE on 05.11.22. **Mr.S.Venkata Krishnan, Chief Growth Officer, Prescinto Technologies** was the resource person. **Ms.D.Usha** was the staff organizer.

- Conferences**



4th International Conference on Emerging Trends in Science, Engineering & Technology- ICETSET 2022 for IV Year Students-EEE & EIE on 07.07.22 & 08.07.22. **Dr.A.Kavitha, Anna University, Dr.R.Saravanan, SRM Institute of Science & Technology, Dr.G.Rohini, S.A Engineering College** were the resource person. **Ms.S.Sivajothi Kavitha** was the coordinator.

- **Workshops**



“Workshop on "Finite Element Analysis on EV Motors" for the EEE students on 17.10.22 Dr.S.Prabhu, Associate Professor, EEE Department, Sree Vidyanikethan Engineering College, A.Rangampet, Andhara Pradesh was the resource persons. Mr.J.Arul Prakash was the staff coordinator.



“Alumni Workshop on -Cloud Computing and Azure Fundamentals” for the EEE students on 23.11.22. Mr.Harun Raseed Basheer,Senior Data Engineer,Hitachi Solutions,India Pvt., Ltd., was the resource persons.Ms.S.Rudhra was the staff coordinator.

- **Seminars**



Seminar on the topic “**Career Advancements and Opportunities**” for the students of EEE on 23.08.22. The Resource person for the Seminar is **Mr. Srikanth, TIME Academy, Chennai**



ED Cell meeting on the topic “**How to apply for funded projects in MSME**” for the students on 23.08.22. The Resource person for the Seminar is **Dr.S.Arun, Professor, Projectcas, JCE, Chennai**



Seminar on the topic “**Microprocessors and Microcontrollers**” for the students and faculty members on 14.09.22. **Dr.M.Balaji, Associate Professor, Electrical and Electronics Engineering Department, SSN Institutions, Chennai** was the Resource person.



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Narayanapuram, Pallikaranai, Chennai - 600100

DEPARTMENT OF SCIENCE & HUMANITIES

**GATEWAY TO
REACH CAREER ASPIRATIONS**



Dr.V.Jamuna
Dean Student Affairs

Date 29 Sep 2022
Time 11:00am to 12:30pm
Venue Auditorium
Participants 1st Year Students

