



MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(AN AUTONOMOUS INSTITUTION)

(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)

Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section 2(f) & 12(B) of the UGC act, 1956

ECE-DEPARTMENT
NEWS LETTER/MAGAZINE

ELECTRO
PULSE

AY: 2024-25

JULY to DECEMBER 2024

Volume: 10



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Mr. Marri Laxman Reddy - Chairman

“The pride of every student and staff would be in his/her college. A college reach heights of glory but without materials like college magazine the outside world may not know of it. The role of a college magazine is to promoting what an institute offers. It brings out into the open things which are unrevealed. It brings to light the names of the unsung heroes and their mighty deeds. I am happy that there is a dedicated team of staff and students who have brought out the magazine of our college. They have presented the stupendous achievements of Marri Laxman Reddy Institute of Technology and Management, in the fields of academics, research, sports and extra circular activities, in a nice way. Dazzle represents the collective work of team. I wish the magazine a grand success”.



Dr. P. Sridhar Ph.D, M. Tech, MISTE - **Director**

“It is a great pleasure to see a creative expressions of students who had contributed to Electro Pulse, MLRITM has grown abundantly in the recent past. It continues to sustain its growth. People reading this magazine will realize the tremendous changes that are happening in the MLRITM campus. The magazine is presenting a glimpse of the growth of the institution on many fronts. The college has been simply unstoppable in its progress as it has been actively involved in various activities that have brought to light the hidden talents of the college students and staff. The highly qualified and dedicated members of staff have always stood shoulder with the management and have carried out their duties with a level of commitment. This magazine has recorded achievements of staff members and students. I wish the management, staff and students of the college success in their future endeavours”.



Dr. R. Murali Prasad Ph. D, M. TECH, MISTE – **Principal**

"It gives me immense pleasure to extend my best wishes to the Department for maintaining the technical Magazine-Electro Pulse, which serves as a platform for students and faculty to showcase their innovative ideas, research contributions, and technical expertise. In today's rapidly evolving technological landscape, staying updated with emerging trends is crucial, and this magazine will foster knowledge-sharing and creativity among budding engineers. I encourage students to actively participate, explore new concepts, and contribute towards advancements in their respective fields. May this initiative continue to inspire and empower young minds for a brighter future".



Dr. N. Srinivas Ph. D, MIEEE, FIETE, LISTE – **HOD-ECE**

"I am happy to learn that MLRITM College of Engineering is coming out with the half yearly college magazine. Efforts such as this will provide an opportunity for the staff and students to participate in technical events, industrial visits, seminars, workshops, sports etc. Such value additions are very much essential for the young technocrats, engineers and scientists, to demonstrate their ideas for a developed India. I sincerely appreciate and congratulate the chairman, Principal, the editorial team and the entire management of the college for their unrelenting efforts in compiling this magazine".



Vision of the Institute

To be a globally recognized institution that fosters innovation, excellence, and leadership in education, research, and technology development, empowering students to create sustainable solutions for the advancement of society.

Mission of the Institute

To foster a transformative learning environment that empowers students to excel in engineering, innovation, and leadership.

To produce skilled, ethical, and socially responsible engineers who contribute to sustainable technological advancements and address global challenges.

To shape future leaders through cutting-edge research, industry collaboration, and community engagement.

Quality Policy

- Ensure excellence in education through innovative teaching and continuous improvement.
- Promote ethical, skilled, and employable graduates who drive sustainable technologies.
- Encourage research, industry collaboration, and community engagement for societal benefit.



Vision of the Department

To provide quality technical education in Electronics and Communication Engineering through research, innovation, striving for global recognition in specified domain, leadership, and sustainable societal solutions.

Mission of the Department

- **DM1:** To create a transformative learning environment that empowers students in electronics and communication engineering, fostering excellence in technical skills and leadership.
- **DM2:** To drive innovation through research, deliver a transformative education grounded in ethical principles, and nurture the development of professionals
- **DM3:** To cultivate strong industry partnerships, and engaging actively with the community for societal and technological progress.

