



SRI RANGANATHAR

INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)

Accredited by NAAC with "A+" Grade & ISO 9001:2015 Certified Institution

Athipalayam, Coimbatore - 641 110. Web site: sriet.ac.in Ph: 0422 2697792



department of E E E



NEWSLETTER

JUNE 2024 (EVEN SEMESTER)



ELECTRICAL AND ELECTRONICS ENGINEERING

Editorial Board (Student):

- ✚ Chief Editor: Mr P Selvapandi IV-EEE
- ✚ Editor: Mr C Lakshmanan III-EEE
- ✚ Designer: Ms S Boomika II-EEE

Staff Editorial Board:

- ✚ Dr J Maalmarugan Prof&HoD/EEE
- ✚ Mr K Muthuraj AP/EEE

E
M
E
E
R

ASSOCIATION

2K23-24

Publish



SRIET Profile:

Sri Ranganathar Institute of Engineering and Technology (SRIET) came into existence in 2011, out of an ardent desire of Dr. V. Narayanasamy to contribute manifold to the society that nurtured him. SRIET is an Innovative Educational Institution where the curiosity, creativity and intellectual joy of students all drive to academic excellence. Our Institution provides complex problem-solving skill and imbibes service to the public good. SRIET is defined by strong association and working in ways that excel in traditional boundaries.

SRIET's academic excellence is rooted in a student-centered model of learning. The Curriculum is an accurate approach to education that pushes the students to be creative thinkers, intellectual risk-takers and entrepreneurial problem-solvers. SRIET leaves students prepared to thrive as independent and innovative leaders and equipped with the tools they need to become the next generation of leaders in their respective fields.

Sri.V. Narayanasamy
Chairman,
Sri Ranganathar Group of Companies



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING (EEE)

ABOUT THE DEPARTMENT:

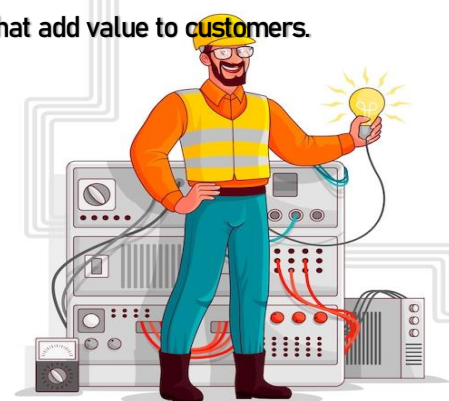
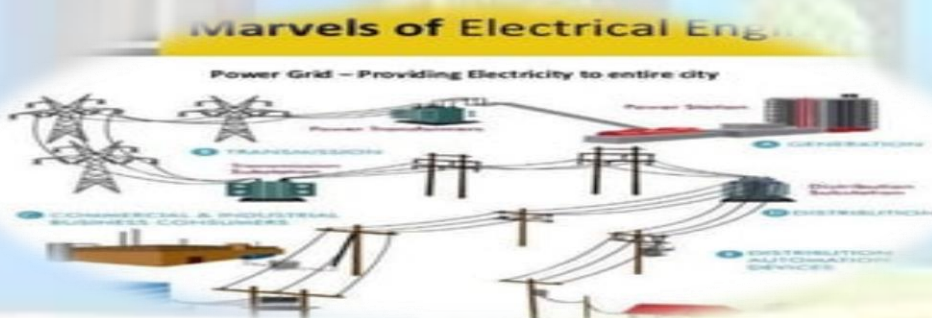
Electrical engineers synthesize science, mathematics, technology, and application-oriented designs into world-class consumer products, timely microprocessors, state-of-the-art computers, advanced electronic components, and much more. From cutting-edge technology revolutions to real life applications, the innovations of electrical engineers continue to lead the future and elevate the standards in the marketplace. With a shortage of electrical engineering talent in the job market, the demand for graduates with an electrical engineering degree remains at an all-time high.

VISION:

To enable our students to have a higher degree of competence in enhancing efficiency in energizing the world and maximizing green energy.

