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 Section2(f) & 12(B)of the UGC act,1956

ECE-DEPARTMENT
NEWS LETTER/MAGAZINE

ELECTRO PULSE

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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".

EDITORIAL TEAM	
Chief Editor	**Dr. N. Srinivas**
Faculty Coordinators	Dr. G. Amarnath Mr. G. Siva Sankar Varma
Student Coordinators	Ms. K. Apoorva Ms. N. Chandana
Publisher	Marri Laxman Reddy Institute of Technology and Management

INDUSTRIAL VISITS

The Department of Electronics and Communication Engineering organized two insightful industrial visits to T-Hub on 16th December 2023 and T-Works on 1st September 2023, offering students an exceptional opportunity to witness innovation and entrepreneurship firsthand. T-Hub, India's premier innovation hub, provided students with a deep understanding of how startups leverage cutting-edge technology to drive progress. The visit included interactive sessions with industry experts, insights into startup ecosystems, and an overview of how emerging technologies like AI, IoT, and blockchain are transforming industries.

At T-Works, India's largest hardware prototyping center, students explored advanced manufacturing tools, 3D printing, and embedded systems that play a crucial role in product development. The hands-on exposure to industrial-grade equipment and the demonstration of real-world applications of electronics and communication concepts bridged the gap between theoretical learning and practical implementation. The visit highlighted the significance of rapid prototyping in the electronics industry and encouraged students to consider innovation-driven careers.

Both visits left a lasting impact, inspiring students to think beyond conventional academic learning and explore opportunities in technology-driven entrepreneurship. The exposure to high-end R&D environments motivated them to engage in innovation, product design, and problem-solving, which are essential skills in today's competitive world. Such industry-academia interactions play a vital role in shaping future engineers, and we look forward to more such enriching experiences in the coming years.

TECHNICAL EVENTS

Ten ECE students participated in Roboveda'23, a technical fest organized by Sreenidhi Institute of Science and Technology, Hyderabad, from November 20 to November 22, 2023. The event provided an excellent platform for students to showcase their technical skills, engage in robotics and innovation-based competitions, and interact with peers from various institutions. Their participation enhanced their knowledge and practical experience in emerging technologies, reflecting the department's commitment to hands-on learning and technical excellence.

D. Sarika (Roll No: 237Y5A0412) participated in the Yuvasangham event held at Banaras Hindu University from November 26 to December 2, 2023. The event provided a valuable platform for learning, cultural exchange, and skill enhancement, allowing students to interact with peers from various institutions. Her participation reflects the department's encouragement toward holistic development and experiential learning.

उत्तर की संस्कृति से रूबरू होंगे दक्षिण के युवा

पंडित दीनदयाल उपाध्याय स्टेशन पर तेलंगाना से पहुंचे युवा● जागरण

जागरण संवाददाता, वाराणसी: प्रधानमंत्री नरेन्द्र मोदी की पहल पर एक भारत श्रेष्ठ भारत कार्यक्रम के अंतर्गत काशी में सोमवार देर रात युवा संगम फेज तीन के लिए युवाओं का आना शुरू हो गया। तेलंगाना से 45 सदस्यीय विद्यार्थियों व शिक्षकों का दल पंडित दीनदयाल उपाध्याय स्टेशन पहुंचा। यहां उत्तर प्रदेश नोडल काशी हिंदू विश्वविद्यालय के शिक्षकों व विद्यार्थियों ने उनका भव्य स्वागत किया। साथ ही उन्हें लेकर बीएचयू स्थित अंतरराष्ट्रीय छात्रावास के रवाना हुए। स्वागत दल में प्रो. के चेलापति राव, डा. नंदलाल, डा. बाला लखेंद्र, रंजीत शांडिल्य, शोध छात्र नील दुबे, रंजीत राय, कनक, सौरव नास्कर आदि रहे।

INTERNSHIPS

Chebrolu Srujana (Roll No: 207Y1A04A7) successfully completed a one-month internship at Bharat Electronics, where she gained hands-on experience in FPGA Design using VHDL from 13th June 2023 to 13th July 2023. This internship provided her with practical exposure to cutting-edge technologies in digital design and reinforced her technical skills in hardware programming. Her achievement highlights the department's commitment to encouraging students to engage in industry-oriented learning experiences.

