

Madanapalle Institute of Technology & Science

(UGC Autonomus Institution)

Angallu (V), Madanapalle-517325

Annamayya District, Andhra Pradesh, India

Department of Mechanical Engineering



NEWSLETTER

July 2024 - September 2024





About the Department

The Department of Mechanical Engineering was established at the inception of the college. The department offers UG programme with intake of 60 students. The UG course in the department has been accredited by NBA under Tier-I criteria. The course offers a deep insight into the discipline and empowers promising engineers with required skills for a successful career in Mechanical Engineering. The department has excellent infrastructure and is well equipped with modern laboratories. The Department has highly qualified, experienced, dedicated and motivated faculty with industry and research background.

Vision

“To be a Centre of Excellence in the field of Mechanical Engineering to generate quality human resource in mechanical engineering who can contribute constructively to the technological and socio-economic development of the Nation.”

Mission

M1: To provide Globally competent Mechanical Engineers through Experienced and Committed Faculty.

M2: To nurture graduates with Scientific temperament, Rational thinking and Humanistic approach for Exceling in their Career.

M3: To promote Excellence in teaching and research through collaborative activities

Reach Us:

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Mr. J. Chandra Sekhar, BTech-III student

Ms. Deepika G., BTech-II student



Message from Principal

It is with great honor and delight that I introduce the 3rd Issue (July – September 2024) of the Mechanical Engineering Department's newsletter at Madanapalle Institute of Technology & Science (MITS). This publication stands as a meaningful initiative to strengthen ties between our institution and its valued stakeholders. MITS continues to make remarkable strides in academics, co-curricular engagements, and the holistic growth of both faculty and students.



Acting as a window into our department's endeavors, this newsletter highlights the dedication, milestones, and vibrant activities of the ME community. I extend my heartfelt appreciation to the editorial team and all contributors for their unwavering commitment and outstanding effort. A special note of gratitude goes to our faculty and students, whose collaboration has brought this vision to life. Wishing everyone continued excellence and success.

Dr. C. Yuvaraj

Principal, Madanapalle Institute of Technology & Science.

Message from Head of Department

The Department of Mechanical Engineering at Madanapalle Institute of Technology & Science (MITS) takes immense pleasure in presenting the 3rd Issue of the 2024 Newsletter. This edition showcases the remarkable strides we have made in academics, hands-on training, and technical initiatives, all aimed at enriching the learning experience for both students and faculty.



I take this opportunity to congratulate the Editorial Team for their outstanding efforts. I express my deep gratitude to Dr. C. Yuvaraj, Principal, MITS, for his constant guidance and support in making this newsletter a success. My heartfelt thanks also go to our faculty members and students for their dedicated contributions. With best wishes for continued progress and excellence.

Dr. S. Baskaran,

Head, Mechanical Engineering Department.



About MITS

Madanapalle Institute of Technology & Science is established in 1998 in the picturesque and pleasant environs of Madanapalle and is ideally located on a sprawling 26.17-acre campus on Madanapalle - Anantapur Highway (NH-205) near Angallu, about 10km away from Madanapalle.

MITS, originated under the auspices of Ratakonda Ranga Reddy Educational Academy under the proactive leadership of Late Sri. N. Krishna Kumar M.S. (U.S.A), the then President and Dr. N. Vijaya Bhaskar Choudary, Ph.D., Secretary & Correspondent of the Academy.

MITS is governed by a progressive management that never rests on laurels and has been striving conscientiously to develop it as one of the best centers of Academic Excellence in India. The Institution's profile is firmly based on strategies and action plans that match changing demands of the nation and the students' fraternity. MITS enjoys constant support and patronage of NRI's with distinguished academic traditions and vast experience in Engineering & Technology.



Industrial Block



Awards and Recognitions

ISTE BEST PRINCIPAL AWARD 2024

Dr. P. Sivaiah, Associate Professor in the Department of Mechanical Engineering and Associate Dean (Research and Development) at Madanapalle Institute of Technology & Science (MITS), has been featured in the prestigious list of the top 2% scientists in the world, as published by Stanford University for the year 2024!



This remarkable achievement is a reflection of Dr. Sivaiah's outstanding contributions to research and innovation in the field of Mechanical Engineering.

