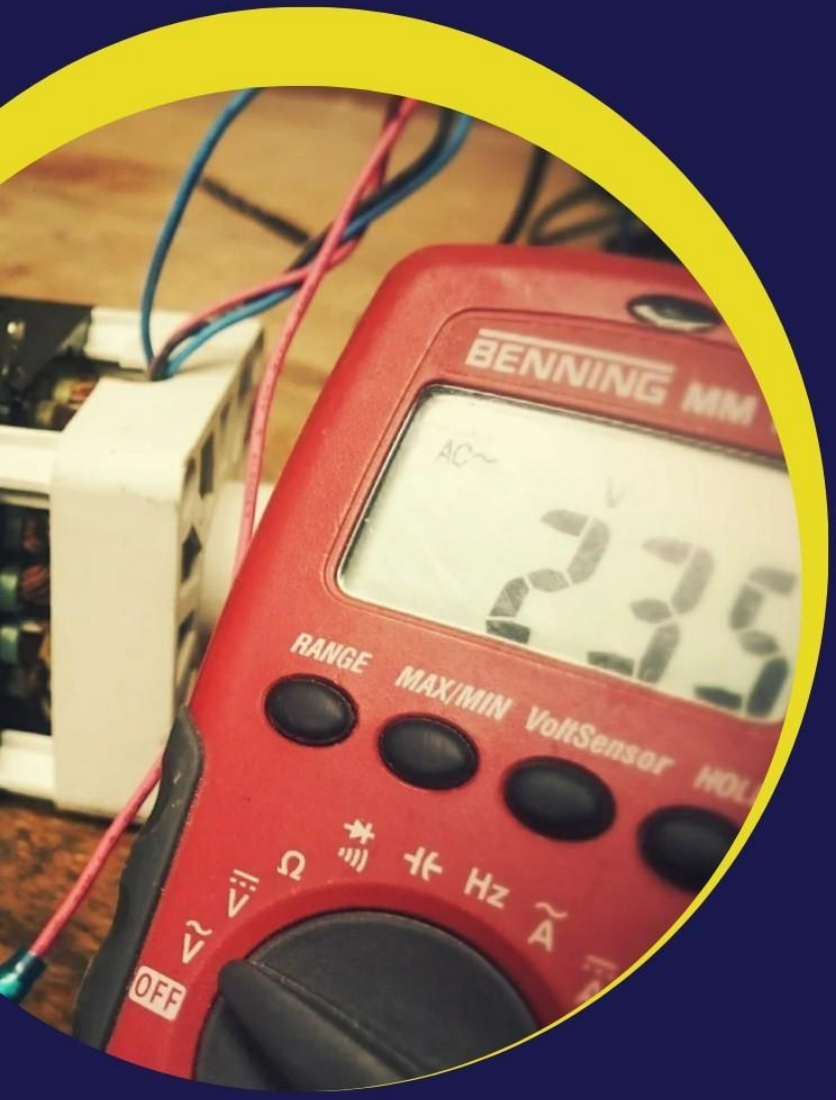
NEWSLETTER

S.A.ENGINEERING COLLEGE (AUTONOMOUS)

ACCREDITED BY NAAC WITH 'A' GRADE & ISO 9001:2015 CERTIFIED INSTITUTION
POONAMALLEE AVADI MAIN ROAD, CHENNAI-7



Electricity and magnetism are those forces of nature by which people who know nothing about electricity and magnetism can explain everything

-Egon Friedell

DEPARTMENT OF ELECTRICAL AND ELECTRONICS

TOP NEWS OF THE MONTHS

MAR2021 - OCT2021

VISION

Conferring Excellent Technical Education with Greater Emphasis on Quality Systems, Moulding Persons for the National Development.

MISSION

- **To Enhance the Quality Education by Providing State-of-Art Infrastructure with Committed Faculty.**
- **To Provide Prerequisite Skills For the Needs of Higher Education, Industries and Research Establishments.**
- **To Handle Socio Economic Challenges of Society by Instilling Human Values and Ethical Responsibilities.**

PROGRAM EDUCATIONAL OBJECTIVES

Graduates will be able

PEO 1: To demonstrate enhanced competence for successful career in the core and allied fields of Electrical & Electronics Engineering.