Ms.S.Sangeetha
Programme Coordinator

Dr Beula Shanthi John
HOD, S&H

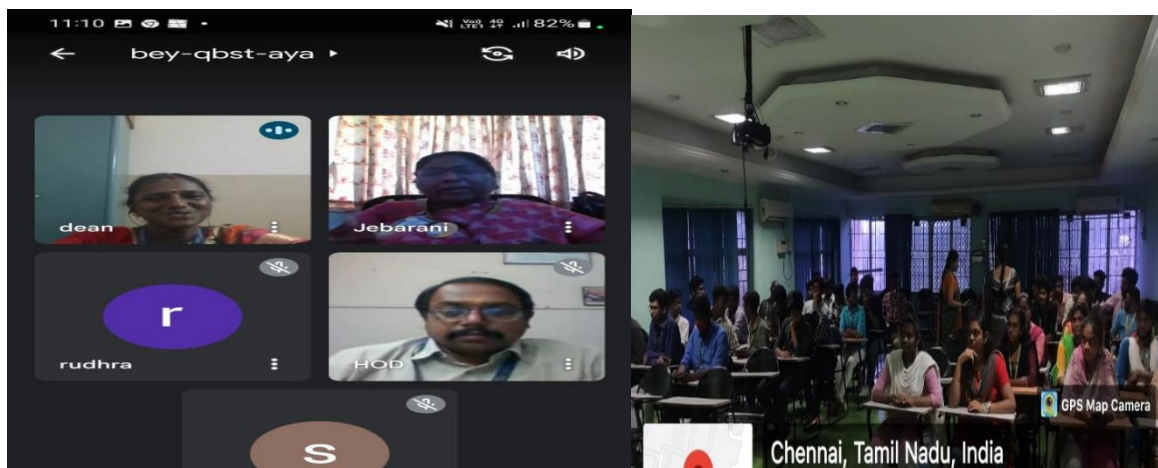
Dr Ramesh S
Principal

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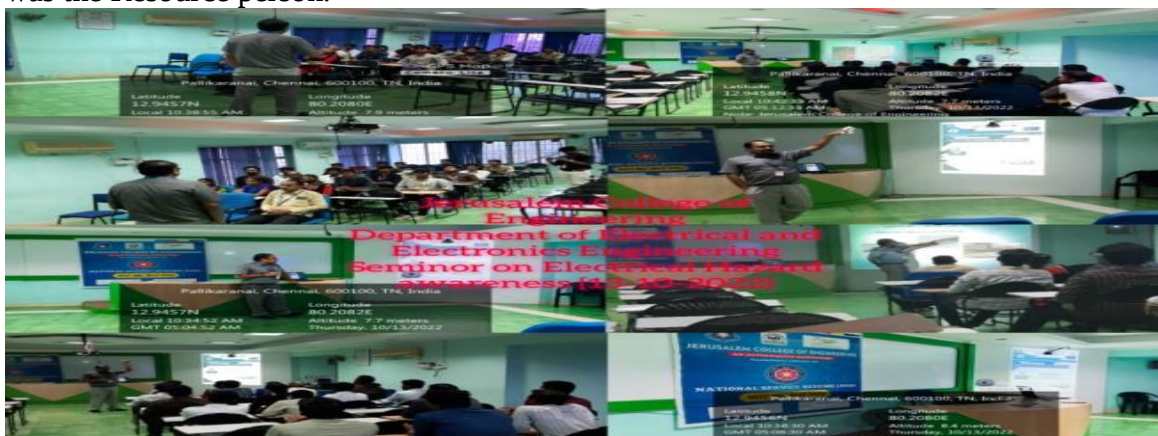


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Seminar on the topic “**Gateway to Reach Career Aspirations**” for the first year Students on 29.09.22., **Dr.V.Jamuna, Professor and Dean Student Affairs** was the resource person.



Alumni webinar on the topic **“Design Thinking : An Effective Approach for problem solving”** for the students and faculty members on 30.09.22. Ms.Jebarani Evangeline, Associate Professor, Electrical and Electronics Engineering Department, SNS College of Engineering, Coimbatore was the Resource person.



Seminar on the topic **“Electrical Hazard Awareness”** for the students on 12.10.22. Dr.S.Vinod, Associate Professor, Electrical and Electronics Engineering Department, JCE, Chennai was the resource person.



JERUSALEM COLLEGE OF ENGINEERING
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Department of Science & Humanities

Opportunities & Importance of Electrical & Electronics Engineering

Dr.S.VINOD, B.E, M.E, Ph.D.,
Associate Professor & Head - EEE



Date 13 Oct 2022
Time 11:00am - 12:30pm
Participants 1st Year Students
Venue Auditorium

Mr.B.Arul Kumar
Programme Coordinator

Dr Beula Shanthi John
HOD, S&H

Dr Ramesh S
Principal

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Seminar on the topic **“Opportunities and Importance of Electrical and Electronics Engineering”** for the first year Students on 13.10.22. Dr.S. Vinod, Professor and Head, EEE department was the resource person.