Events Organized

- ❖ Mr. Ajith Gopal Joshi, Assistant Professor, coordinated an online panel discussion titled "Innovation & Start-up Ecosystem in Higher Education Institutions and Role of Enablers" on August 7, 2024. Organized by the Department of Mechanical Engineering in association with IIC, this awareness program engaged 70 participants. The event fostered skills in modern engineering tools, teamwork, communication, project management, and lifelong learning, while emphasizing entrepreneurial competencies, attracting participants keen on advancing innovation in academia.
- ❖ Mr. Ajith Gopal Joshi and Dr. Dhruvajit Sarma, Assistant Professors, facilitated an invited talk on "Journey towards Entrepreneurship" on August 21, 2024. Hosted by the Department of Mechanical Engineering in collaboration with IIC and ED Cell, this guest lecture inspired 60 participants. It highlighted the importance of teamwork, communication, project management, and lifelong learning, offering valuable insights into the entrepreneurial journey.



- ❖ Mr. Ajith Gopal Joshi, Assistant Professor, organized a talk on “Research and Innovation” on August 22, 2024. Conducted by the Department of Mechanical Engineering in association with IIC, this invited guest lecture drew 60 participants. The session emphasized engineering fundamentals, problem analysis, research investigation, modern tool usage, teamwork, communication, and lifelong learning, alongside entrepreneurial competencies, sparking interest in research-driven innovation.
- ❖ Dr. Jagannath Pattar and Mr. Raghavendra H., Assistant Professors, coordinated an online guest lecture titled “Pathway to Success: Career Development & GATE Cracking Strategies for NIT, IIT, IISc, and Global Opportunities” on August 23, 2024. Organized by the Department of Mechanical Engineering, this event attracted 100 participants. It focused on teamwork, communication, and lifelong learning, equipping attendees with strategies for career advancement through competitive examinations.
- ❖ Dr. Rupshree Ozah and Dr. Dhruvajit Sarma, Assistant Professors, led a workshop titled “Hands-on 3DP Workshop on Design Optimization and Part Printing” on September 12, 2024. Organized by the Department of Mechanical Engineering in association with the ISTE student chapter, this practical session engaged 60 participants. It enhanced skills in engineering fundamentals, problem analysis, modern tool usage, teamwork, communication, and lifelong learning, with a focus on entrepreneurial competencies in additive manufacturing.
- ❖ Mr. S. Manoj Kumar, Assistant Professor, facilitated an expert talk on “The 8th Habit of Successful Entrepreneurs” on September 12, 2024. Hosted by the Department of Mechanical Engineering in collaboration with IIC and ED Cell, this invited lecture captivated 52 participants. It emphasized teamwork, communication, project management, and lifelong learning, unveiling key habits for entrepreneurial success.
- ❖ Mr. Muthu Lakshmanan, Assistant Professor, coordinated an alumni guest lecture on “Opportunities for Mechanical Engineers in the Design Stream” on September 13, 2024. Organized by the Department of Mechanical Engineering in association with IIIC, this session inspired 55 participants. It highlighted teamwork, communication, lifelong learning, and entrepreneurial competencies, showcasing design-oriented career paths for mechanical engineers.
- ❖ Mr. Ajith Gopal Joshi, Assistant Professor, organized a “Startup Mentoring Activity and Awareness Session on Trademark Registration” on September 23, 2024. Conducted by the Department of Mechanical Engineering in collaboration with the Startup & Incubation Cell, this invited talk engaged 17 participants. It focused on teamwork, communication, project management, and lifelong learning, providing practical guidance on startup development and intellectual property.



- ❖ Dr. Anantha Raman L., Assistant Professor, Dr. R. Prithivirajan, Associate Professor, and Mr. S. Manoj Kumar, Assistant Professor, coordinated the 2nd International 5-Day Faculty Development Program (FDP) on “Sustainability and Research in Modern Mechanical Engineering” from September 23 to 27, 2024. Organized by the Department of Mechanical Engineering, this FDP attracted 401 participants. It enriched skills in engineering fundamentals, problem analysis, research investigation, modern tool usage, societal impact, environmental awareness, teamwork, communication, and lifelong learning, while aligning with design and development, manufacturing processes, and entrepreneurial competencies.