MISSION:

- To facilitate students to adept latest technology in addressing the challenges in transmission and distribution of electricity.
- To engage and collaborate with education and experience towards building unified technology.
- To kindle the students to innovate in designing and developing new products and process that add value to customers.
- To inculcate the need of green energy in the minds of students to sustain Mother nature.





HOD'S DESK

I believe my role as an educator is to guide and nurture the next generation to establish skills to achieve health, respect, prosperity and fulfilment.

The ability to be innovative and creative is important to me. I enjoy being challenged and inspired by the people around me. I am an avid supporter of effective and innovative professional development that encourages teachers to be reflective and to continuously examine our practice to provide quality teaching and learning for each student. My role as head of the department is to keep up with latest trends and research and be an active partner in the college's professional development.



Dr. J MAALMARUGAN M.E., Ph.D.,
Professor, HOD

Email: maalmarugan@sriet.ac.in
Mobile: 84899 29865

LABORATORY SPECIFICS:

Power Electronics and Drives Laboratory:

- ✦ It consists of different kinds of demo kits such as SCR characteristics, study kit for D.C motor control using chopper and necessary simulation software.
- ✦ The lab is equipped with all the power electronic converters, DSP and FPGA based DC and AC Drives, Digital Integrated kits, Power supplies.

Electrical Machines Laboratory:

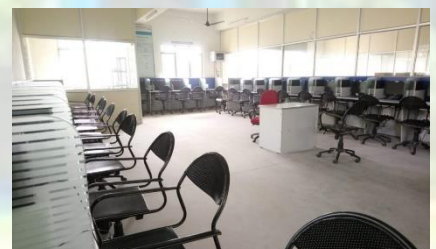
- ✦ Imparts the knowledge about characteristics and behaviour of the DC and AC Machines.
- ✦ Well established with all kinds of motors, generators and latest Drives.

Control System Laboratory:

- ✦ Lab is equipped with control system kits like DC servomotor and synchros.
- ✦ Well established with instrumentation kits like LVDT, strain gauge, thermistor and thermocouple kit
- ✦ Provides an opportunity for the students to implement the control system concepts

Power System Simulation Laboratory:

- ✦ Furnished with high speed internet facilities in all the systems.
- ✦ Software like ETABS in this lab interface the mathematical computing visualization and a powerful language to provide a flexible environment for technical computing in the areas of power electronics, control system, power system and electronic circuits.





PROGRAM OUTCOMES (PO)

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 team work	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.

PROGRAM SPECIFIC OUTCOMES (PSO)

PSO1	Capable to provide socially acceptable technical solutions to complex electrical engineering problems with the application of modern and appropriate techniques for sustainable development.
PSO2	Comprehend, analyses and design products in core domains namely power, control and energy to meet the ever-changing demands of industry and society.



Student's Achievements:

3rd year EEE students Guna M And Yaswanth Surya L have participated and “secured third place in Paper presentation, in Inter“O”Fest conducted by Sree Sakthi engineering college”, Coimbatore , on 23.03.2024.



Extension Activities: Student's Project Proposal:

- **Priyadharshini K, Surya S, Vignesh C** from IV EEE submitted a **project proposal** on “**How might we design a cost-efficient Myoelectric prosthetic arm using 3D print**” to Naan Mudhalvan-Anna University Niral Thiruvizha 14.01.2024.
- **Balaji N, Daniel J, Ferosha Thowith S, Uma Maheshwari R** from IV EEE Submitted a Project Proposal on “**How might we create a Skill/Job recommender application using suitable technology**” to Naan Mudhalvan-Anna University Niral Thiruvizha 14.01.2024.
- **Muralidharan V, Muralidharan V, Jerin Titus J, Karuppaiah S** from IV EEE submitted a Submitted a Project Proposal on “**How might we create a Skill/Job recommender application using suitable technology**” to Naan Mudhalvan-Anna University Niral Thiruvizha 14.01.2024.