PEO 2: To explore challenges in higher education and research with a multidisciplinary perspective and effective communication for lifelong learning.

PEO 3: To inculcate entrepreneurial skills, upholding professional ethics, cultural aspects, societal and environmental factors for sustainable development.

PEO 4: To adapt evolving technologies and stay contemporary to cultivate leadership quality through effective collaboration.

PROGRAM OUTCOMES

Engineering Graduates will be able to:

1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **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.
3. **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.
4. **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.
5. **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.
6. **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.
7. **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.
8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **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.
11. **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.
12. **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.

PROGRAM SPECIFIC OUTCOMES (PSO)

Students will be able to:

1. Utilize coherent theoretical and practical methodologies to design and implement Electrical and Electronics systems.

2. Assimilate facts of basic Electronics to Power Electronics and recent embedded technologies for governing, consistent and workable Electrical and Electronics Systems.

3. Apply computing platform and developing software for power grids and hybridizing the new renewable energy to overcome the power demand.

EDITORIAL BOARD

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05/03/2021

IEEE ACTIVITIES

The department of EEE has organized the IEEE activities for the students on every Friday. The Technical Connexion as been conducted for the students on 5/3/2021. IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity. IEEE and its members inspire a global community through its highly cited publications, conferences, technology standards, and professional and educational activities.

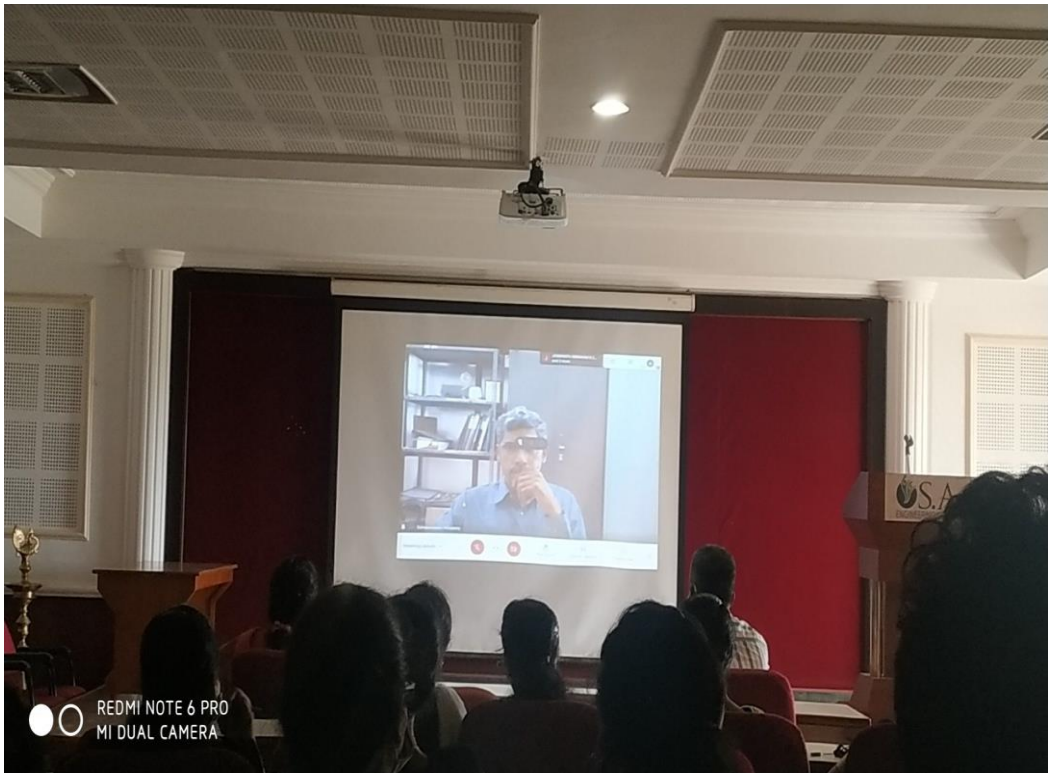
12/03/2021

IEEE ACTIVITIES

The department of EEE has organized the IEEE activities for the students on every Friday. The Technical Talks as been conducted for the students on 12/3/2021.