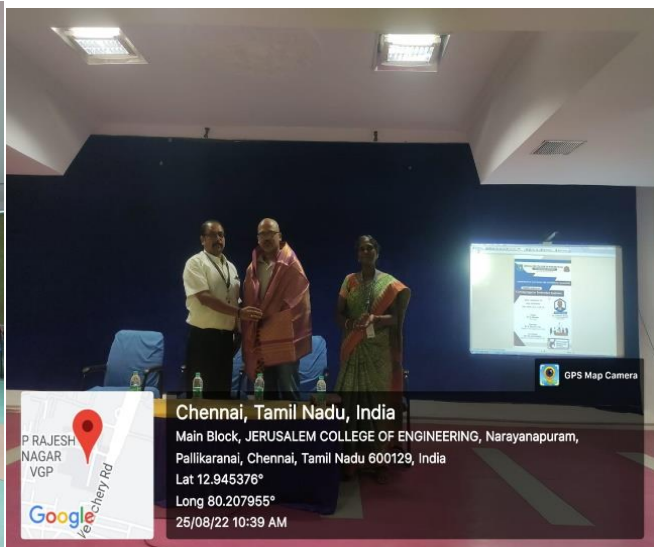


Seminar on the topic “Awareness Session on Virtual Lab: A MoE-Govt of India Initiative, a platform for teaching & learning” at LH 26 and PSS laboratory for the students on 18.11.22. The Resource person for the Seminar is **Mrs.S.Rudhra and Mrs.S.Sivajothi Kavitha**, Assistant Professor, EEE Department, JCE, Chennai



Seminar on the topic “National Education Day” at LH 26 for the students on 23.11.22. **Mrs.Vaishnavi Vignesh Raja**, Director, Equad Engineering Services, Chennai was the resource person.

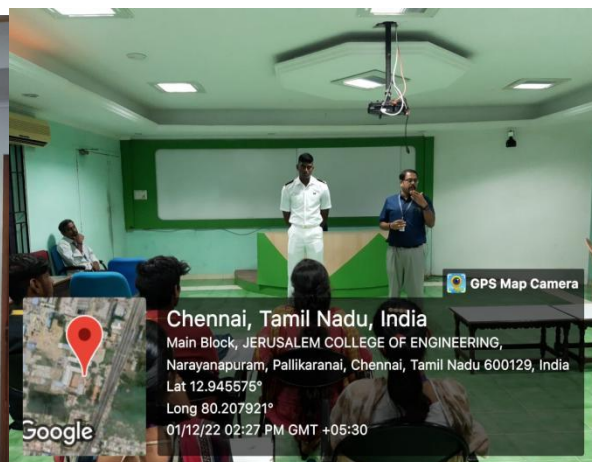
- **Guest Lectures**



Guest lecture on the topic **“Cutting Edge in Embedded Systems”** for the EEE students and faculty members on 25.08.22. **Dr. P. Madhan Mohan, Head Research and Development, Jasmin Infotech** was the resource persons.



Guest lecture on the topic **“Royal Charter Day & its Importance”** for the students and faculty members on 09.09.22. **Dr.J.Balamurugan, Assistant Executive Engineer, TNEB/ TANGEDCO** . was the resource person.

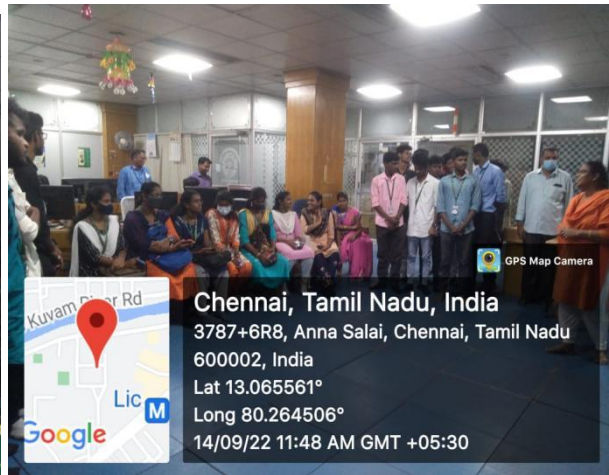
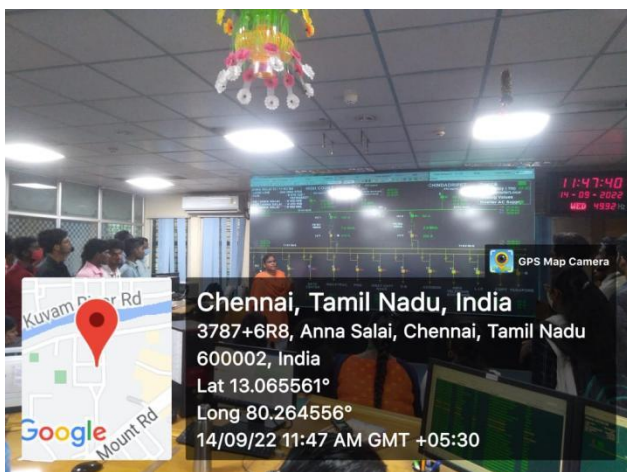


Alumni Guest Lecture on **"Prospects and Opportunities in armed forces for Technical graduates"** for the EEE students on 01.12.22. **Mr.N.Rajagopal, Assistant Commandant, Executive Officer, Indian Coast Guard** was the resource persons

- **Industrial Visits / Educational Tours**



An Industrial visit to Dakshin Chitra-Essence of Indian Tradition, Chennai was organized for third year EEE students on 19.10.22.