Program Educational Objectives (PEO) for the UG Program

PEO 1: Have successful careers in Industry.

PEO 2: Show excellence in higher studies/ Research.

PEO 3: Show good competency towards Entrepreneurship.

Program Outcomes (POs) for the UG Program

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.



5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs) for the UG Program

1. **Professional Skills:** An ability to analyze and design analog & digital systems for a given specification and function.
2. **Problem-solving and Applications Skills:** An ability to solve and implement functional blocks of hardware-software co-designs problems for VLSI, signal processing and communication applications.
3. **Successful Career:** Gain the hands-on competency skills in Computing Tools for electronics and communication systems for the entry level position to meet the requirements of the Employer.



Program Educational Objectives (PEOs) for the PG program

PEO1: To achieve professional success in the embedded systems domains by applying technical knowledge in academic, industry and entrepreneurial roles.

PEO2: To excel in research and innovation through deep understanding of industrial needs and emerging technologies for developing real-world solutions.

PEO3: To improve knowledge and skills for career growth by upholding integrity and embracing lifelong learning globally.

PEO4: To exhibit leadership, professionalism, and communication skills in multidisciplinary towards the sustainable development.

Program Outcomes (POs) for the PG program

- 1. Research / Investigation:** An ability to independently carry out research /investigation and development work to solve practical problems.
- 2. Report Preparation:** An ability to write and present a substantial technical report/document
- 3. Domain Mastery (Embedded Systems):** Students should be able to demonstrate a degree of mastery in Embedded Systems
- 4. Application of Engineering Principle:** Acquire and apply engineering principles to design embedded systems and processes that address complex real-world problems.
- 5. Modern Tools & Societal Impact:** Use modern tools to conduct experiments, apply technical skills, and develop solutions for societal challenges and sustainable development.
- 6. Lifelong Learning & Adaptability:** Recognize the value of lifelong learning and proactively engage in ongoing professional development by embracing and integrating emerging technologies.

EDITORIAL TEAM	
Chief Editor	Dr. N. Srinivas
Faculty Coordinators	Dr. G. Amarnath Mrs. P. Sandhya
Student Coordinators	Ms. K. Apoorva (UG) Mr. K. Anila Kumar (PG)
Publisher	Marri Laxman Reddy Institute of Technology and Management

ECE-Alumni Meet – 2024

The Alumni Meet concluded with a vote of thanks from the organizing committee, expressing gratitude to all attendees for making the event memorable. The distinguished Alumni were felicitated. The alumni appreciated the initiative, expressing their joy in reconnecting with old friends and mentors.



ECE-Department – “Alumni Meet 2024”, is conducted on 31/08/2024 and 50 Alumni students participated in the event. The former students were welcomed with enthusiasm by faculty and current students. The gathering aimed to strengthen the bond between alumni and the department while fostering professional networking opportunities. The event featured interactive sessions where alumni shared their career experiences, industry insights, and the impact of their education on their professional growth.

A panel discussion was also held, where senior alumni provided guidance to current students about career prospects, emerging technologies, and higher education opportunities.



INDUSTRIAL VISIT



On 13/09/2024, 68 ECE students went to Central Institute of Tool Design (CITD), Balanagar, Hyderabad for Industrial Visit. During the visit, students explored various sections of CITD, including CNC machining, 3D printing, embedded systems, and robotics. Experts from the institute demonstrated the working of high-precision tools and highlighted their applications in industries like aerospace, automotive, and electronics.

The interactive sessions helped students understand the integration of electronics and communication technologies in modern manufacturing, bridging the gap between theoretical knowledge and practical implementation.

The students expressed their enthusiasm for learning about real-world applications of ECE concepts and their role in industrial automation. The department extends its gratitude to CITD for this informative session and looks forward to more such industry-academia interactions in the future.