Student's event participation details:

- **SATHISHKUMAR.G, DHIVAHAR S, GOKUL T, PRABHAKARAN S, SANGEETHA K, SRIEE VIDHYAHARINI K, SUVENDAR A, LOGESHWARAN A S** 3rd EEE undergone Internship Training at Bargave Rubber Private Limited, Kochadai, Madurai-625016 from 18.01.2024 to 25.01.2024.
- **SIVASAKTHINATHAN.M, SARAVANA KUMAR K** 3rd EEE undergone Internship Training at Protowiz Private Limited, Coimbatore-641025 from 18.01.2024 to 23.01.2024.
- **RAVICHANDRAN N, SOWMIYA V, SATHYA SANJEEV G, MERSILIN GEETHA J, LAKSHMANAN C, KATHIRVEL K, GUNA M, ASWI. N** 3rd EEE undergone Internship Training at SS Systems, Sivanandhapuram, Coimbatore – 641049 from 09.01.2024 to 13.01.2024.
- **KAMALESH R** 3rd EEE undergone Internship Training at Hi-Tech Research Foundation, Tharangambadi, Nagapattinam-609313 from 18.01.2024 to 25.01.2024.
- **BALU PRATHICK P, SUJITH KUMAR S** 3rd EEE students undergone Internship Training at JPR Power Systems and Controls, Maniakarampalayam, Coimbatore-641006 from 11.01.2024 to 25.01.2024.
- **KOWSALYA P, GOWTHAM A, SAKUNTH B** 3rd EEE undergone Internship Training at Shree M.T.K Textiles (P) Ltd, Pasur, Annur-641653 from 10.01.2024 to 20.01.2024.
- **Lohith G, Kiran Kumar S** II-EEE Undergone internship program on “Automation of EHT Substation at 220/132/33KV Substation” from 24.02.2024 to 04.03.2024.
- **Boomika S, Chandrikha R, Mohanapriya M** II-EEE Undergone an internship training in “Design Department” from 26.02.2024 to 01.03.2024
- **“Sujith kumar S** III EEE have participated in circuit surge and circuitrix conducted by **Dr. N. G. P. INSTITUTE OF TECHNOLOGY**”, Coimbatore, on 04.03.2024 & 05.03.2024.



- **Balu Prathick P, Kamalesh R, Kathirvel K, Lakshmanan C, Yaswanth Suriya L** III EEE Participated in two days' workshop on “Smart Charging, Bright Future: Understanding Battery Management Systems in Electric vehicles” in Sree Sakthi Engineering College, Karamadai, Coimbatore-641104 on 07.03.2024 & 08.03.2024 .



- **Balu Prathick P, Dhanush B III** EEE Participated in the one-day National level technical symposium **INTER'O FEST 2K24** in **Sree Sakthi Engineering College, Karamadai, Coimbatore-641104** on 23.03.2024.
- **Guna M, Yaswanth Surya L B III** EEE Participated in the one-day National level technical symposium **INTER'O FEST 2K24** in **Sree Sakthi Engineering College, Karamadai, Coimbatore-641104** on 23.03.2024.
- **Arunkumar j, Jana Prathap S, Premkumar M, Anishkumar A III** EEE Participated in the one-day National level technical symposium **INTER'O FEST 2K24** in **Sree Sakthi Engineering College, Karamadai, Coimbatore-641104** on 23.03.2024.
- **Jana Prathap S, Sridhar S III** EEE Participated in the state level technical symposium **XTENSIS 2024** under the event **Brain Byte** in **Sri Ramakrishna Engineering College, Coimbatore-641022**, on 26.03.2024.
- **Arunkumar J, Bhoomika, Kabilan E, Premkumar, Tharun Kumar Reddy, Ramajeyam V, Ramar M, Sridhar S II** EEE Participated in the one-day National level technical symposium **VARUNAH-2K24** under paper presentation and got first Place in **Kathir College of Engineering, Neelambur, Coimbatore-641062**, on 28.03.2024.
- **Amerunisha M, Abishek S, Mohinthbabu J, Raja M IV** EEE Presented a paper titled on **“Fuzzy Type-II Controller Based UPQC for Power Quality Enhancement in Grid Connected Micro Grid System”** in the one-day National level Conference on **“Innovations in Communication and Electrical Drives”** in **P.A College of Engineering and Technology, Pollachi-642002** on **16.04.2024**.
- **Arunkumar s, Prajithakumari P, Gopi P, Selva Bharathi R** Presented a paper titled on **RASPBERRY PI BASED FACE RECOGNITION AND FINGERPRINT ATTENDANCE SYSTEM** in the International conference on Recent Trends in Engineering and Science (ICRTES-2024) in **Kings College of Engineering, Pudukkottai** on 02.05.2024 & 03.05.2024.
- **Balamurugan N, Vasantha Jananeeswari N, Sundar P, Vijay B** Presented a paper titled on **SOLAR BASED EV WIRELESS CHARGING USING IOT** in the International conference on Emerging Trends in Engineering, Technology and Science (ICETETS -2024) in **Kings College of Engineering, Pudukkottai** on 02.05.2024.
- **Ferosha thowhith S, Balaji N, Umamaheswari R, Daniel I** Presented a **paper titled** on **OPTIMIZING ENERGY HARVESTING AND LOAD MANAGEMENT** in the International conference on Emerging Trends in Engineering, Technology and Science (ICETETS -2024) in **Kings College of Engineering, Pudukkottai** on 02.05.2024
- **Yazhini S, Karupiah S, Jerin Titus J, Muralidharan V** Presented a paper titled on **DESIGN OF A LOW-COST PRINTED CIRCUIT BOARD DEVELOPMENT SYSTEM** in the International conference on



