

Electrical & Electronics Engineering Department-Newsletter

Volume 2024 Issue 3
(May June 2024)

About GMRIT

www.gmrit.edu.in

GMR Institute of Technology is situated in Rajam, a small industrial town approximately 100 kilometers away from the 'city of destiny,' Visakhapatnam in Andhra Pradesh. The institute's campus spans over a sprawling 117 acres of land. The lush, sylvan, and idyllic surroundings in the heart of the agricultural belt provide an ideal setting for higher studies. The institute is affiliated with Jawaharlal Nehru Technological University Gurajada, and approved by AICTE New Delhi. It has been accredited with NAAC - 'A' grade by UGC. The Department of EEE has been accredited by the National Board of Accreditation (NBA) in Tier-I for the academic years 2022-23 to 2024-25.

GMRIT offers 4-year B.Tech. programs in eight core disciplines and 2-year M. Tech programs in five specializations. The institution has received a grant extension of autonomous status for a period of ten years, starting from 2018-19 to 2027-2028.

About EEE Department

Vision

To be a preferred department of learning for students and teachers alike, with a commitment towards Academics & Research, serving the students in an atmosphere of innovation, critical thinking and making them Industry ready.

Mission

M1. To provide adaptable education in a collaborative and innovative environment in skilling the graduates to solve real world problems in the field of Electrical & Electronics Engineering

M2. To prepare the students as critical thinking professionals with multidisciplinary research orientation and Innovation

M3. To instill ethical values and nurture the graduates who will be able to contribute to the society

Overview

The Department of Electrical & Electronics Engineering was established in 1997. The department offers four-year B.Tech and two-year M.Tech programs. It has a rich tradition and well-qualified faculty, along with widely recognized laboratories. The department aims to provide a strong foundation in Electrical and Electronics Engineering fundamentals, emphasizing mathematical and scientific principles. Additionally, the course focuses on developing skills in the application of design processes for innovative engineering solutions. The annual intake of students in this department is 120.

Facilities & Infrastructure

- Sophisticated Laboratories include:
 - Electrical Machines Lab
 - Electrical Engineering Lab
 - Electrical Measurements Lab
 - Power Systems Lab
 - Power Electronics Lab
 - Electrical Systems Simulation
 - Power Electronics and Drives Lab (PG)
- An efficient administrative office that operates as per ISO-9001 standards
- A well-stocked department library
- To enable the students and provide opportunities, to understand in the industrial eco-systems and work on latest technological developments in the industries, MoUs are signed with various industrial organizations
- Committed and dedicated faculty

Major Courses Offered

- Electrical Machines
- Electrical Circuits
- Measurements and Instrumentation
- Semiconductor Devices & Circuits
- Linear and Digital integrated circuits
- Electromagnetic Field Theory
- Control Systems
- Power Generation, Transmission and Distribution
- Power System Protection
- Green Energy Technologies
- Power Electronics
- Electrical Vehicle Technologies
- Signals and Systems Theory
- Electrical Drives
- Power System Analysis and Control
- Engineering Economics and Project management

Research and Academic Achievements

Technical Paper Publication in Conferences

- Dr. Vasupalli Manoj et al. presented their article titled 'Performance Investigation of SRM-Based In-Wheel Electrical Vehicle' at the E3S Web of Conferences, conducted by Satya Institute of Technology and Management, Vizianagaram.
- Dr. Vasupalli Manoj et al. presented their article titled 'Fault Mitigation in Seven-Level Diode Clamped with Static Switch Based Fourth Leg Inverter Topology for Induction Motor Drives' at