An Industrial visit to SCADA-EB Substation, Anna Salai, Chennai was organized for second, third and final year EEE students on 14.09.22.



An industrial visit to CSIR-Madras Complex, Taramani, Chennai was organized for second, third and year students of EEE on 26.09.22.



An industrial visit to Integral Coach Factory, Perambur, Chennai was organized for second, third and final year students of EEE on 21.10.22.

- **Parent-Teacher Meeting**



The Parent-Teacher Meeting was conducted for the second, third and the final year EEE students on 12.10.22. All the parents attended the meeting.

- **Awards and Achievements of faculties**



Dr.V.Jamuna was awarded with the Faculty Appreciation Award for the year 2021-22 from The Institution of Engineers(India), Kancheepuram Local Centre on 29.11.22.



- Ms.S.Sivajothi Kavitha has mentored the team SUN SPOT that participated in the innoWAH! – Pitch Your Point Competition 2022- 23 by IIT PALS.

Club Activities

- Electronics Club Activities



Technical connection under Electronics club for EEE and E&I students. Ms.S.Rudhra conducted the club activities for the students on 24.08.2022 under the Electronics Club Activity- Technical Connections.



Technical and Non-technical events under Electronics Club on 14.9.2022 for Inter department students.

Activities by Faculties (EEE Department)

Proposals / Patent Applied:

Sl. No	Name of the Investigator	Topic	Amount	Year applied
1	Dr. V. Jamuna, Adarsh Singh and Guru Prasad	“IOT based Battery Management System” to Tamil Nadu State Council for Science and Technology (TNSCST)	10,000/-	30.08.2022
2	Dr.S.Vinod, Shrinivas, Suramayilvakannan, Bharath and Bharathi Prakash	“Solar EV Charging Station”- Tamil Nadu State Council for Science and Technology (TNSCST)	10,000/-	30.08.2022
3	Ms.S.Rudhra, Abarna, Sowmiya and Padmavathy	“Bridgeless cuk to converter-based EV Charger”- Tamil Nadu State Council for Science and Technology (TNSCST)	10,000/-	30.08.2022.
4	Ms.S.Sivajothi Kavitha, Balaji, Srikanth, Tamilvalavan and Tharunraj	“Piezoelectric Power Supply Systems for Highways” - Tamil Nadu State Council for Science and Technology (TNSCST)	10,000/-	30.08.2022.
5	Ms.D.Usha, Antonis Ajay Soloman and K.Sanjay	“Smart Poultry Farm Monitoring System” - Tamil Nadu State Council for Science and Technology (TNSCST)	10,000/-	30.08.2022.
6	Dr. V. Jamuna and Ms.S.Sivajothi Kavitha	“Green Powered-Division Based Automatic Irrigation System for Smart Agriculture” - MSME	15,00,000/-	12.10.2022
7	Dr.S.Ramesh and Dr. V. Jamuna	SPICE(Scheme for promoting Interest, Creativity and Ethics among Students- AICTE	1,00,000/-	15.10.2022
8	Dr.S.Vinod and Ms.S.Rudhra	“Proactive traffic signal clearance for ambulance service”-MSME	14,00,000/-	30.11.2022
9	Mr.J.Arul Prakash & Ms.D.Usha	“Smart solar based Low-cost Air water Generator System” - MSME	14,00,000/-	30.11.2022
10	Mr.J.Arul Prakash & Mr.P.Venkatesan	“Smart Care IOT based low-cost solar operated E-Vehicle cum chair with step climbing for physically challenged person” - MSME	14,00,000/-	30.11.2022