Recent Trends in Engineering and Science (ICRTES-2024) in **Kings College of Engineering, Pudukkottai** on 02.05.2024 & 03.05.2024.

- **Manirathnam S, Aresh M, Siranjeevi S, Kirubhakaran OM** Presented a paper titled on **ENHANCEMENT OF SOLAR GENERATION USING MODULE MOUNTING STRUCTURE** in the International conference on Emerging Trends in Engineering, Technology and Science (ICETETS -2024) in **Kings College of Engineering, Pudukkottai** on 02.05.2024.
- **Ishwarya S, Sriram S, Siddharth A, Radhakrishnan J** Presented a paper titled on **GRID INTERGRATION SOLAR PV SYSTEM USING MULTILEVEL INVERTER WITH POWER QUALITY INTENSIFICATION** in the International conference on Emerging Trends in Engineering, Technology and Science (ICETETS -2024) in **Kings College of Engineering, Pudukkottai** on 02.05.2024.
- **Rajaperumal M, Thasin K, Selvapandi P, Vinitha J** Presented a paper titled on **DESIGN AND IMPLEMENTATION OF AN EMERGENCY SOLAR CHARGING SYSTEM FOR ELECTRIC SCOOTERS** in the International conference on Recent Trends in Engineering and Science (ICRTES-2024) in **Kings College of Engineering, Pudukkottai** on 02.05.2024 & 03.05.2024.
- **Vignesh C N, Priyadharshini K, Suriya S** Presented and published a paper titled on **SMART ENERGY EFFICIENT AUTOMATION SYSTEM WITH SECURITY FEATURES USING IOT** in the International Journal of Research and Analytical Reviews (IJRAR) in **The Board of International Journal of Research and Analytical Reviews (IJRAR)** on 02.05.2024.

Program Organized:

- **Mrs S Divya** have Organized one day workshop on **“Prototype/Process Design and Development”** association with **Mr U Aiyappan, Manager, Freesun Energy, Coimbatore** on 08.03.2024.
- **Dr K Bagyalakshmi** have Organized one day Seminar on **“How to Plan for Start-up and Legal and Ethical Steps”** in association with **Mrs Christi Ranjith, Team Lead, Accenture** on 09.03.2024.







Chief Patron:
Dr. V. NARAYANASAMY
Chairman, SRJ Groups

President:
Dr. H. GANESAN
Principal, SRJET

Vice President:
Dr. J. MAALMARUGAN
H/O/EEE, SRJET

Co-Ordinator:
Dr. K. Bagyalakshmi
AP/EEE, SRJET



SRI RANGANATHAR

INSTITUTE OF ENGINEERING AND TECHNOLOGY

Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai
 Accredited by NAAC with A+ Grade & ISO 9001:2015 Certified Institution
 Athipalayam, Coimbatore - 641 110, Ph:0422 2697792, www.sriet.ac.in