16/03/2021

ONLINE GUEST LECTURE



The department of EEE has organized the Guest Lecture on **"SMART GRID TECHNOLO- GIES"** on 16.03.2021. The head of the department, Dr.G.Rohini felicitated the chief guest **Dr.P.SOMASUNDARAM, PROFESSOR, ANNA UNIVERSITY, CHENNAI.** The guest delivered the lecture on Smart grids are electricity network that use digital technologies, sensors and software to better match the supply and demand of electricity in real time while minimizing costs and maintaining the stability and reliability of the grid. Some examples of smart grid technology include advanced metering infrastructure (AMI) for real-time monitoring of energy usage, distribution automation to improve the management of power distribution, demand response systems to adjust electricity usage in response to supply and price signals, and grid-interactive. Smart grid can be categorized in two main components Networks and System. System components are categorized in Electric Utility Operation Center, Household Appliances, Energy Resources that are renewable, Smart Meters and suppliers.

19/03/2021

IEEE ACTIVITIES

The department of EEE has organized the IEEE activities for the students on every Friday. The dumb charahab as been conducted for the students on 19/3/2021.

19/03/2021

GUEST LECTURE

The department of EEE has organized the Guest Lecture on **"PROTECTION AND SWITCH-GEAR"** on 19.03.2021. The head of the department, Dr.G.Rohini felicitated the chief guest **Er.C.PRASATH, EXECUTIVE ENGINEER/MRT, NORTH CHENNAI POWER STATION CHENNAI.** The guest delivered the lecture on Switchgear is an integral part of an electric power system. Switchgear includes fuses, switches, relays, isolators, circuit breaker, potential and current transformer, indicating device, lightning arresters, etc. that protects electrical hardware from faulty conditions.

03/09/2021

GUEST LECTURE

The department of EEE has organized the Guest Lecture on **"IEEE, The World of Opportunities – IEEE Awareness Program"** on 03.09.2021. The head of the department, Dr.G.Rohini felicitating address to the chief guest **Janani R, hair of Content Development Team in IEEE YESIST12 2021.** The guest delivered the lecture on the network provides opportunities for collaboration, learning, and growth. IEEE also helps professionals stay current on industry trends and standards, which is essential for career advancement. Moreover, IEEE certification can lead to higher salaries.

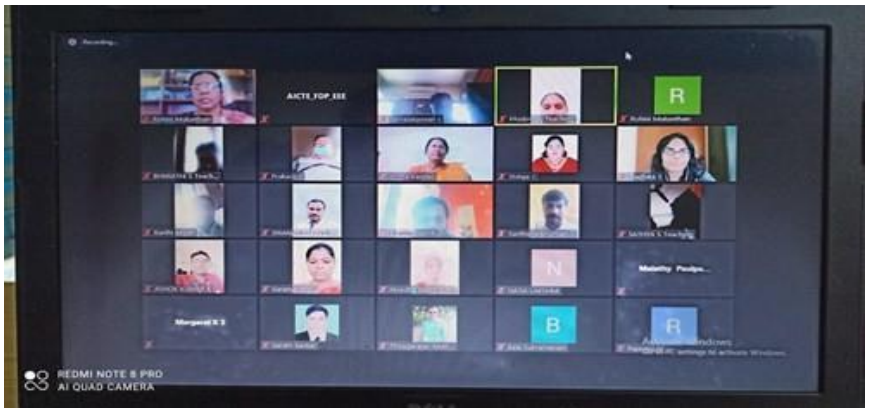
04/09/2021

GUEST LECTURE

The department of EEE has organized the Guest Lecture on **"Real Time Applications of Semiconductors "** on 04.09.2021. The head of the department, Dr.G.Rohini felicitating address to the chief guest Dr.A. Saraswathi, Assistant Professor/EEE, & HOD/ECE, University college of Engineering, Vilupuram, Tamil Nadu, India. The guest delivered the lecture on Semiconductors are used in almost every sector of electronics. Consumer electronics: Mobile phones, laptops, games consoles, microwaves and refrigerators all operate with the use of semiconductor components such as integrated chips, diodes and transistors.

