

Electrical & Electronics Engineering Department-Newsletter



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About GMRIT

www.gmr.it.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 2025-26 to 2027-28.

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)
- 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 Circuit Analysis
- 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

Conference Publications

- Suresh Kumar, L.V.; Saipraneeth, K.; Priyanka, B. "Deep Learning and Cloud-Integrated IoT Systems for Early Crop Disease Detection." 2025 Third International Conference on Cyber Physical Systems, Power Electronics and Electric Vehicles (ICPEEV), Mahendra University, March 2026. (Scopus Indexed). DOI: 10.1109/ICPEEV67897.2025.11291431.

- Janapati, R.; Manoj, V.; Desai, U.; Babu, V.; Sabreen, G.S. "Explainable Hybrid PSO-SVM Framework for EEG-Based Cognitive Confusion Detection." 2026 5th International Conference on Sentiment Analysis and Deep Learning (ICSADL), Birendranagar, Nepal, pp. 1-5, 2026. DOI: 10.1109/ICSADL67539.2026.11452046.

Journal Publications

- Ravindiran, G.; Karthick, K.; Sivarethinamohan, S.; Rajamanickam, S.; Shyamala, G.; Datta, D.; Christo, M.S. "A cluster-aware synthetic resampling and machine learning framework for multi-class Air Quality Index classification." Environmental Monitoring and Assessment, vol. 198, p. 270, 2026. (SCIE & Scopus Indexed, Q2, IF: 3.0). DOI: 10.1007/s10661-026-15121-7.
- Aruna, S.K.; Praveen, P.; Gowtham, K.; Mohammed Khashif, S.; Jaganathan, K.; Karthick, K. "Classification of Medicinal Plant Leaves using Deep Learning Algorithms." International Journal of Intelligent Systems and Applications (IJISA), vol. 18, no. 1, pp. 132-149, 2026. (Scopus Indexed, Q4). DOI: 10.5815/ijisa.2026.01.10.
- Sekhar, G.T.; Boddepalli, M.; Kanthi, A.; Suresh Kumar, L.V. "Maximal Temperature Dependent Supercapacitor Charging of Regenerative Braking System Using FOPID-Based Optimization Algorithm." Energy Storage, vol. 8, no. 3, pp. 1-15, March 2026. (ESCI & Scopus Indexed, Q3, IF: 4.0). DOI: 10.1002/est2.70377.
- Mangaraj, M.; Pilla, R.; Lakshmana Rao, K.; Potnuru, U.K.; Holla, M.R. "DBLN Based IC-DSTATCOM for Power-line Conditioning in the Power Distribution System." IEEE Access, 2026. (Scopus & SCIE Indexed, Q2, IF: 3.4). DOI: 10.1109/ACCESS.2026.3685356.
- Gandhi Ramarao, Dasyam Chandra Mouli, Rebba Sasidhar, Sivasankara Raju Rallabandi, Prasad Chongala, Kiran Kumar Kalyana & Vasupalli Manoj, "Experimental and Simulation-Based validation of a HIL-Validated Model-Based Framework–Driven hybrid control Framework for EV battery optimization." Iranian Journal of Science and Technology Transactions of Electrical Engineering, April 2026. (SCIE & Scopus Indexed, Q3, IF: 1.5). DOI: 10.1007/s40998-026-01071-w.
- Guntreddi, V.; Murala, D.K.; Ponnappalli, V.A.S.; Chaitanya, M.K.; Majji, B.; Manoj, V. "Machine learning-driven advancements in next-generation cognitive radar systems." Discover Applied Sciences, vol. 8, no. 4, March 2026. (ESCI & Scopus Indexed, Q2, IF: 2.8). DOI: 10.1007/s42452-026-08505-4.
- Pilla, R., et al. "Optimal battery selection for electric vehicles: a comparative ranking approach." International Journal of Applied Power Engineering (IJAPE), vol. 15, no. 1, p. 319,

March 2026. (Scopus Indexed, IF: 4.0). DOI: 10.11591/ijape.v15.i1.pp319-327.

Professional Development Activities by Faculty Members

- Dr. T. S. Kishore successfully completed a 12-week NPTEL certification course on "Introduction to Machine Learning" in April 2026.
- **Certificates of Appreciation for Faculty Members**

On 14th March 2026, GMRIT – Deemed to be University, Rajam, proudly awarded Certificates of Appreciation to several esteemed faculty members. These certificates were presented in recognition of their dedication to continuous learning and the successful completion of various professional development courses during the academic year 2024-2025. Representing the EEE Department, Dr. K. Karthick received a Certificate of Appreciation for the course "Fundamentals of AI". This felicitation underscores the institution's unwavering commitment to fostering a culture of academic excellence and continuous upskilling among its teaching fraternity.

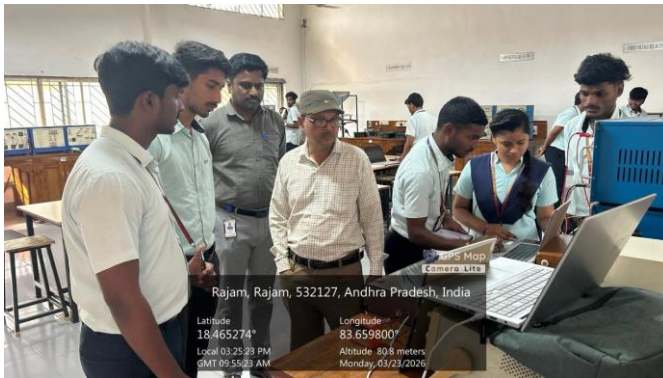


Guest Lecture / Events Organized

- **Project Exhibition 2026**

On 23rd March 2026, the Department of Electrical and Electronics Engineering (EEE) successfully hosted "Project Exhibition 2026." This engaging event served as a vibrant showcase of student innovation, technical expertise, and the exciting future of engineering. It provided an excellent platform for budding electrical and electronics engineers to display their practical skills, creative problem-solving abilities, and hard work through various dynamic project models and technical presentations.





➤ Institute Level Project Exhibition Contest 2026

On 25th March 2026, the Project Club successfully organized the Institute Level Project Exhibition Contest 2026. This dynamic event featured an engaging Inter/Intra-Institutional Business Plan (B-Plan) Competition designed to foster an entrepreneurial mindset among students.



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 L V Suresh Kumar

Section Editors (Students)

Student-Centric Events and Engagement

AMBAKANDI GANESH KUMAR (23341A0203)

ANDHAVARAPU GAYATHRI (23341A0205)

TARIGOPPULA MANIKANTA SRINIVASA RAO (23341A02B9)

VEMAKOTI HARIKA (23341A02C5)

BORA LAKSHMI PRASAD (23341A0222)

GOSALA INDU (23341A0245)

VANAPALLI POOJITHA (23341A02C2)

KANDULA SAI MANIKANTA (24341A0257)

KARRA SRI VARSHITHA (24341A0260)

BHASURU SAMEERA (24341A0214)

EDDUM YASHWANTH SAI KUMAR (24341A0235)

MUDDANA DARSHINI (24341A0278)

NIKKU SIVAMANI (24341A0288)

KOTNANA MOHIT MANIKANTA (24341A0267)

PATTA LAHARI (24341A0294)