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



INSTITUTION'S INNOVATION COUNCIL
(Ministry of HRD Initiative)

INSTITUTION'S INNOVATION COUNCIL

&



EMEER ASSOCIATION PRESENTS

One Day Seminar on

How to Plan for Start-up and Legal & Ethical Steps

Speaker

Mrs. Christi Ranjith

Team Lead, Accenture



Date : 09.03.2024

Time : 10.00 am

Seminar Hall

- Dr K Bagyalakshmi have Organized Add-On Course on “Recent Trends in IoT Application Development” from 25.03.2024 to 28.03.2024 in association with G Narendran, R&D Engineer, VS Innovation Pvt. Ltd., Chrompet, Chennai-44.



Chief Patron :
Dr. V. NARAYANASAMY
Chairman, SRJ Groups

President:
Dr. H. GANESAN
Principal, SRJET

Vice President:
Dr. J. MAALMARUGAN
H/O/EEE, SRJET

Co-Ordinator :
Dr. K. Bagyalakshmi, AP/EEE
AP/EEE, SRJET



SRI RANGANATHAR

INSTITUTE OF ENGINEERING AND TECHNOLOGY

Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai
 Accredited by NAAC with A+ Grade & ISO 9001:2015 Certified Institution
 Athipalayam, Coimbatore - 641 110, Ph:0422 2697792, www.sriet.ac.in

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



INSTITUTION'S INNOVATION COUNCIL
(Ministry of HRD Initiative)

INSTITUTIONS INNOVATION COUNCIL

&



EMEER ASSOCIATION

Conduct Add-On Course on

Recent Trends in IoT Application Development

Chief Guest

G. Narendran

R & D Engineer, VS Innovation Pvt. Ltd.,
 Chrompet, Chennai - 44



Date : 25.03.2024 - 28.03.2024
 Time : 10.00 am - 04.30 pm



Journal Publication Details:

- **Dr.K.Bagyalakshmi** Presented and published a paper titled on **SMART ENERGY EFFICIENT AUTOMATION SYSTEM WITH SECURITY FEATURES USING IOT** held by **The Board of International Journal of Research and Analytical Reviews (IJRAR)** on **02.05.2024**.



Research proposal Details:

- **Dr K Bagyalakshimi** have proposed project on title “**How might we design a cost-efficient Myoelectric prosthetic arm using 3D print**” at **Naan Mudhalvan-Anna University Niral Thiruvizha** on **14.01.2024**.
- **Mr D Palanivel** have proposed project on title “**How might we create a Skill/Job recommender application using suitable technology**” at **Naan Mudhalvan-Anna University Niral Thiruvizha** on **14.01.2024**.
- **Mrs G Mariya Sundari** have proposed project on title “**How might we explore the adoption of game-based education to cultivate diverse skills**” at **Naan Mudhalvan-Anna University Niral Thiruvizha** on **14.01.2024**.

Conference Publication Details:

- **Dr.K.Bagyalakshmi** presented the paper titled on “**IoT Based Poultry Farm Smart Management System**” in **2nd International conference on Knowledge Engineering and Communication Systems** held at **SJC Institute of Technology** in association with **IEEE Bangalore Section** on **18.04.2024 & 19.04.2024**.





- **Mr K Rajeshkumar** Presented a paper titled on **“RASPBERRY PI BASED FACE RECOGNITION AND FINGERPRINT ATTENDANCE SYSTEM”** in International conference on Recent Trends in Engineering and Science (ICRTES-2024) during 02.05.2024 & 03.05.2024 at Kings College of Engineering, Pudukkottai.
- **Mr K Muthuraj** Presented a paper titled on **“DESIGN AND IMPLEMENTATION OF AN EMERGENCY SOLAR CHARGING SYSTEM FOR ELECTRIC SCOOTERS”** in international conference on Recent Trends in Engineering and Science (ICRTES-2024) during 02.05.2024 & 03.05.2024 at Kings College of Engineering, Pudukkottai.



Interaction with Outside World:

Dr K Bagyalakshmi Served as a Reviewer for the **“International conference on Research Advances in Engineering and Technology” (ITechCET-2024)** at **Musaliar College of Engineering and Technology, Pathanamthitta, Kerala** on 24.05.2024 & 25.05.2024.

