

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 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)
- 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

Books / Book Chapters Published

- Dr. Mohd. Asif Gandhi, **Dr. J. S. V. Siva Kumar**, Dr. Ashes Maji, and Dr. S. Sakthivel Padaiyatchi, Electric Vehicle Technology, RK Publications, India, February 2025. ISBN: 978-93-48655-15-8

Papers Published in Conferences

- C. Saiprakash, S. R. Kumar Joga, B. Sowmya, T. V. Krishna, V. L. Narayana and **V. Manoj**, "Fault Diagnosis in Micro Grid Using Wavelet Transform in Combination with Machine

Learning," 2024 3rd Odisha International Conference on Electrical Power Engineering, Communication and Computing Technology (ODICON), Bhubaneswar, India, 2024, pp. 1-6, doi: 10.1109/ODICON62106.2024.10797544

- **K. Karthick**, S.K.Aruna & S. Ravivarman, "Prediction of CO and NOx Emission from Gas Turbine using Machine Learning", Proceedings of International Conference on Computing, Circuits, Energy and Materials 2022 (ICCEM 2022), Nagercoil, India, 2022, pp.375-380. AIP Conf. Proc. 25 March 2025; 3137 (1): 020037. <https://doi.org/10.1063/5.0262087>. ((Scopus & CPCI-S (WoS) Indexed).
- U. Ravi, N. P. Kumar, B. S. Kumari, C. Saiprakash, **V. Manoj** and S. R. K. Joga, "Hilbert spectral analysis for PQ disturbances detection in Sustainable Energy Systems," 2025 International Conference on Sustainable Energy Technologies and Computational Intelligence (SETCOM), Gandhinagar, India, 2025, pp. 1-6, doi: 10.1109/SETCOM64758.2025.10932521

Papers Published in Journals

- **Teegala Srinivasa Kishore, Potnuru Upendra Kumar**, Vidyabharati Ippili, "Review of global sustainable solar energy policies: Significance and impact", Innovation and Green Development, Volume 4, Issue 2, 2025, 100224, ISSN 2949-7531, (Scopus indexed, Q1, <https://doi.org/10.1016/j.igd.2025.100224>)

<https://www.sciencedirect.com/science/article/pii/S2949753125000219>)

- Akila Agnes S, Arun Solomon A, **Karthick, K.**, Safran, M. and Alfarhood, S. (2025), "Edge-Enhanced Feature Pyramid SwinUNet: Advanced Segmentation of Lung Nodules in CT Images", IET Image Processing, 19: e70072. (SCI-E, Q3 & Scopus Indexed, Q2, Scopus indexed, I.F: 2.0, <https://doi.org/10.1049/ipr2.70072>)

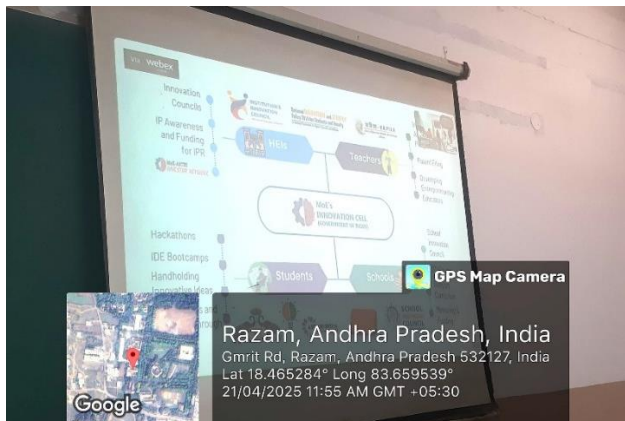
Professional Development Activities by Faculty Members

- Dr. G. Indira Kishore, Assistant Professor, attended an FDP titled "Innovations in Energy and Transportation, Microgrids, Autonomous Systems, and Sustainable Technologies" at Gayatri Vidya Parishad College of Engineering, Visakhapatnam, Andhra Pradesh, from 24 to 28 February 2025.
- Dr. L. V. Suresh, Associate Professor, attended an FDP titled "Vehicle Control Units: The Brain of Electric and Hybrid Vehicles" at Skyy Skill Academy on 22 March 2025.
- Dr. R. Rama Krishna, Assistant Professor, attended an online one-week FDP titled "Practical Aspects of ICT Tools and Online Teaching in the Current Scenario" at KLE Society's Science and Commerce College, Kalamboli, Navi Mumbai, from 21 to 26 April 2025.

Events and Engagement

➤ IIC-GMRIT & Department of EEE Inaugurates IP UTSAV and Celebrates World Creativity and Innovation Day

On 21st April 2025, IIC-GMRIT & Department of EEE successfully inaugurated IP UTSAV and celebrated World Creativity and Innovation Day. The event featured an insightful session focused on innovation, startups, and the importance of Intellectual Property (IP) in today's competitive landscape. Organized under the Ministry of Education's Innovation Cell, the program saw active participation from over 300 students of GMRIT along with members from IIC.



➤ Sensitization Program on Intellectual Property Rights (IPR) at GMRIT

On 26th April 2025 (Saturday), GMR Institute of Technology will host a Sensitization Program on Intellectual Property Rights (IPR) – Publication and Grant Process in the Auditorium. This event is organized to commemorate World Intellectual Property Day and aims to educate students and faculty on the nuances of IPR, focusing on the publication and grant procedures.



- On 25th April 2025, **"Mock GATE"** was a single-round event organized by ISTE student coordinators Ms.V. Harika, Ms.A. Gayathri, Mr.A. Ganesh Kumar, and Mr.T. M. Srinivas Rao. Twenty-two participants registered via a Google Form, entered their details, and answered 20 multiple-choice questions on electrical and electronics fundamentals—modelled on actual GATE exam problems.

After grading each submission out of 50, the top two performers were:

- Winner: Purnima Sanapala (JNTU 23341A02B0) – 41/50
- Runner-up: Sirisha Sasapu (JNTU 23341A02B3) – 36/50

All other participants scored between 14 and 35 points.



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)