



Editorial Board

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Technical Talk on “EV – An Engineer’s Perspective” at AJIET

October 08, 2025

A technical talk on “EV – An Engineer’s Perspective” was conducted by Dr. Suryanarayana K, Professor and Head, Department of Electrical and Electronics Engineering (EEE), NMAMIT, Nitte and his team for the third-semester students of the Electronics and Communication Engineering (ECE) and Mechanical Engineering (ME) departments of A J Institute of Engineering and Technology (AJIET), Mangaluru on 6th October 2025 at 2:00 PM in their Seminar Hall–1. The session was aimed at imparting knowledge to their students with a comprehensive understanding of Electric Vehicle (EV) fundamentals, focusing on the key components – the battery, motor and controller, as well as their interdependent roles in EV operation. Dr. Suryanarayana and his team explained the principles, design considerations and real-world challenges associated with each subsystem, helping the students connect their theoretical knowledge with the practical engineering applications.

To reinforce the concepts, the team conducted five live demonstrations, which included:

- I. Working of Capacitors and Inductors – showcasing energy storage and reactive behaviour.
- II. Battery Know-Hows – explaining types, charging and discharging, and safety considerations.
- III. Buck Converter – illustrating step-down DC-DC conversion principles.
- IV. Boost Converter – demonstrating step-up DC-DC conversion used in EV power systems.
- V. Induction Motor V/f Control and Tesla Egg Demonstrations – highlighting motor control techniques and the rotating magnetic field concept.

The interactive nature of the session, coupled with hands-on demonstrations, helped students gain valuable insights into the working and design aspects of electric vehicles. The participants expressed enthusiasm and appreciation for the engaging and informative session, that enhanced their curiosity and understanding of the modern automotive technologies.

Substation Visit at Kemar

October 12, 2025

The Department of Electrical and Electronics Engineering, NMAMIT, Nitte in Association with The Institution of Engineers (India) (IEI), Institute of Electrical and Electronics Engineers (IEEE) and Indian Society for Technical Education (ISTE) organised an industrial visit to the Substation, Kemar, Parpale, Doopadakatte, Udupi District on October 10, 2025. Fifty six students of B. Tech (EEE) final year students accompanied by Mr. Chiranjeevi Y, Assistant Professor – Grade - II and Mr. N. Rajneesh Shetty, Lab Assistant visited Kemar substation of KPTCL on Friday, October 10, 2025.

Mr. Uday Kumar, Assistant Executive Engineer (Maintenance), KPTCL welcomed the students and faculty members and briefed them on the operation and maintenance of the substation. The substation receives electrical power at 220 kV from Varahi hydroelectric plant and UPCL thermal plant. This is stepped down to 110 kV for sub-transmission. From 110 kV, the voltage is stepped down further to 11 kV for local distribution. The switchgear for 220 kV and 110 kV systems are located outdoor whereas the same for 11 kV system are located indoor. Mr. Uday Kumar took the students to different regions of the switchyard and described them. The outdoor switchyard includes surge arrestors, isolators, earthing switches, circuit breakers, current transformers and potential transformers. The procedure for availing a shutdown including manual tripping of the circuit breaker followed by opening of the isolators and closing of the earth switches was also demonstrated to the students. The students were also shown the two 220/110 kV power transformers and explained the functioning of the equipment such as oil surge relay, Buchholz relay, breather, cooling system, neutral current transformer. Further, Mr. Uday Kumar arranged to open an indoor 11 kV circuit breaker and demonstrate its operation to the students. He also elaborated the role of SCADA (Supervisory Control and Data Acquisition) system and station battery bank.

To conclude the visit, the faculty member and the students thanked Mr. Uday Kumar, who is an alumnus of NRAMP, Nitte for his keen interest in explaining the students about the sub-station operation.

Industry Visit by Faculty Members

October 25, 2025

Two faculty members of the Department of Electrical and Electronics Engineering (EEE) Dr. Dinesh Shetty, Assistant Professor – Grade III and Mr. Ravikiran Rao, Assistant Professor – Grade – II lead by Dr. Suryanarayana K, Professor & Head, Department of EEE visited Leksa Lighting, Moodbidri, NIDEC, Mangaluru, Teloquence Semiconductors, Udupi, Manipal Energy and Infratech, Manipal, Manipal.Net, Manipal with the aim of inviting them to participate in the Student Hobby Project Exhibition – ELIXIR 2025, held annually and organized by the Department of EEE, scheduled to be held on October 10-11, 2025 in the college premises. The visit also sought to strengthen industry-institute interactions and explore opportunities for collaborative projects, technical advisory roles and curriculum enhancement.

During the visits, Dr. Suryanarayana K briefed the company representatives about the objectives of ELIXIR, the ongoing projects in the Department of EEE and the key strengths of the department in the domains of Power Electronics, Renewable Energy Systems and Embedded Technology. He also emphasized the importance of industry participation in the event to enhance student exposure and promote collaborative innovation.

At Leksa Lighting, Mr. Roland, Managing Director, appreciated the efforts of the department in connecting academia with industry and agreed to join the Technical Advisory Committee to provide insights into courses related to Illumination Technology.