FDP/STTP/Seminar/Workshops Attended Details:

- **Dr.J.Maalmarugan, Mr. Alex George, Dr.K.Bagyalakshmi, Mr.P.Meenakshi Sundaram, Mr.D.Palanivel, Mr. K.Rajesh Kumar** Participated in a **Five-Day Online FDP** on **“Innovative Strategies for Creative Classroom Teaching”** in **Vellore Institute of Technology (VIT), Chennai** on 19th to 23rd February 2024
- **Dr.J.Maalmarugan, Mr.D.Palanivel** have Successfully cleared the assessment as **Trainer with Grade B** for the qualification pack of **Field Technician Other Home Appliances (ELE/Q3104-V3.0)** in **National Skill Qualification Framework Level – 4** on 22.03.2024.
- **Mr K Muthuraj** have Participated in two days’ workshop on **“Smart Charging, Bright Future: Understanding Battery Management Systems in Electric Vehicles”** in **Sree Sakthi Engineering College, Karamadai, Coimbatore-641104** on 07.03.2024 and 08.03.2024
- **Dr.J.Maalmarugan, Mr. Alex George, Mr.P.Meenakshi Sundaram, Dr.K.Bagyalakshmi, Mr.D.Palanivel, Dr S Divya , Mrs G Mariya Sundari** have Participated in the one-day workshop on



“Virtual Labs” organized by SRIET in Collaboration with Amrita Virtual Labs, Amrita Vishwa Vidyapeetham in Amrita Virtual Labs, Amrita Vishwa Vidyapeetham on 03.04.2024.

- Dr S Divya have Successfully completed Microsoft, SAP & TNSDC led FDP on “Applied AI with Deep Neural Networks” under TechSaksham in Naan Mudhalvan on 01.02.2024 to 03.02.2024



Coimbatore, Tamil Nadu, India
 Sri Ranganathar institute of engineering and technology Sarkarsamakulam-Thudiyalur Rd, Tamil Nadu 641110, India
 Lat 11.128876°
 Long 76.986145°
 08/03/24 12:08 PM GMT +05:30

- Mr Alex George have Successfully completed NPTEL-ACTE FDP 12 weeks course on “Operation and Planning of Power Distribution Systems” in IIT-Guwahati on Jan-Apr 2024.
- Dr.J.Maalmarugan, Mr. Alex George, Dr.K.Bagyalakshmi, Mr.P.Meenakshi Sundaram, Mr.D.Palanivel, Mr. K.Rajesh Kumar , Mr K Muthuraj, Dr S Divya, Mrs G Mariya Sundari have Attended 6 days FDTP on “EE3023 MEMS and NEMS” in Sree Sakthi Engineering College, Karamadai, Coimbatore-641104 on 24.06.2024 to 29.06.2024.





Technical Message:

India - the key player in semiconductor:

India is focusing on becoming a key player in semiconductor manufacturing. The government recently announced a multi-billion-dollar initiative to set up semiconductor fabrication plants within the country. This is significant for India's self-reliance in the electronics sector, as the demand for chips in everything from smartphones to automotive

electronics is growing rapidly. Companies like *Vedanta* and *Foxconn* are looking to invest in building semiconductor manufacturing units, which could reduce dependency on imports and boost India's electronics industry companies, car manufacturers, app-based transportation network companies and mobility solution providers have entered the sector and are slowly building up electric car capacity and visibility.



Incentives for Semiconductor manufacturing:

The government has approved a financial outlay of approximately **₹76,000 crore** (around \$10 billion) for setting up semiconductor fabrication plants (fabs), packaging units, and other infrastructure necessary for a robust semiconductor manufacturing ecosystem in India.

Government Incentives Boosting Semiconductor Startups in India:
 Capital Subsidies, Tax Breaks, and More

- Capital Subsidies and Tax Incentives
- Production-Linked Incentive (PLI) Scheme
- Support for Design-Linked Incentives (DLI)
- Special Economic Zones (SEZs)



Skills of a Successful Electrical Engineer