04/09/2021

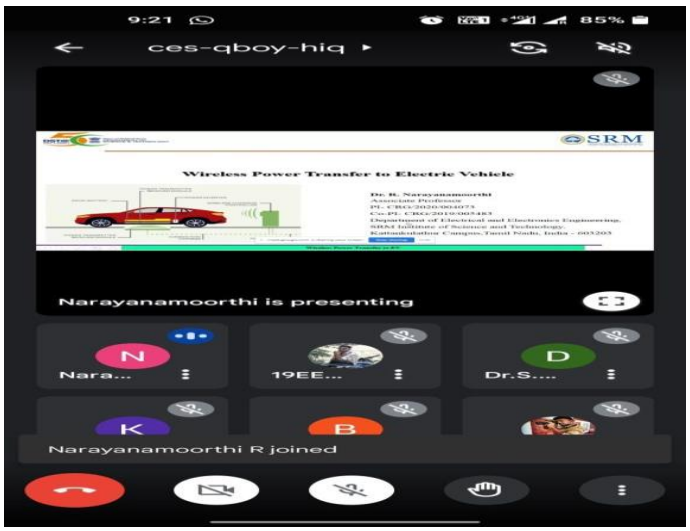
GUEST LECTURE



The department of EEE has organized the Guest Lecture on **"Control of Active Power and Reactive Power using ETAP "** on 04.09.2021. The head of the department, Dr.G.Rohini felicitating address to the chief guest Er. E. Mohan Kumar, Power System Engineer, M/S Power Projects, 4, Vinobha Nagar, Koduvai - 638660. The guest delivered the lecture on ETAP PPC facilitates comprehensive regulation of active and reactive power as well as the voltage of heterogeneous PV systems. ETAP PPC graphical user interface provides optimal support during commissioning and requires no programming knowledge on your part.

09/09/2021

GUEST LECTURE



The department of EEE has organized the Guest Lecture on **"Object Oriented Programming"** on 09.09.2021. The head of the department, Dr.G.Rohini felicitating address to the chief guest Mr.S.Navaneethan, System Engineer, Infosys, Pvt, Ltd. The guest delivered the lecture on Object-oriented programming (OOP) is defined as a programming paradigm (and not a specific language) built on the concept of objects, i.e., a set of data contained in fields, and code, indicating procedures – instead of the usual logic-based system.

01/10/2021

GUEST LECTURE

` The department of EEE has organized the Guest Lecture on **"**Control **Industrial Implementation of Controlled Converters"** on 01.10.2021. The head of the department, Dr.G.Rohini felicitated the chief guest Dr.D. Zamrooth, Assistant Professor, University College of Engineering, Kancheepuram. The guest delivered the lecture on the pulse-width–modulation (PWM) technique is widely used to control power converters. This control method involves the generation of a signal that manages to switch the power converter's electronic switches on and off to achieve the desired voltage value at the output.

01/10/2021

GUEST LECTURE

The department of EEE has organized the Guest Lecture on **"Sensor System for Measurement & Instrumentation "** on 01.10.2021. The head of the department, Dr.G.Rohini felicitated the chief guest Ms.T.H. Padmamalini, IOT Hardware Engineer, Real AI, Tambaram, Chennai, Tamil Nadu. The guest delivered the lecture on a sensor in process instrumentation is a device that detects and measures a physical parameter, such as temperature, pressure, flow, level or chemical composition, and converts it into an electrical signal that can be read by an instrument or control system.

04/10/2021

GUEST LECTURE

The department of EEE has organized the Guest Lecture on **"Wind Turbine Components and Various Technologies "** on 04.10.2021. The head of the department, Dr.G.Rohini felicitated the chief guest K.Boopathi, Director & Division Head, National Institute of Wind Energy (NIWE), Pallikaranai, **Chennai - 600 100.** The guest delivered the lecture on the drivetrain on a turbine with a gearbox is comprised of the rotor, main bearing, main shaft, gearbox, and generator. The drivetrain converts the low-speed, high-torque rotation of the turbine's rotor (blades and hub assembly) into electrical energy.