Volume - X, Issue - 3 (2024-25 A.Y)

NSRIT AUTONOMOUS

E-MINDS

DEPARTMENT OF EEE

Established in 2008, the Department of EEE has grown steadily, offering programs that cater to the evolving needs of the industry. The department began with a B. Tech program with an initial intake of 60 students in 2008, followed by the launch of an M. Tech program in Power Systems Control and Automation with 24 students in 2014.The department consists of qualified and dedicated faculty who serve as the key pillars supporting the department's growth and success in all aspects. Our curriculum and activities encompass key areas such as power systems, control systems, electrical machines, electromagnetic theory, and computer languages. They also integrate the latest advancements in rapidly growing fields like electric vehicles and renewable energy systems through honour and minor degree, which are essential for modern societal development and industrial progress

Department Vission

- To attain academic excellence in electrical and electronics engineering by imbibing ethical and moral values and contributing to society through research.

Department Mission

- M1: To impart technical knowledge thorough quality education and creating conducive environment through state-of-the-art infrastructure and facilities.
- M2: To promote academia - industry relationship for enhancing multidisciplinary research.
- M3: To imbibe core values of integrity, team work, professional ethics and societal responsibilities

THE CREW

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HOD Message:

It is a privilege and honour to lead the EEE department at this esteemed institution. Our field is at the heart of modern technological advancements, with a particular emphasis on the rapidly growing electric vehicle (EV) sector. This dynamic field encompasses core technologies like power systems, power electronics, electrical machines, control systems, and electromagnetic theory etc., all of which are critical to the development of efficient and sustainable transportation solutions.

To stay at the forefront of innovation, our departmental association, ADVAYA, organizes workshops, technical training, and expert guest lectures. These initiatives focus on emerging trends, including EV technologies, drone, IOT Technologies and aim to equip our students and faculty with the knowledge and skills needed to excel in this exciting domains.

Our department is committed to playing a pivotal role in shaping the future of electric mobility. By fostering research, development, and education in EV-related areas, we strive to create a sustainable and electrified transportation ecosystem.

Department Profile

Established in 2008, the Department of Electrical and Electronics Engineering has grown steadily, offering programs that cater to the evolving needs of the industry. The department began with a B.Tech program with an initial intake of 60 students in 2008, followed by the launch of an M.Tech program in Power Systems Control and Automation with 24 students in 2014.The department consists of qualified and dedicated faculty who serve as the key pillars supporting the department's growth and success in all aspects. Our curriculum and activities encompass key areas such as power systems, control systems, electrical machines, electromagnetic theory, and computer languages. They also integrate the latest advancements in rapidly growing fields like electric vehicles and renewable energy systems through honour and minor degree, which are essential for modern societal development and industrial progress

The departmental association, ADVAYA, organizes various initiatives like workshops, technical training sessions, guest lectures, and seminars featuring industry experts and academicians. These activities aim to foster continuous knowledge enhancement for both faculty and students, ensuring they stay updated with emerging trends and technologies. The department is committed to developing innovative and skilled graduates who contribute meaningfully to the industry and academia. With the rapid industrial growth in the country, there is a rising demand for electrical engineers in the power sector, private industries, public

sector undertakings (PSUs), and government organizations, creating ample opportunities for our graduates to excel and lead in their careers.

Department Vision

To attain academic excellence in electrical and electronics engineering by imbibing ethical and moral values and contributing to society through research.

Department Mission

M1: To impart technical knowledge thoroughly quality education and creating conducive environment through state-of-the-art

M2: To promote academia - industry relationship for enhancing multidisciplinary research

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Program Educational Objectives

PEO 1: Demonstrate the real-world engineering problem solving skills by applying the fundamental and conceptual engineering knowledge as a practicing Electrical and Electronics Engineer

PEO 2: Provide research-based engineering solutions addressing the environment and sustainability by maintaining the professional standards and ethical values.

PEO 3: Foster self-directed learning through their professional experience, technology advancements in their relevant field of interest.

