2024-25

# MECHANICAL

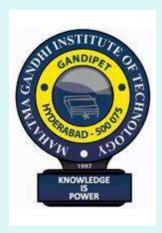
**NEWSLETTER** 

# IGNITO STUDENT FEST INDIA DESIGN WEEK

**MAGISTECH** 

MAHATMA GANDHI INSTITUTE OF TECHNOLOGY DEPARTMENT OF

MECHANICAL ENGINEERING



#### **Department Vision**

The Department inspires and motivates the students to acquire knowledge to develop and serve the industry and society with great zeal. It aims to transform the students into disciplined, talented citizens of impeccable character, fused with hands on training to make them good entrepreneurs with an emphasis to develop social, cultural and environmental consciousness and lifelong learning.

#### **Department Mission**

The Mission of the Department is to strive towards the development and dissemination of knowledge in the areas of Mechatronics Engineering. It aims at reaching the pinnacle of technical excellence with continuous quality improvement. It is destined to train the students with a capacity to take-up policy formulation and decision making responsibilities.



#### **Program Educational objectives (PEO's)**

- To prepare the students for fundamental technical knowledge and skills in Mathematics, Science and Engineering to recognize, analyse and solve problems in the industry which meet the needs of national and multinational companies, in the area of Mechanical Engineering
- To develop the ability among the students for acquiring technical knowledge in specialized areas of Mechanical Engineering with a focus on research & development and gaining technical skills using modern tools
- To promote the student's awareness of life-long learning, and to introduce them to professional ethics and codes of professional practice.
- To develop the students to become effective collaborators and innovators leading/ participating in efforts to address social, technical, and business challenges following environmental consciousness

#### Program Specific Outcomes (PSO's)

- To what extent you are able to identify, formulate and solve engineering problems of advanced Mechanical Engineering in the area of Thermal, Production and Design.
- Whether you are able to apply the concepts of Mechanical Engineering for the development of engineering applications in the area of Multi-Disciplinary Applications.

#### MESSAGE FROM THE HOD



Mechatronics, a very unique and emergent discipline, was started with the inception of the Mahatma Gandhi Institute of Technology (MGIT) in the year 1997. MGIT is the only Institute in the State and in the country to have started for the first time this innovative discipline of engineering, which is an integrated technology involving synergetic consideration and fusion of concepts of mechanical engineering, electronics, electrical, computer science, and control engineering, the key element being the integration of these areas through the design process.

The Department of Mechanical Engineering (Mechatronics) offers UG and PG courses in Mechatronics and also a UG course in Mechanical Engineering. The Department has forty well-qualified faculty members, viz. six Professors, one Associate Professors, and thirty-three Assistant Professors, and is supported by qualified and experienced non-teaching staff. At present, the department has 11 PhD holders and 20 faculty members pursuing their PhD with reputed Institutions.

The Department has well-established independent laboratories like SCADA-based Instrumentation & Control systems, Computer Aided Motion Control Design, CNC & Robotics, Advanced CAD/CAM Lab with licensed software, Machine tools Lab with CNC–EDM, advanced Thermal Engineering and Heat Transfer Lab with computer-based multi-cylinder petrol engine test rig, and Advanced Material testing lab with computer-based tensile and torsion testing machine. The department is also having advanced Measurement equipment like FARO gage, portable CMM and a 3D printing Lab. The AICTE has sanctioned a MODROBS project to the department for the modernization of the CNC & Robotics lab, and also sanctioned a grant-in-aid for organizing a two-week FDP and one-week STTP programs.

UGC and JNTUH (TEQIP–III) have also sanctioned Research Projects to the Department. The students work with various clubs/ professional chapters like ASME, SAE, Robotics, ISTE, and Innovation Club. They showcase their potential knowledge in the form of product development and organize various workshops/seminars/conferences. Indian National Academy of Engineers (INAE), New Delhi, has awarded Mechatronics students for Best Innovative Undergraduate Projects at the National Level in the area of Agricultural Robots during the Academic Years 2016–17 & 2018-19.