At NIDEC, Mangaluru, Mr. Miasaka was invited to attend ELIXIR 2025. He readily accepted the invitation and fondly recalled his experience during previous editions of the event, expressing interest in continued association with NMAMIT.

During the interaction with Mr. Anand, Founder of Teloquence Semiconductors, Udupi, he emphasized the need for students to strengthen their fundamentals in semiconductor technology to align with future industry needs. Dr. Suryanarayana elaborated on the department's recent initiatives to introduce semiconductor-oriented courses and projects.

At Manipal Energy and Infratech, Mr. Sudheer Shetty introduced the team to their HR Head and the HoD extended the formal invitation to ELIXIR. The team also interacted with Mr. Sathish, Project Team Lead, discussing current trends in solar energy and its derivatives. Dr. Suryanarayana highlighted the department's ongoing solar-based projects and invited the team to witness student innovations during the exhibition.

Finally, at Manipal.Net, the delegation met Ms. Ashwini, an alumna of NMAMIT and was introduced to Mr. Prashanth, Director of the company. The HoD shared the motivation and vision behind ELIXIR and extended the invitation to participate in the event.

The visit was highly productive in strengthening industrial relationships, gaining insights into current technological trends and expanding participation in ELIXIR 2025. Several industry leaders expressed their keen interest in attending the exhibition and collaborating with the department in the future initiatives.

Expert Talk on SGP Components

October 12, 2025

The Department of Electrical and Electronics Engineering (EEE), NMAMIT, Nitte in Association with The Institution of Engineers (India) (IEI), Institute of Electrical and Electronics Engineers (IEEE) and Indian Society for Technical Education (ISTE) organised a technical talk by Mr. Raghupathy Bhat, Professor, NRAMP, Nitte on “Switch Gear Components of Electrical Transmission and Distribution System” on October 11, 2025 between 9.30 AM and 11 AM at Machines Lab, Department of EEE, NMAMIT, Nitte. The speaker spoke about the various components that are used in electrical generation, transmission and distribution systems. He showed and explained different switch gear components procured from Kavour substation. He also shared a few reading materials with the students. Dr. Rajalakshmi Samaga B L, Professor, Department of EEE and the Department Professional Society Coordinator thanked the speaker and handed him over an appreciation letter. Thirty six students of B. Tech (EEE)

final year appearing for campus placement for the switch gear company “Burns and McDonnell” got benefited from this talk.



Felicitation to Dr. Rasananda Muduli

October 11, 2025

The Department of Electrical and Electronics Engineering, NMAM Institute of Technology, Nitte, felicitated Mr. Rasananda Muduli, Assistant Professor – Grade I, Department of EEE, on October 11, 2025, for successfully completing his Ph.D. defense on his doctoral research work titled “Application of Reinforcement Learning for Frequency Control of Electric Vehicles and Renewable Energy Sources Integrated to Power System” carried out under the guidance of Dr. Debashish Jena and Dr. Tukaram Moger, Professors, Department of Electrical and Electronics Engineering, National Institute of Technology Karnataka (NITK), Surathkal. The department faculty members congratulated Mr. Rasananda Muduli on this significant academic achievement and extended best wishes for his continued contributions to research and teaching in the field of power systems and artificial intelligence applications.



Industrial Visit to Varahi Underground Hydro-Electric Project

October 18, 2025

The Department of Electrical and Electronics Engineering, NMAM Institute of Technology, Nitte, organized an industrial visit to the Varahi Underground Hydro-Electric Project on October 16, 2025. A total of 69 students from the V Semester, B.Tech (EEE) accompanied by three faculty members, participated in the visit. The visit was aimed at providing students with the practical exposure to hydroelectric power generation and deepen their understanding of power plant operation, control and maintenance.

Located in the Western Ghats of Karnataka, the Varahi Hydro-Electric Power Plant is one of the state's most prominent hydropower facilities, managed by the Karnataka Power Corporation Limited (KPCL). The plant is well known for its underground powerhouse and advanced control systems, which make it an engineering landmark in renewable energy infrastructure.

During the visit, students were introduced to the layout and operation of the power plant through detailed presentations and technical discussions led by the KPCL officials. They told students that the Varahi Hydro-Electric Project has a total installed capacity of 230 MW, comprising four 115 MW generating units in its underground powerhouse. The plant generates

around 1,100 million units (MU) of electricity annually, contributing significantly to Karnataka's power supply.

Students also visited the Mani Dam, constructed across the Varahi River, which stores water for power generation. They observed the operation of two 4.5 MW generating units at the dam site and gained insights into the SCADA (Supervisory Control and Data Acquisition) system used for real-time monitoring and control of generation parameters. Detailed explanations were provided about the turbines, penstocks, transformers, lubrication systems and nozzles, giving students a holistic understanding of the hydroelectric generation process.

The visit provided students with valuable hands-on learning about power generation, transmission, and automation systems. Observing the operation of turbines, penstocks and the control systems strengthened their conceptual understanding of electrical energy conversion and grid integration.