Dr. R. S. R. Krishnam Naidu

Professor & HOD – EEE

The following are the Activities and Achievements from the department of EEE

S.No	Name of the Activity and Achievement	Organized by	Date of the Event	Page Numbers
1.	Faculty Development Program on Green Energy	Maharaj Vijayaram Gajapathi Raj College of Engineering	02-12-2024 to 07-12-2024	6
2.	International Conference on Present Challenges and Innovations in Electrical Engineering (PCIEE-2024)	University College of Engineering (Autonomous), Osmania University, Hyderabad.	20-12-2024 to 21-12-2024	6-7
3.	Alumni Talk -1	NSRIT College, Department of EEE	21-12-2024	7-8
4.	Interdepartmental Collaboration: EEE Students at CSE Cultural Club's Event"	NSRIT College, Department of CSE		8
5.	Virtual Alumni Meet	NSRIT College, Department of EEE	28-12-2024	9
6.	CEMS Industrial Visit	NSRIT College, Department of EEE	03-01-2025	10
7.	Alumini Talk - 2	NSRIT College, Department of EEE	08-01-2025	11
8.	3- Day Workshop On Embedded systems.	NSRIT College, Department of EEE	06-01-2025 to 08-01-2025	11-12
9.	Awareness program on Electricity Consumer Grievances Redressal Forum (CGRF)	NSRIT College, Department of EEE	21-01-2025	13

10.	Guest Lecture on connected Autonomous Vehicles	NSRIT College, Department of EEE	23-01-2025	14
11.	Alumini Talk - 3	NSRIT College, Department of EEE	25-01-2025	14-15
12.	NSRIT Second-Year EEE Students Win 3rd Prize at Aditya University Projects Expo	Adity University, Surampalem	30-01-2025 to 31-01-2025	15
13.	Guest Lecture on Artificial Intelligence	NSRIT College, Department of EEE	07-02-2025	16
14.	Second EEE Students Outside Participation	JNTU-GV, GVP, ANITS, Aditya University	10-02-2025 to 27-02-2025	16
15.	Industrial Visit to APEPDCL SCADA Control Centre	NSRIT College, Department of EEE	28-02-2025	17

1. Faculty Development Program on Green Energy

Mrs. Swathi Mantri, a faculty member at Nadimpalli Satyanarayana Raju Institute of Technology, successfully completed the AICTE-approved ATAL Academy Faculty Development Program on Innovation in Green Energy Generation and Storage Technologies. The program, held at Maharaj Vijayaram Gajapathi Raj College of Engineering, enhanced her expertise in sustainable energy solutions, reflecting the institute's focus on innovation and research.


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AICTE

MANBAS

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

Nelson Mandela Marg, Vasant Kunj, New Delhi -110070

AICTE Training and Learning (ATAL) Academy

Certificate

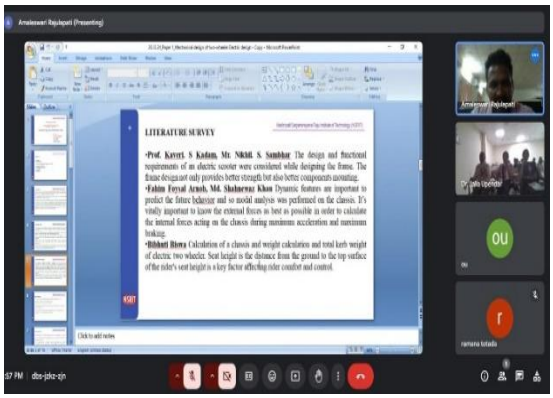
It is certified that Mrs. Swathi Mantri, Faculty members of the AICTE approved institutions of NADIMPALLI SATYANARAYANA RAJU INSTITUTE OF TECHNOLOGY has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Innovative green energy generation and storage technologies at MAHARAJ VIJAYARAM GAJAPATHI RAJ COLLEGE OF ENGINEERING from 02/12/2024 to 07/12/2024.

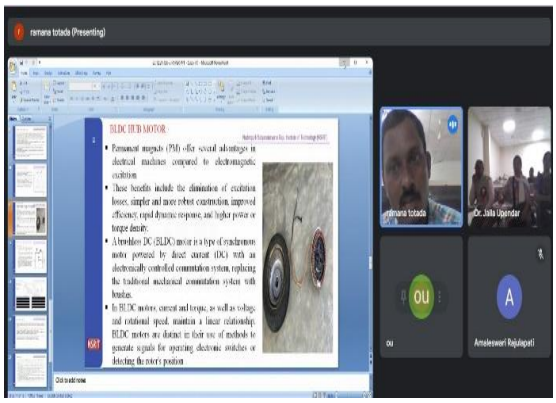
S Subrahmanyam Mendu
Professor Level (AICTE Institute), Coordinator
MAHARAJ VIJAYARAM GAJAPATHI RAJ COLLEGE OF ENGINEERING

Dr. Sunil Luthra
Director & Bureau Head
Training and Learning Bureau, AICTE

2. International Conference on Present Challenges and Innovations in Electrical Engineering (PCIEE-2024)

Mr. T. Ramana, Mr. P. Mahesh, and Dr. R. Amaleswari, esteemed faculty members of NSRIT, attended the International Conference on Present Challenges and Innovations in Electrical Engineering (PCIEE-2024). Organized by the Department of Electrical Engineering at the University College of Engineering (Autonomous), Osmania University, Hyderabad, this significant event is scheduled for 20th and 21st December 2024 and will be conducted online. PCIEE-2024 aims to bring together distinguished researchers, academicians, industry professionals, and students to discuss the latest advancements, challenges, and innovations in the electrical engineering domain. The conference offers a platform for the exchange of ideas, presentation of research findings, and fostering collaborations among participants from across the globe. This event plays a crucial role in promoting the growth and development of electrical engineering, facilitating global networking, and advancing the field's progress.