Publications of Papers in Journals

Sl. No	Name of the Author	Title	Name of the Journal	Date
1	V. Jamuna, S. Sivajothi Kavitha, D.Usha Asha M, Priyanka K	The ZAPPY Disinfection Bot for Modern Healthcare System	Journal of Sustainable Engineering and Built Environment Faculty of	29-12-2022

			Engineering, Technology, and Built Environment, UCSI University	
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Faculties as Resource Persons in Conferences

Sl. No	Name of the Resource Person	Title	Name of the Institution	Date
1	Dr.V.Jamuna – Internal Session Chair	Fourth International Conference on Emerging Trends in Science, Engineering & Technology.	Jerusalem College of Engineering	07.06.2022
2	Dr.S.Vinod – Internal Session Chair	Fourth International Conference on Emerging Trends in Science, Engineering & Technology.	Jerusalem College of Engineering	07.06.2022

Faculties as Chair Persons in Workshop

Sl. No	Name of the Resource Person	Title	Name of the Institution	Date
1	Dr.S.Vinod	Students Induction Day Program	Meenakshi Sundararajan Engineering College	10.11.2022

Faculties as Chair Persons in Seminars

Sl. No	Name of the Resource Person	Title	Name of the Institution	Date
1	Dr.V.Jamuna	National Seminar on " Role of Motor Controller in Electric Vehicles"	Mahaguru Institute of Technology	17.11.2022
2	Ms.S.Rudhra	Awareness Session on Virtual Lab: A MoE-Govt of India Initiative, a platform for teaching & learning”	Jerusalem College of Engineering	18.11.2022
3	Ms.S.Sivajothi Kavitha	Awareness Session on Virtual Lab: A MoE-Govt of India Initiative, a platform for teaching & learning”	Jerusalem College of Engineering	18.11.2022
4	Dr.S.Vinod	Seminar on the topic "Entrepreneurship Development Skills in Power Engineering"	Sai Ram Institute of Technology	30.11.2022

Conferences Attended by Faculties

Sl. No	Name of the Faculty	Title	Name of the Institution	Date
1	Dr.V.Jamuna and Ms.S.Sivajothi Kavitha,Ms.D.Usha, Asha M and Priyanka K	“The Zappy Disinfectant Bot for Modern Healthcare system”	Fourth International Conference on Emerging Trends in	PP 84, ISBN 978-

			Science, Engineering & Technology.	81-955848- 3-3.
2	Dr.V.Jamuna and Vishranthi.R.M	“Ai Based Solar Powered Zeta Converter For irrigation system”	Fourth International Conference on Emerging Trends in Science, Engineering & Technology.	. PP 87, ISBN 978- 81-955848- 3-3.
3	Dr.V.Jamuna, Ms.P.Subhashini,Dr.T.V.Narmadha and S.Deepa	“A Study Of Motors Used In Electric Vehicles”	Fourth International Conference on Emerging Trends in Science, Engineering & Technology.	PP 86, ISBN 978- 81-955848- 3-3.
4	Dr.S.Vinod, Ms.S.Rudra, A. Kathiresan and S. Sarah Samreen	“Voltage Enhancer and Protector For Farm Motors”	Fourth International Conference on Emerging Trends in Science, Engineering & Technology.	PP 83, ISBN 978- 81-955848- 3-3.
5	Dr.S.Vinod, Ms.S.Rudra, S. Deepan Baalaji,PR. Jothi Yamini and S.Tamilkkumaran	“Agribot”	Fourth International Conference on Emerging Trends in Science, Engineering & Technology.	PP 84, ISBN 978- 81-955848- 3-3.
6	Dr.S.Vinod, Ms. S.Rudra and S.Kiruba Princee	“Design Of Electric Vehicle Charger Using Bridgeless Cuk Converter”	Fourth International Conference on Emerging Trends in Science, Engineering & Technology.	PP 84, ISBN 978- 81-955848- 3-3.
7	Dr.S Vinod, S Rudhra and M Yamuna	“Bridgeless Zeta Converter Based Electric Vehicle Charging Station”	Fourth International Conference on Emerging Trends in Science, Engineering & Technology.	PP 86, ISBN 978- 81-955848- 3-3.
8	Ms.D.Usha, Ms.S.Sivajothi Kavitha, N. Muralidharan , S.Sanjay Kumar and R.Sree Guru	“Smart Medicine Reminder System for Senior Citizen”	Fourth International Conference on Emerging Trends in Science, Engineering & Technology.	PP 83, ISBN 978- 81-955848- 3-3
9	Ms.S.Sivajothi Kavitha ,Ms.D.Usha and Mathanraj.G	“Solar Power Bidirectional Dc-Dc Converter for charging the battery used in Electrical Vehicles”	Fourth International Conference on Emerging Trends in Science,	PP 85, ISBN 978- 81-955848- 3-3