ONE WEEK – SHORT TERM TRAINING PROGRAM

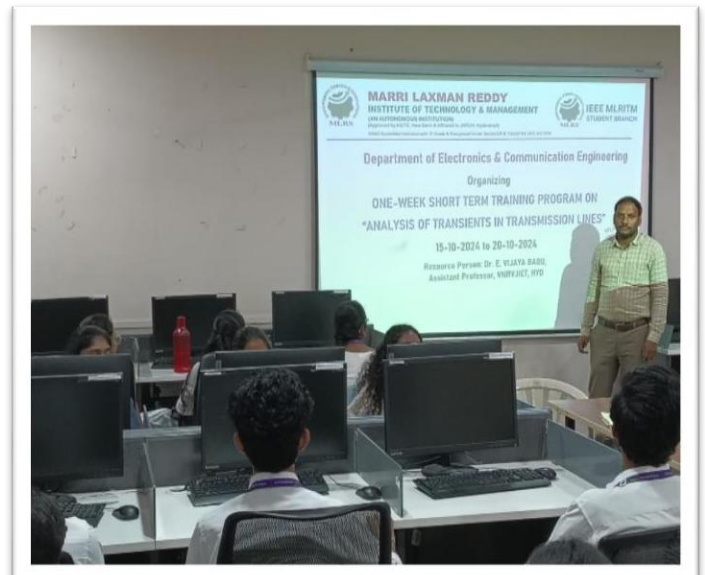


On 15th Oct to 20th Oct 2024, 50 students of II ECE, Participated in a Two week STTP on “Analysis of Transients in Transmission Lines” the program aimed to enhance students' understanding of transmission line transients, their causes, and methods to analyze and mitigate them. Experts from academia and industry conducted insightful sessions, providing both theoretical concepts and practical demonstrations.

During the training, students learned about switching and lightning transients, traveling waves, reflection and refraction phenomena, and protective

measures used in power systems. Hands-on simulation exercises using advanced software tools allowed them to visualize transient behavior in transmission lines. Interactive discussions and case studies helped them connect the theoretical principles with real-world applications in power transmission and communication systems.

The STTP proved to be a valuable learning experience, broadening students' knowledge and technical skills in electromagnetic transients and system protection. The participants appreciated the opportunity to engage with industry experts and gain practical insights beyond classroom learning. The department commends the students for their active involvement and looks forward to encouraging more such professional development programs in the future.





TEACHERS DAY CELEBRATION



The ECE students, celebrated Teachers' Day on 05/09/2024 with great enthusiasm to honour the faculty members. The celebrations began with a warm welcome speech, followed by students expressing their gratitude through speeches, poems, and special presentations. As part of the event, students organized felicitation ceremony to the teachers efforts.

The celebration concluded with a vote of thanks, acknowledging the faculty's continuous support and mentorship. Teachers expressed their appreciation for the thoughtful gestures and encouragement from their students. environment in the ECE department.



II ECE – ORIENTATION PROGRAM

explore innovative projects and research areas.

The orientation concluded with an interactive Q&A session where students clarified their doubts regarding academics, technical clubs, and placement opportunities. The program successfully provided a roadmap for the students, helping them transition smoothly into their second year. The department looks forward to guiding and supporting them in their academic journey and professional aspirations.



On 22/08/2024, ECE Department organized the orientation program to II ECE students. The program aimed to familiarize students with the academic curriculum, department facilities, and opportunities available for their professional growth. Faculty members and senior students warmly welcomed the new batch, setting the stage for an informative and engaging session.

Faculty members provided insights into the importance of core subjects, lab work, and emerging technologies in ECE. Senior students shared their experiences, offering valuable tips on time management, internships, and career planning. A special talk by an industry expert highlighted the latest trends in electronics and communication, inspiring students to



TECHNICAL EVENTS



Robothon 2K24 event, conducted by Marri Laxman Reddy Institute of Technology, Hyderabad, Telangana from 08th to 09th November 2024 and 07 ECE students participated in the event. N. Vikram (247Y1D5504), P. Meghana (247Y1D5505), and R. Abhilash (247Y1D5506) actively participated in a seminar on **Introduction to Python Libraries for Data Mining** held on 22.10.2024. Their participation reflects the active involvement of M.Tech students in enhancing their technical knowledge and skills through various academic events and seminars.