3. Alumni Talk -1

Alumni Mr. Uma Shankar, from the 2018-2022 batch of Nadimpalli Satyanarayana Raju Institute of Technology (NSRIT), recently visited the college and interacted with 3rd-year students. Currently working as a Software Developer at Tilicho Labs, Mr. Uma Shankar shared his professional journey and provided valuable insights into the software development industry. He discussed essential skills for success, emerging technologies, and the significance of continuous learning in the ever-evolving tech landscape. The session offered practical knowledge and career guidance, helping students understand industry expectations. Mr. Uma Shankar's visit strengthened the bond between NSRIT alumni and students, fostering a spirit of mentorship and inspiring the next generation of engineers to excel in their careers.

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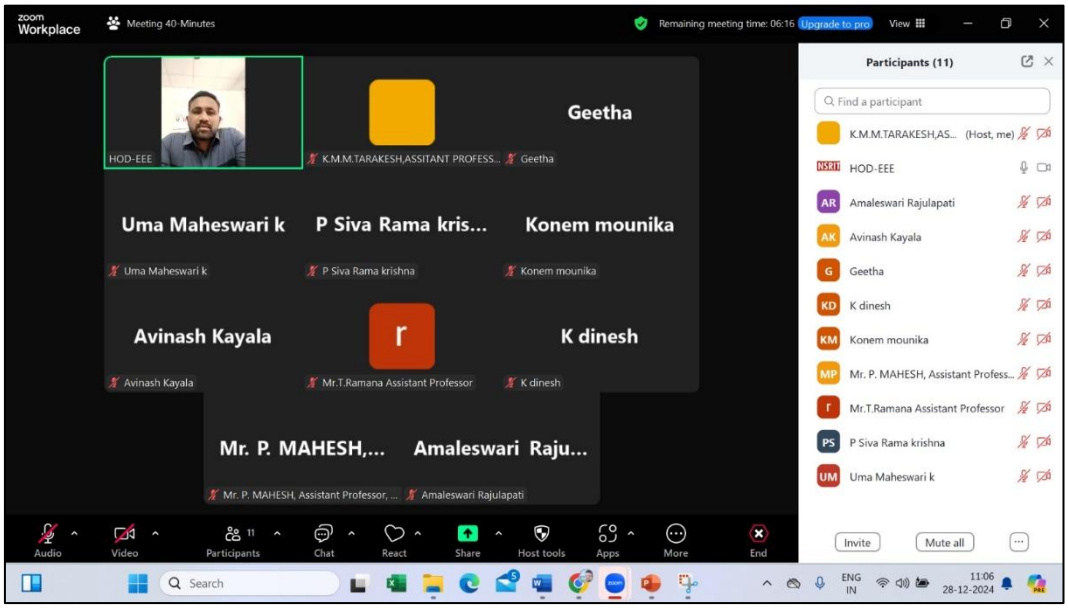
4. Interdepartmental Collaboration: EEE Students at CSE Cultural Club's Event"

Second-year Electrical and Electronics Engineering (EEE) students at Nadimpalli Satyanarayana Raju Institute of Technology (NSRIT) participated in a post-presentation event organized by the Cultural Club of the Department of Computer Science Engineering. The event offered a valuable opportunity for interdisciplinary interaction, allowing students to enhance their presentation skills, exchange ideas, and gain insights into a range of technical and cultural topics. This initiative

promoted cross-departmental collaboration and contributed to the holistic development of students, reinforcing the institute's commitment to fostering innovation, communication, and teamwork across disciplines.

5. Virtual EEE Alumni Meet

The EEE Alumni Meet for the 2018-2022 batch at Nadimpalli Satyanarayana Raju Institute of Technology (NSRIT) was successfully held on 28th December 2024 through an online platform. This virtual event brought together alumni and current students, offering a valuable opportunity for meaningful interactions and networking. Alumni shared their professional journeys, providing insights into career growth, industry trends, and the skills required to thrive in the rapidly evolving engineering field. The event helped current students gain practical knowledge and guidance for their future careers while also allowing alumni to reconnect with their alma mater. The meet emphasized the importance of a strong alumni network, fostering a sense of community, and reinforcing NSRIT's commitment to continuous learning, mentorship, and professional development opportunities for both past and present students.