Faculty Development Programmes

- **Dr. D. Arunkumar** participated in an 8-day Faculty Development Programme (FDP) on “Emerging Concepts in HVAC&R” from July 8, 2024, to July 15, 2024. This interdisciplinary programme was organized by Kalinga Institute of Industrial Technology (KIIT) Deemed to be University, Bhubaneswar, enhancing his expertise in cutting-edge heating, ventilation, air conditioning, and refrigeration technologies.
- **Mr. Raghavendra H** attended a 5-day Faculty Development Programme titled “Inculcating Universal Human Values in Technical Education” from August 5, 2024, to August 9, 2024. Organized by AICTE, New Delhi, this interdisciplinary initiative focused on integrating ethical values into technical education, enriching his pedagogical approach.
- **Mr. Raghavendra H** participated in a 5-day FDP on “Innovations in Robotics and UAVs: Digital Twins, Drone Design, and Future Trends” from July 30, 2024, to August 3, 2024. Hosted by VNR VJIET, Bachupally, this interdisciplinary programme deepened his understanding of advancements in robotics and unmanned aerial vehicle technologies.
- **Mr. Gejendhiran S.** completed a 5-day Faculty Development Programme on “Inculcating Universal Human Values in Technical Education” from August 5, 2024, to August 9, 2024. Organized by AICTE, New Delhi, this interdisciplinary effort emphasized the infusion of universal human values into engineering education.
- **Dr. Rupshree Ozah** participated in a 5-day FDP titled “Inculcating Universal Human Values in Technical Education” from August 5, 2024, to August 9, 2024. Conducted by AICTE, New Delhi, this interdisciplinary programme enriched her ability to incorporate ethical perspectives into technical curricula.



- **Dr. Veeresalingam Guruguntla** attended a 5-day Faculty Development Programme on “Inculcating Universal Human Values in Technical Education” from August 5, 2024, to August 9, 2024. Organized by AICTE, New Delhi, this interdisciplinary initiative strengthened his capacity to blend human values with technical instruction.
- **Mr. Aravindhana D.** completed a 5-day FDP on “Inculcating Universal Human Values in Technical Education” from August 5, 2024, to August 9, 2024. Hosted by AICTE, New Delhi, this interdisciplinary programme enhanced his skills in fostering ethical awareness within technical education frameworks.
- **Dr. Dhruvajit Sarma** participated in a 5-day Faculty Development Programme titled “Inculcating Universal Human Values in Technical Education” from August 5, 2024, to August 9, 2024. Organized by AICTE, New Delhi, this interdisciplinary effort advanced his proficiency in embedding values-based learning in engineering education.
- **Mr. Ajith Gopal Joshi** participated in a 5-day FDP on “Inculcating Universal Human Values in Technical Education” from August 5, 2024, to August 9, 2024. Conducted by AICTE, New Delhi, this interdisciplinary programme bolstered his approach to integrating ethical principles into technical teaching.
- **Mr. Muthulakshmanan** attended a 5-day Faculty Development Programme on “Inculcating Universal Human Values in Technical Education” from August 5, 2024, to August 9, 2024. Organized by AICTE, New Delhi, this interdisciplinary initiative enhanced his ability to promote value-based education in technical disciplines.
- **Mr. Manoj Kumar S** completed a 6-day Online UHV-II Faculty Development Programme from August 19, 2024, to August 24, 2024. Organized by AICTE, New Delhi, this interdisciplinary programme furthered his expertise in universal human values, tailored for online delivery in technical education.
- **Dr. Jagesh Kumar Prusty** participated in a 5-day FDP titled “Inculcating Universal Human Values in Technical Education” from August 5, 2024, to August 9, 2024. Hosted by AICTE, New Delhi, this interdisciplinary programme enriched his pedagogical strategies with a focus on ethical values.
- **Mr. Prasad K.** attended a 5-day Faculty Development Programme on “Inculcating Universal Human Values in Technical Education” from August 5, 2024, to August 9, 2024. Organized by AICTE, New Delhi, this interdisciplinary effort enhanced his capacity to integrate human values into technical education.