- the E3S Web of Conferences, conducted by JNTUA College of Engineering, Anantapur
- Dr. R.Ramakrishna et al. presented their article titled 'Shunt Active Power Filter with Three Level Inverter using Hysteresis Current Controllers' at the E3S Web of Conferences, conducted by Satya Institute of Technology and Management, Vizianagaram.
 - Dr. R.Ramakrishna et al. presented their article titled 'Novel MPPT of PV System with MIWO Algorithm for Water Pumping Application' at the E3S Web of Conferences, conducted by Satya Institute of Technology and Management, Vizianagaram.
 - Dr. R.Ramakrishna et al. presented their article titled 'TS-Fuzzy Associated DTC of Three Phase Induction Motor Drive for Water Pumping from Single Phase Supply' at the E3S Web of Conferences, conducted by Satya Institute of Technology and Management, Vizianagaram.
 - Dr. N. V. A. Ravikumar et al. presented their article titled 'TNon Linear Modelling and Control of Unified Power Flow Controller' at the E3S Web of Conferences, conducted by NS Raju Institute of Technology, Sontyam, Visakhapatnam.
 - Dr. N. V. A. Ravikumar et al. presented their article titled 'Novel Control of Wind-PV-Battery based Standalone Supply System with LSTM Controllers' at the E3S Web of Conferences, conducted by JNTUA College of Engineering, Anantapur.
 - Dr. N. V. A. Ravikumar et al. presented their article titled 'Speed Control of 6-Phase PMSM using Fuzzy Controllers' at the E3S Web of Conferences, conducted by Satya Institute of Technology and Management, Vizianagaram.
- ### Papers Published in Journals
- S.R.K. Joga, P. Sinha, V. Manoj, S.R. Sura, V.N. Pudi, N.F. Ibrahim, A. Alkuhayli, M.M. Hussein, U. Khaled, D.E.M. Wapet, A. Beroual, and M.M. Mahmoud, "Applications of tunable-Q factor wavelet transform and AdaBoost classifier for identification of high impedance faults: Towards the reliability of electrical distribution systems," Energy Exploration & Exploitation, Vol. 0, No. 0, pp. 1-39, 2024. doi: 10.1177/01445987241260949 (Indexed by SCOPUS, IF:2.2, Q2, <https://doi.org/10.1177/01445987241260949>)
 - Anjaiah, Kanche, P. K. Dash, Ranjeeta Bisoi, Snehamoy Dhar, and S. P. Mishra. "A new approach for active and reactive power management in renewable based hybrid microgrid considering storage devices," Applied Energy vol. 367, pp. 123429, 2024 (Indexed by SCI/WoS, IF-11.2, Q1, doi: 10.1016/j.apenergy.2024.123429)
 - Karthick, K., Dharmaprakash, R., & Sathya, S. (2024), "Predictive Modeling of Energy Consumption in the Steel Industry Using CatBoost Regression: A Data-Driven Approach for Sustainable Energy Management," International Journal of Robotics and Control Systems, vol. 4, no. 1, pp. 33-49, 2024. (Indexed by Scopus, Q4)

- Punitha, K., Rahman, A., Radhamani, A.S., Nuvvula, R.S.S., Shezan, S.A., Ahammed, S.R., Kumar, P.P., Ishraque, M.F., "An Optimization Algorithm for Embedded Raspberry Pi Pico Controllers for Solar Tree Systems," Sustainability (Switzerland), vol.16, no. 9, pp. 3788, 2024 (Indexed by SCIE/WoS, IF- 3.9, Q1, doi: 10.3390/su16093788)

Guest Lecture / Events Organized

- The Department of Electrical and Electronics Engineering (EEE) at GMRIT organized a project exhibition on 30th May 2024. This event showcased the innovative projects developed by our EEE students, highlighting their creativity and technical prowess. The exhibition provided a platform for students to demonstrate their work, exchange ideas, and receive valuable feedback from faculty members.



- Conducted guest lecture on "An introduction to Power Cables and Their Industrial Applications" by Mr. B.Sreenivasula Reddy, Technical Officer-E, Electrical Section, M/s BARC, Kalpakkam, Tamilnadu on 04-05-2024.

Professional Development Activities by Faculty Members

- Dr. P.Ramana, Professor / EEE, completed the 'Python Basics for Data Science' course offered by IBM through the edX platform (Online Course).
- Dr. Sthita Prajna Mishra, Sr. Assistant Professor / EEE, completed the 'Python Basics for Data Science' course offered by IBM through the edX platform (Online Course).
- Dr.J.S.V. Sivakumar has participated in One Week Online Faculty Development Programme on "Entrepreneurial Perspectives on Green Energy and Electric Vehicle Innovation" organized by Department of EEE, Shri Vishnu Engineering College for Women (Autonomous) held during 21st – 26th May, 2024.