6. CEMS industrial visit

The Centre of Excellence in Maritime & Shipbuilding (CEMS) is a premier skill development initiative established by the Government of India, Ministry of sports, Shipping, and Waterways, in collaboration with Siemens Industry Software India Pvt Ltd and the Indian Register of Shipping. The industrial visit has been organised for internal participants. 70 students from EEE III year of our college attended the visit. The Head of the Department Dr. R S R Krishnam Naidu and Dr. R. Amaleswari, Associate Professor has coordinated the industrial visit. The Head of the Department thanked the Centre of Excellence in Maritime and Shipbuilding training team for giving permission to visit the site.

7. Alumini Talk - 2

An alumni talk for the 3rd-year EEE students was organized by Mr. Tarakesh Sir, featuring Ritik Ranjan, an NSRIT alumnus who is currently working as a Software Engineer at TCS, Chennai. The session was conducted online, allowing students to actively interact with Ritik and gain valuable insights into the software industry. During the talk, Ritik shared his professional experiences, career progression, and the skills required to succeed in the rapidly evolving tech landscape. The students were able to ask questions and receive practical advice on career development. Ritik's guidance inspired the students and provided them with a deeper understanding of the software engineering field, helping them prepare for their future careers with greater clarity and direction.

8. 3- Day Workshop On Embedded systems.

Mr. Madhan Kumar. With over 14 years of experience in electronics and embedded systems. The 5-day workshop on "Real-Time Embedded Systems Using Arduino" was held to provide participants with an in-depth understanding of the concepts, programming, and applications of embedded systems. The event aimed to bridge the gap between theoretical knowledge and practical implementation, fostering technical skills relevant to industry demands.The event has been conducted for internal participants. 70 internal participants are from Department of Electrical & Electronics Engineering - II year of our college. The Principal of the college has addressed the gathering. Dr. R S R Krishnam Naidu, HOD-EEE has thanked the Resource person for accepting the invitation for the conduction of the event. Dr. R. Amaleswari, Associate Professor and Dr. S.Rajendra Prasad, Assistant Professor has hosted the event.

- Setting Up and Interfacing LEDs: Participants will learn how to connect LEDs to the Arduino board and control them using simple code. This includes understanding current-limiting resistors and basic programming concepts.

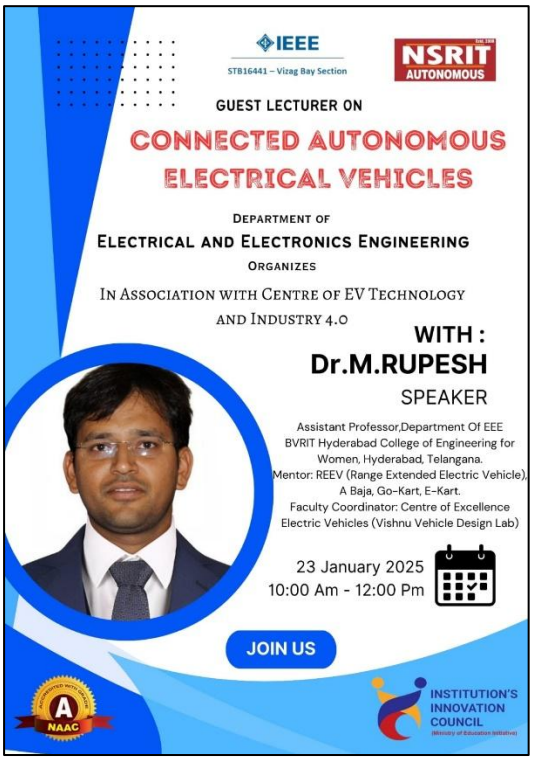
- Integrating Switches and Relays for Practical Applications: Participants will learn how to interface switches and relays with the Arduino. They will implement simple projects such as controlling an LED with a switch and using a relay to turn on/off a high-power device.

9. Awareness program on Electricity Consumer Grievances Redressal Forum (CGRF)

The Department of EEE organized an "Awareness Program on Electricity Consumer Grievances Redressal Forum (CGRF)" on 21st January 2025. The session was led by Dr. B. Satyanarayana, Chairperson of CGRF, APEPDCL. The primary objective of the program was to raise awareness among students about the importance and role of CGRF in addressing consumer grievances related to electricity services. Dr. Satyanarayana elaborated on the process of lodging complaints, the resolution mechanisms, and the significance of consumer rights within the electricity sector. The session offered valuable insights into the regulatory framework, empowering students with essential knowledge about consumer protection and helping them understand the mechanisms in place for resolving issues in the electricity industry.