06 – ECE students, participated in Robout'2.0 at Marri Laxman Reddy Institute of Technology, Hyderabad, Telangana from 25th to 26th November 2024.

Sreenidhi Institute of Science and Technology, Hyderabad, Telangana organized a Technical fest from 18th to 20th November 2024. 09 – ECE students participated in that event.

03 – ECE students, participated in the Semiconductor Manufacturing Skills – Training Workshop at IISc Bangalore, Karnataka from 05/12/2024 to 06/12/2024.

Electro Pulse



INTERNSHIPS

33 – ECE Students did two-weeks Internship about Deep Learning, PCB and ASIC IC Design on CITD (Central Institute of Tool Design), Balanagar, Hyderabad from 01st to 14th August 2024.

L. Sijju (Roll No: 227Y1A04H9), Sai Charan Golla (Roll No: 227Y1A0444), G. Aditya (Roll No: 227Y1A04D0) and Md Adnan Shareef (Roll No: 237Y5A0415) completed Internship on Digital System Prototyping Using FPGA's at National Institute of Electronics and Information Technology from 18th September to 11th October 2024.

Mariyala Rajesh (237Y1D5501) completed an internship from 01-07-2024 to 13-07-2024 on **Robotics Control Algorithm Optimization using Embedded Systems** at ANVI Robotics Pvt Ltd. During the same period, K. Anil Kumar (237Y1D5502) worked on **Radio Frequency (RF) Systems Engineering** at SANSI RF and Communication Systems Private Limited.

Md. Sharif, 227Y1A04F3, won Runner-Up at Robout'2.0 event organized by Marri Laxman Reddy Institute of Technology and Management, Hyderabad from 25-11-2024 to 26-11-2024.



K. Anil Kumar (237Y1D5502) secured a placement at **Unistring Tech Solutions Private Limited** on 01-11-2024. He was offered a package of **2.7 LPA** for the position.

STUDENT

ACHEVEMENTS

Vanga Dinesh, 227Y1A04E2, won Runner-Up at Technical Fest organized by Sreenidhi Institute of Science and Technology, Hyderabad from 18-11-2024 to 20-11-2024.



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FACULTY

ACHEVEMENTS

Dr. N. Srinivas, Professor and HOD - ECE Department received IETE Yasodamma and Sarasvani Award at IETE Centre Bhopal, Madhya Pradesh on 14th September 2024.



Mr. D. Rupa Kumar received NPTEL Believer, NPTEL Enthusiast, NPTEL Evangelist certificates.

Mrs Nagajyothi received Believer certificate. Mrs Pranali Dilip Surkar received NPTEL Believer certificate. Mrs B. Manjula received NPTEL Believer certificate. Mrs. P. Saritha received NPTEL Discipline Star, NPTEL Believer certificates.





Dr. R. Murali Prasad, published two papers “An Intelligent optimized user’s resource searching and Nearest peer Identification in Mobile Networks” and “Accurate Brain Tumor Image Segmentation and Classification Using Deep Convolutional Network (DCNN) and Pulse Coupled Neural Networks (PCNN)” in International Journal of Communication Systems, Wiley and Frontiers in Biomedical Technologies on September 2024 and December 2024.



Dr. N. Srinivas, Published a paper “ Analysis of a CR- Enabled Energy- Efficient Device- to- Device Network with Ambient Backscattering and NOMA” on International Journal of Communication Systems, Wiley during October 2024.

Mr. G. Siva Sankar Varma and Mrs. P. Lavanya, published a conference paper “IM-NOMA: A Hybrid OFDM-IM and OFDM Systems for Enhancing Achievable Rate and SNR with QPSK” in 2024 IEEE International Conference on Electrical, Electronics, Information and Communication Technologies (ICEEICT) | during October 2024.