- **Dr. Anantha Raman L.** participated in a 6-day Online UHV-II Faculty Development Programme from August 19, 2024, to August 24, 2024. Conducted by AICTE, New Delhi, this interdisciplinary initiative deepened his understanding of universal human values in the context of technical education.
- **Dr. Arun Kumar D.** participated in a 5-day FDP on “Sustainability and Research in Modern Mechanical Engineering” from September 23, 2024, to September 27, 2024. Organized by MITS, Madanapalle, this programme focused on manufacturing, advancing his knowledge of sustainable practices in mechanical engineering.
- **Dr. Jagesh Kumar Prusty** attended a 6-day Faculty Development Programme titled “Sustainability and Research in Modern Mechanical Engineering” from September 23, 2025, to September 27, 2025. Hosted by MITS, Madanapalle, this manufacturing-focused programme enriched his expertise in sustainable mechanical engineering research.
- **Dr. Manish Sharma** completed a 7-day FDP on “Sustainability and Research in Modern Mechanical Engineering” from September 23, 2026, to September 27, 2026. Organized by MITS, Madanapalle, this programme emphasized manufacturing, enhancing his research capabilities in sustainable engineering solutions.
- **Mr. Ajith Joshi** participated in an 8-day Faculty Development Programme on “Sustainability and Research in Modern Mechanical Engineering” from September 23, 2027, to September 27, 2027. Conducted by MITS, Madanapalle, this manufacturing-oriented programme bolstered his knowledge of sustainable engineering advancements.
- **Dr. Manish Sharma** attended a 5-day FDP titled “Outcome Based Education and Application of Generative AI in Teaching and Research” from September 19, 2024, to September 28, 2024. Organized by Nirmala College, Muvattupuzha (Autonomous), Kerala, and The University of Engineering & Management Jaipur, Rajasthan, this interdisciplinary programme enhanced his skills in AI-driven education and research methodologies.
- **Dr. Khan Rehan Wasim** completed a 4-week FDP on “Python for Data Science” from July 2024 to August 2024. Offered by NPTEL, this interdisciplinary programme strengthened his skills in Python programming for data science applications.



Conference Attended

- ❖ **Dr. S. Baskaran** attended the Additive Manufacturing Researcher's Conclave on September 18-19, 2024. Organized by CMTI, Bangalore, this conference focused on manufacturing and provided a platform for researchers to explore advancements in additive manufacturing technologies.
- ❖ **Mr. Mohd. Rizwan Ali** participated in the Additive Manufacturing Researcher's Conclave held on September 18-19, 2024. Hosted by CMTI, Bangalore, this manufacturing-oriented event offered valuable insights into the latest developments and research trends in additive manufacturing.
- ❖ **Dr. Anantharaman L** attended the 2nd International Conference on Self Sustainable Artificial Intelligence Systems (ICSSAS 2024) from October 23-25, 2024. Organized by M.P.N. Achimuthu M. Jaganathan Engineering College, Tamilnadu, this interdisciplinary conference enriched his understanding of sustainable AI systems and their applications.

Research Publications

- **Dr. M. Lakshmana Rao** published his research titled "Trend-Forecasting of Covid-19 Cases using Regression Analysis and Python" in the *Grenze International Journal of Engineering and Technology*. Appearing in Volume 10, Issue 2, this Scopus-indexed work, published by GRENZE Scientific Society, explores predictive modeling of COVID-19 trends using regression techniques.
- **Dr. Ilangoan Arun, Dr. R. Prithvirajan, and Dr. S. Baskaran** published the article titled "Hot Corrosion Behavior of Electrical Discharge Coated Duplex Stainless Steel Under Sulfur Environment" in *Transactions of the Indian Institute of Metals*. Published by Springer with DOI 10.1007/s12666-024-03432-7, this SCIE-indexed study falls in Quartile 2, offering insights into material durability under corrosive conditions.
- **Dr. M. Lakshmana Rao** authored "Microstructure, Wear and Residual Stresses of Selective Laser Melting AlSi10Mg Solid Cylinder" in *Part E: Journal of Process Mechanical Engineering*. This SCI-indexed paper, published by Sage with DOI 10.1177/09544089241272825, ranks in Quartile 3 and examines the properties of laser-melted aluminum alloys.
- **Anantha Raman L** contributed to "Enhanced Removal of Manganese Ions from Wastewater Media by Oxidized MNT-Based Filters: EDS and Raman Investigations". This Scopus-indexed publication by IOP Publishing.