10. Guest lecture on Connected Autonomous Electrical Vehicles

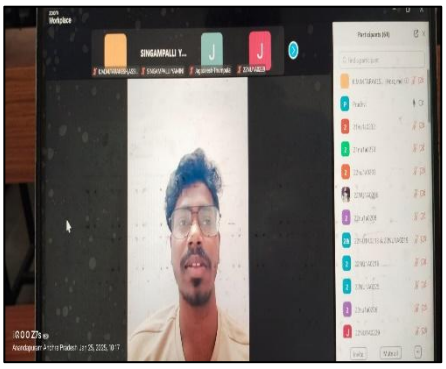
The Department of EEE organized a "Guest Lecture on Connected Autonomous Electrical Vehicles" on 23rd January 2025. The session was conducted by Dr. M. Rupesh, Assistant Professor at BVRIT College of Engineering for Women, Hyderabad. Dr. Rupesh discussed the advancements in connected autonomous vehicles, highlighting the role of electrical engineering in developing these innovative technologies. The lecture covered topics such as vehicle automation, connectivity, and the challenges faced in implementing autonomous systems. Students gained valuable insights into the future of transportation, as well as the significant opportunities in this evolving field of electrical engineering.



11. Alumni Talk -3

Alumni Mr. K. Prudhvi Yadav, from the 2018-2022 batch of Nadimpalli Satyanarayana Raju Institute of Technology (NSRIT), recently visited the college and interacted with 3rd-year students. Currently working as a Packaged APP Developer at Accenture, Mr. Prudhvi Yadav shared his professional journey and provided valuable insights into the software development industry. During the session, he discussed the essential skills required to succeed in the field, emerging technologies, and the importance of continuous learning to stay ahead in the industry. His talk offered the students practical knowledge and career guidance, helping them better

understand industry expectations and prepare for their future careers in the ever-evolving tech landscape.



12. NSRIT Second-Year EEE Students Win 3rd Prize at Aditya University Projects Expo

Second-year EEE students from NSRIT participated in the Projects Expo at Aditya University, Surampalem, East Godavari District, and secured the 3rd prize. Their innovative projects impressed the judges, showcasing the students' creativity and technical skills. This achievement highlights NSRIT's commitment to fostering practical learning and excellence.

13. Guest lecture on Artificial intelligence

The Department of Electrical and Electronics Engineering at Nadimpalli Satyanarayana Raju Institute of Technology (Autonomous), in association with the Centre for EV Technology and Industry 4.0, organized a guest lecture on "Artificial Intelligence".

Artificial intelligence (AI) is a technology that enables machines to perform tasks that usually require human intelligence, such as learning, problem solving, and decision making. AI can be used to create devices and applications that can see, understand language, and make decisions.

Human intelligence refers to the intellectual capacity of humans, encompassing the ability to learn, understand, reason, solve problems, adapt to new situations, think abstractly, and apply knowledge to navigate complex scenarios, often characterized by high levels of self-awareness and motivation; essentially, it's the mental capability to process information, learn from experience, and make informed decisions.

14. Second EEE Students Outside Participation

Second-year EEE students actively participated in various intra-institute competitions and won prizes. They showcased their skills at events held by Gayatri Vidya Parishad, JNTU-GV, GMRIT, and Aditya University. Their enthusiasm and dedication earned them recognition, reflecting the strong talent and competitive spirit nurtured at NSRIT, and contributing to the institute's success in such events.

15. Industrial Visit to APEPDCL SCADA Control Centre

An industrial visit to the SCADA Control Centre at APEPDCL, Pedawaltair, Visakhapatnam, was organized for the 4th-year students of the Department of EEE. The visit provided students with practical exposure to the SCADA system, emphasizing real-time monitoring and control of power distribution networks. During the visit, students gained insights into automation processes, fault detection, and data acquisition techniques. They observed the integration of advanced technologies in managing electrical grids. The visit offered a valuable learning experience, enhancing students' understanding of modern power distribution systems and the role of automation and control in the energy sector.

Various components installed at the 33/11 KV sub-station for SCADA & DMS implementation in Visakhapatnam City include IED relays, RTUs, TMUs, and routers. IED relays acquire data from circuit breakers, sending it to the RTU. The RTU collects data from various devices and communicates with the SCADA control center via fibre optic cables and leased line networks.