- Dr.P.Ramana, Dr.G.Chandra Sekhar, Dr.TSL Ayyarao, Dr.M.Rambabu Dr. R. Ramakrishna & Dr.V.Manoj participated in the online FDP titled "Recent Trends in Renewable and Electric Vehicle Technologies," organized by Lakireddy Bali Reddy College of Engineering, Mylavaram from 3rd to 7th June, 2024.

Placement Achievements of Our Students

Moschip (6.00 LPA)

- Uppala Yashwanth Kumar (20341A02B4)

Unschool (6.30 LPA)

- Krishna Koushik Bhogi (20341A0269)

Deepak Fertilisers and Petrochemicals Ltd. (4.50 LPA)

- Bondada Eswari (21345A0203)
- Inmovidu Tech (7.00 LPA)
- Baratam Ashish (20341A0207)
- Baratam Venkata Lakshmi (20341A0208)
- Kosireddy Santosh Kumar (20341A0268)
- Manish Sanapala (20341A0278)
- Setti Venkata Siva Sai Tanuja (20341A02A7)
- Vemakoti Sai Akhila (20341A02Co)

Edu-station (7.00 LPA)

- Madha Rishika (20341A0275)
- Namburi Manasa (20341A0287)
- Sasapu Padmini (20341A02A4)
- Seepana Jyotshna (20341A02A5)
- Setti Venkata Siva Sai Tanuja (20341A02A7)

- Sigatapu Deepika (20341A02A8)

Philips Engineering Services (3.00 LPA)

- Ruttala Taraka Krishna Murthy (20341A02A0)
- Tummalapalli Bhavani Sankar (21345A0218)
- Kadimiseti Manohar Reddy (20341A0258)
- Parusubothu Ramakrishna (20341A0292)
- Kona Jyothikrishna (21345A0213)
- Poreddi Mukhesh (20341A0295)

MGH Infra (6.50 LPA)

- Purli Balakrishna Sai (20341A0297)
- Ambati Revathi (21345A0201)

Waisl (4.50 LPA)

- Buddepu Harika (20341A0217)
- Seera Pavankumar (20341A02A6)

India Cements (3.50 LPA)

- Burla Manikanta (20341A0219)
- Darla Naga Sai Krishna (20341A0227)
- Palli Hari (20341A0291)
- Ganji Sai Kiran (21345A0204)

Tata Consulting Engineering (5.00 LPA)

- Usirikayala Sainadh (20341A02B5)
- Jagu Praveensrikar (20341A0252)
- Pothala Murali (21345A0216)
- Chandrapudi Sesi Vamsi (20341A0221)
- Valle Sireesha (20341A02B6)

Accenture - Advanced ASE (6.50 LPA)

- Krishna Koushik Bhogi (20341A0269)
- Accenture - ASE (4.50 LPA)
- Sasapu Padmini (20341A02A4)

KMV Projects Ltd. (3.42 LPA)

- Kelangi Manoj (21345A0212)
- Nakka Balamurali (20341A0284)

GMR Group (4.50 LPA)

- Atti Alekya (20341A0206)
- Bendi Sanjana (20341A0210)
- Bodepu Sai Kumar (20341A0214)
- Bonu Yogesh (20341A0216)
- Chandaka Haripriya (20341A0220)

Editorial Borad Members

Chief Editors

Dr.Ramana Pilla

Dr.K.Karthick

Section Editors (Faculty)

Research and Academic Achievements

Dr G Indira Kishore

Guest Lecture / Expert talk / Events Organized

Dr. Rajesh Kumar Patnaik

Dr L V Suresh Kumar

Guest Lectures / Technical Contributions to the External World by Faculty Members

Dr. Hemanth Kumar Chappa

Section Editors (Students)

Student-Centric Events and Engagement

Budumuru Gireesha (22341A0225)

Turubilli Kiran (23345A0206)

Gandreti Sai Varun (22341A0244)

Guddala Harshitha (22341A0252)

Kondaka Harika (22341A0266)

Vangapandu Hari (22341A02C3)

Koneti Vinay Kumar (22341A0267)

Lenka Sai Nirupama (22341A0273)