Overall, the industrial visit to the Varahi Underground Hydro-Electric Project was a highly educational and enriching experience, bridging the gap between classroom learning and industrial practice. The Department extends its sincere appreciation to KPCL for their support and hospitality in organizing this insightful visit.

KARNATAKA POWER CORPORATION LTD.,
Varahi Project
ANNEXURE 'A'

ಸಂರಕ್ಷಿತ ಸಂಸ್ಥೆಗಳಿಗೆ ಸಂದರ್ಶನ (ಭಾರತೀಯರಿಗೆ ಮಾತ್ರ)
Visitors to Protected Establishments
(For Indian Nationals only)

No. **358**
phno:- 9448548622

Date / ದಿನಾಂಕ : 16.10.2025
Time / ಸಮಯ : 11:10 HRS

1. ಸಂದರ್ಶಕನ (ರ) ಹೆಸರು :
Name of Visitor (s)..... **Pradeep Kumar + 71 members**
ಒಟ್ಟು/ಸಂಖ್ಯೆ With total Number(s)..... **total 72 members**

2. ಪೂರ್ಣ ಅಂಚೆ ವಿಳಾಸ :
Full Postal Address..... **Asst. Professor, Dept. of E. & EE Engineering, NMAM, Institute of Technology, Nitte, Karnataka.**

3. ಅನುಮತಿ ನೀಡಿರುವ ಸ್ಥಳಗಳು : **MANI DASH & PH**
Permitted to see..... **MURTHI ONLY** **[VIA YADUR]**

4. ದಿನಾಂಕ ಮತ್ತು ಸಂದರ್ಶನದ ಕಾಲಾವಧಿ :
Date and Period of Visit..... **16.10.2025 [one day only]**

5. ಸಂದರ್ಶನದ ವೇಳೆ / Time of Visit..... **11:10 HRS to 16:30 HRS**

6. ಸಂದರ್ಶನದ ಕಾರಣ / Reason for Visit..... **Academic Study Tour**

7. ಅನುಮತಿ ಸ್ಥಿರೀಕರಣ / Clearance Confirmed..... **YES**

8. ಸಂದರ್ಶನದ ಅನುಮತಿ / Visit Approved..... **SEC. (E&V) / SEC. (V&H)**

9. ವಾಹನದ ಸಂಖ್ಯೆ / Vehicle No. **KA 19 AA 4244**

ಭದ್ರಾಧಿಕಾರಿ / Security Officer
K.P.C. Ltd., Hosangadi
ಕ.ವಿ.ನಿ.ನಿ. ಹೊಸಗಡಿ

ಸಂದರ್ಶಕರ ಸಹಿ / Visitor's Signature
(Instructions on overleaf)

Samhati – Parent Teachers' Meeting

October 27, 2025

The Department of Electrical and Electronics Engineering (EEE), NMAM Institute of Technology, Nitte conducted "Samhati" a Parent-Teacher Meeting on October 18-19, 2025, for the parents of first and third-year EEE students. The meeting was held in Room NC25, Second Floor, Sir M. Visvesvaraya Block, with active participation from the parents of 40 students.

Dr. Nagesh Prabhu, Vice-Principal, NMAMIT, Nitte graced the event. He spoke about the Vision and Mission of the department, the mentor-mentee process and the objectives behind introducing remedial classes and supervised learning. He advised parents to regularly monitor their wards' academic progress and encourage them to achieve good CGPA.

Dr. Suryanarayana K, Professor and Head, Department of EEE addressed the gathering and highlighted the importance of such interactions in the engineering domain. He emphasized the various opportunities provided to students to channelize their energy in the right direction to become competent engineers and responsible citizens. He also encouraged parents to attend the upcoming project exhibition ELIXIR, scheduled for November 10–11, 2025. Furthermore, he discussed the significance of core subjects, their relevance in diverse industries, opportunities in higher studies, and the continuous academic and professional support extended by the department.

Parents appreciated the department's efforts in closely monitoring student progress and requested daily access to attendance and marks. The HoD informed them about an upcoming app that will facilitate real-time monitoring and assured that details would be shared through the parent group.

Faculty members actively participated in the event. The program was well-coordinated by Mrs. Nutana Shetty, Asst. Professor – Grade I and Mrs. Swathi Hatwar H, Asst. Professor – Grade - II. Parents expressed their gratitude and appreciation for the department's continuous efforts in guiding and supporting students in their academic journey.



**Details of the Workshop / STTP/ Faculty Development Program
attended by the faculty of E&E Engg in the month of October
2025**

Sl. No.	Name	Dept	Title of the Programme	Place	Date
1.	Dr. Krishna Rao	E&E Engg	International Conference on 'Emerging Technologies in Electronics and Green Energy' (ICETEG 2025)	JSS Science and Technology University, Mysuru	October 10-11, 2025
2.	Mr. Chiranjeevi Yarramsetty	E&E Engg	Recent Trends and Breakthroughs in power industry for 21st Century Electrical Engineering Education	Dept of Electrical Engineering, National Institute of Technology, Silchar	October 03-07, 2025