			Engineering & Technology	
10	Ms.K. Hemalatha,Ms.S.Sivajothi Kavitha and Ms.D.Usha	“Autonomous System for Protection of Valuable Trees from Smuggling using Zigbee”	Fourth International Conference on Emerging Trends in Science, Engineering & Technology	PP 87, ISBN 978-81-955848-3-3.

FDPs Attended by Faculties

Sl. No	Name of the Faculty	Title	Name of the Institution	Date
1	Dr.S.Vinod and Ms.S.Rudhra	Two weeks Faculty Development Program on “Power Electronics Applications to Renewable Energy System, Electric Vehicle and Intelligent Control”	Sri Sairam Institute of Technology.	10.10.2022 to 21.10.2022
2	Ms.S.Rudhra and Ms.S.Sivajothi Kavitha	PALS VLAB Faculty Development Program	IIT -PALS	19.10.2022 to 21.10.2022
3	Dr.S.Vinod and Ms.S.Rudhra, Ms.S.Sivajothi Kavitha and Ms.D.Usha	Online Five Day FDP on "Mathematical Foundations for Data Science"	Jerusalem College of Engineering	31.10.2022 to 04.11.2022
4	Mr.J.Arul Prakash	AICTE and ATAL sponsored FDP	AMET University.	31.10.2022 to 11.11.2022

Seminars Attended by Faculties

Sl. No	Name of the Faculty	Title	Name of the Institution	Date
1	Dr.S.Vinod and Ms.S.Rudhra, Ms.S.Sivajothi Kavitha,Ms.D.Usha and Mr.J.Arul Prakash	" Role of Motor Controller in Electric Vehicles"	Mahaguru Institute of Technology	17.11.2022
2	Ms.S.Sivajothi Kavitha and Ms.D.Usha	Webinar on "Latest Research in Polymer Blend based Nanocomposites & Metallic Nanostructures for Biomedical Sensors & Optoelectronics"	Educare Taiwan University in Online Platform	18.12.2022

Activities by Departments

Memorandum of Understanding(MoU)

Sl. No	Name of the Institution	Title	Date
1	Dr.K.Padmanatha, EVNEXUS PVT,LTD	Electric Vehicles	07.11.2022

2	Mrs.Vaishnavi Vignesh Raja,Director-EQuad Engineering Services	Institute Industrial Collaborations	23.11.2022

Parent-Teacher Meets

Sl. No	Name of the Department	Date
1	EEE Department	12.10.2022

Industrial Visits / Educational Tours

Sl. No	Name of the Department	Name of the Company	Year	No of Students
1	EEE-02.06.2022	Jeppiaar Steels Pvt, Ltd., Munnivakkam,Kanchipuram	II,III and IV Year	56
2	EEE-14.09.2022	SCADA-EB Substation, Anna Salai,Chennai	II,III and IV Year	56
3	EEE-26.09.2022	CSIR-Madras Complex, Taramani,Chennai	II,III and IV Year	56
4	EEE-19.10.2022	Dakshin Chitra-Essence of Indian Tradition, Mahabalipuram	II,III and IV Year	56
5	EEE-21.10.2022	Integral Coach Factory,Perambur	II,III and IV Year	56

List of Prize Winners in Model Making, Quiz, etc.

Sl. No	Name of the Event	Name of the Student	Year	Date
1	Quiz - Halcyon Club	Visten Povas Solomon, A. Joshwa Soloman, S. Kishore Kumar	II Year	18.11.2022