Pattlolla Sai Keerthana (Roll No: 207Y1A0498) and Devasani Nikitha (Roll No: 207Y1A0426) successfully completed a one-month internship on Python Development at Code Clause from 16th June 2023 to 16th July 2023. During this internship, they enhanced their programming skills, gained hands-on experience in software development, and worked on real-time projects.

B. Varun (Roll No: 207Y1A0456) and P. Narasing Rao (Roll No: 217Y5A0406) successfully completed a one-month internship on Java Programming at Growth Ninja from 19th June 2023 to 16th July 2023. Throughout the internship, they strengthened their programming skills, gained practical experience in software development, and worked on real-time projects, enhancing their industry readiness and technical expertise.

K. Lokesh (Roll No: 207Y1A04D3), Jamini Srivastava (Roll No: 217Y5A0414), and R. Vital (Roll No: 217Y5A0417) successfully completed a one-month internship on Python Programming and Web Development at Digital Bheem from 26th June 2023 to 23rd July 2023. During the internship, they enhanced their programming skills, gained hands-on experience in software development, and worked on real-time projects, improving their technical expertise and industry readiness.

38 ECE students successfully completed a one-month internship at InternPe from 12th June 2023 to 9th July 2023. The internship covered Web Development, C++ Programming, and Python Programming, providing students with hands-on experience and enhancing their technical skills in software development.

FACULTY ACHIEVEMENTS

I. ADUM BABU, receeived PhD Degree from Anna Malai University on 27th September 2023.

Mrs. N. Parimala, received NPTEL Believer Certificate.

Dr. N. Srinivas, received the Best Researcher award from Knowledge Research Academy, Coimbatore, Tamil Nadu at 10th December 2023 on International Award Ceremony.

Dr. N. Srinivas, received the Best Paper award at 3rd Internantional Conference on Mobile Networks and Wireless Communication 2023 during 4th – 5th December 2023 conducted at Siddartha Institute of Technology, Tumakuru.

Dr. N. Srinivas, Published a paper, "Spectrum sensing performance of wireless cognitive radio sensor network with hard-decision fusion over generalized α–μ fading channels" in Scopus/SCI Jounal - International Journal of Communication Systems, Wiley on July 2023.

"Throughput and harvesting time trade-off in a energy harvesting cognitive radio network", in Scopus/SCI Jounal – Wireless Network, Springer on August 2023.

Mr. K. Sridhar, Published a Patent, "Synthesis and Characterization of Novel Light Weight Metalic Glass Composites" on 1st September 2023.

Mr. K. Nagabhushan, Published a Patent, "Sound Amplifier and Reflector for Smart Phones" on 14st December 2023.

Mrs. D. Malathi Rani, Published two papers "Application gateway with web application firewall", and "Melanoma classification using convolutional neural network " in the AIP Publisher a Scopus Journal in September 2023.

STUDENT ACHIEVEMENTS

Dr. B. Ashok Nayak, Published a paper, "FPGA Implementation of High-Performance Truncated Rounding based Approximate Multiplier with High-Level Synchronous XOR-MUX Full Adder" in Scopus Jounal - WSEAS Transactions on Ckts and Systems on December 2023.

Dr. G. Amarnath, Published a paper, "Dual-Facet Loaded Dual-Polarized Quad-band Dielectric Resonator-Rectenna for RF Energy Harvesting in Smart City Applications" in Scopus Jounal - IEEE Wireless Antenna and Microwave Symposium (WAMS) on September 2023.

V. Abhinay, 227Y1A0402, won First Prize in Elocution Competition conducted at Marrri Laxman Reddy Institute of Technology and Management, Hyderabad on 15-08-2023.

T. Ravi Kumar, 227Y1A0460, won First Prize in Essay Writing Competition conducted at Marrri Laxman Reddy Institute of Technology and Management, Hyderabad on 15-08-2023.

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

The management is committed in assuring quality service to all its stakeholders, students, parents, alumni, employees, employers, and the community.

Our commitment and dedication are built into our policy of continual quality improvement by establishing and implementing mechanisms and modalities ensuring accountability at all levels, transparency in procedures, and access to information and actions.

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)

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)

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**: Underst and 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 underst and ing 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)

1. Analyze and design analog & digital circuits or systems for a given specification and function.
2. Implement functional blocks of hardware-software co-designs for signal processing and communication applications.