- **Dr. Kamlesh Kumar** authored a chapter titled “Welding of Ti-6Al-4V Alloy-A Review” in the book *Advances in Manufacturing Engineering: Select Proceedings of ICFAMMT 2024*. Published by Springer on July 31, 2024, this work appears as Chapter 15 (Welding-4) with DOI 10.1007/978-981-97-4324-7_15 and ISSN (Print) 978-981-97-4323-0, providing a comprehensive review of welding techniques for the Ti-6Al-4V alloy.

Workshop Attended

- ❖ **Dr. Rupshree Ozah** participated in a national-level workshop titled “Advances in Additive Manufacturing” on August 24, 2024. Organized by IIT Tirupati, this manufacturing-focused programme provided her with cutting-edge insights into additive manufacturing technologies.
- ❖ **Dr. Dhruvajit Sarma** attended a national-level workshop on “Advances in Additive Manufacturing” on August 24, 2024. Hosted by IIT Tirupati, this manufacturing-oriented event enriched his expertise in the latest additive manufacturing techniques.

Reviewer in Peer Review Journal

- **Dr. Baskaran S.** served as a reviewer for Results in Engineering on July 2, 2024, evaluating manuscript RINENG-D-24-02772. His expertise contributed to maintaining the journal’s high standards in engineering research.
- **Dr. Baskaran S.** reviewed manuscript MRX-129626 for Materials Research Express on July 9, 2024. His critical analysis ensured the quality of published research in materials science.
- **Dr. Baskaran S.** acted as a reviewer for Materials and Manufacturing Processes on July 12, 2024, assessing manuscript LMMP-2024-0667.R1. His insights supported advancements in manufacturing process research.
- **Dr. Baskaran S.** evaluated manuscript AEJ-D-24-00940 for Alexandria Engineering Journal on July 13, 2024. His review upheld the journal’s rigorous standards in engineering scholarship.



- **Dr. Baskaran S.** reviewed manuscript AEJ-D-24-04499 for Alexandria Engineering Journal on July 13, 2025. His expertise ensured the integrity of future publications in this esteemed journal.
- **Mr. Ajith G Joshi** served as a reviewer for Journal of The Institution of Engineers (India): Series D (IEID) on July 28, 2024, assessing manuscript IEID-D-24-00392R1. His contributions supported the journal's focus on engineering excellence.
- **Dr. Baskaran S.** reviewed manuscript ERX-105918 for Engineering Research Express on August 20, 2024. His evaluation bolstered the journal's commitment to cutting-edge engineering research.
- **Dr. Baskaran S.** acted as a reviewer for Journal of Manufacturing Science and Technology on August 16, 2024, evaluating manuscript CIRPJ-D-24-00329. His expertise enhanced the quality of manufacturing science publications.
- **Dr. Baskaran S.** reviewed manuscript CIRPJ-D-24-00598 for Journal of Manufacturing Science and Technology on August 18, 2024. His rigorous assessment supported the journal's high scholarly standards.
- **Dr. Baskaran S.** served as a reviewer for Jurnal Tribologi on August 21, 2024, assessing manuscript JTRIB-00731-2024-01. His input advanced research in tribology and related fields.
- **Dr. Baskaran S.** evaluated manuscript IJDM-D-24-00557 for *International Journal on Interactive Design and Manufacturing (IJIDeM)* on September 2, 2024. His review strengthened the journal's focus on interactive design and manufacturing.
- **Dr. Baskaran S.** reviewed manuscript IJDM-D-24-01147 for International Journal on Interactive Design and Manufacturing (IJIDeM) on September 3, 2024. His expertise ensured the quality of published research in this domain.
- **Dr. Baskaran S.** acted as a reviewer for Polymer Composites on September 23, 2024, with no manuscript number specified. His contributions supported advancements in polymer composite research.



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