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- 11. Navadeep Kodali

#### **FACULTY PUBLICATIONS**

- Application of machine learning based algorithm to predict performance of turning Al– SiC-MWCNT using cryogenically treated textured insert published in Hybrid Advances Volume 10, September 2025, 100432, 2773-207X by Dr. G. Chandra Mohana Reddy
- Experimental Investigation of Nano aluminasunflower Oil Fluid as Cutting Fluid in Machining Process published in Journal of Environmental Nanotechnology Volume 14, No 1 (2025) pp. 425-432 2319-5541 by Dr. G. Chandra Mohana Reddy
- Application of Solid Lubrication and Evaluation of its Performance in Turning of Nano Particle Embedded Aluminium Metal Matrix Composites Published in International Journal of Vehicle Structures and Systems vol 16 no 6 (2024) 1955-2505 Dr. G. Chandra Mohana Reddy.
- Investigation on Al-SiC-MWCNT Metal Matrix Composite Using Solid Lubricant, Ceramic Coated and Cryogenic Cutting Conditions in Turning Process published in Archives of Metallurgy Materials 2300-1909 by Dr G. Chandramohan Reddy.
- Improved electrical properties of Ba1– xCaxCe0.8Nd0.2O3– δ solid oxide fuel cells published in Inorganic Chemistry Communications, Vol. 169 (2024) by Dr. K Ankamma.
- CFD Analysis on Air Conditioning Effect using K-Omega Model published in International Journal for Research in Applied Science & Engineering Technology Volume 13, Issue II, Pp.366-378, Feb 2025, ISSN: 2321-9653 by Dr. S. Madhava Reddy.

- Thermal and phase change characteristics of organic phase change material enhanced by carbonaceous materials published in Journal of thermal analysis and calorimetry 12th march 2025, Springer publications by Dr. K. Sudhakar Reddy.
- PV panel thermal management under outdoor conditions published in Engineering and Technology (IJIRSET) Volume 25, Issue 6, 2025, PAGE 13 0391-6715 by Dr. K. Sudhakar Reddy.
- Design and Fabrication of Automated Accumulator for Waste Management published in International Journal for Research in Applied Science & Engineering Technology Volume 12, Issue VII, July 2024 2321-9653 by Dr. K. Sudhakar Reddy.
- A Comparative Analysis of Single and Multiobjective Process Parameter Optimization of Dissimilar Metal Friction Welds Journal of Physics: Conference Series 2837 (2024) 012076, 1742-6596 by Dr. P Venkata Ramana.
- Design and Fabrication of Portable Oxygen Ventilator published in Bulletin for Technology and History Journal Volume 25, Issue 2, 13th Feb 2025, ISSN: 0391-6715 by Dr. S. Madhava Reddy.
- Design and Fabrication of Omni Directional Turbine published in International Journal of Research Publication and Reviews Vol.6, Issue 5, Pp.15282-15288, ISSN: 2582-7421 by Dr. S. Madhava Reddy.

- A critical insight into the use of EDM for machining advanced ceramic composites – a review published in An International Journal of Machining Science and Technology Published on 13.06.2025, PP: 1-25, ISSN: 1091-0344 by Dr. S. Madhava Reddy.
- Design and Analysis of Drag Strut in Passenger Aircraft published in Advanced Materials Processing and Characterization Technology, ICPCM 2023. Springer Book chapter: Proceedings in Materials vol 2. Springer, Singapore, Pp.149-161. Published 12 August 2025, ISBN: 978-981-96-4631-9 by Dr. S. Madhava Reddy.
- Design and Fabrication of Automated Accumulator for Waste Management published in International Journal for Research in Applied Science & Engineering Technology Volume 12, Issue VII, July 2024, 2321-9653, by Dr. S. Madhava Reddy.
- Application of Machine Learning Based Algorithm to Predict Performance of Turning Al-SiC-MWCNT Using Cryogenically Treated Textured Insert, accepted for publication in Hybrid Advances, ISSN: 2773–207X. By G. Chandra Mohana Reddy.
- Impact of Rajayoga Meditation on Psychological Wellbeing Among Adults, International Journal of Multidisciplinary Research, Volume 17, Issue 5, July–August 2025, pp. 1–7, ISSN 2582–2152, by T. Karthik and V. V. N. Satya Suresh.
- Optimization of Injection Moulding Process Parameters for Disposable Specimen Collection Containers, International Journal for Research in Applied Science and

- Experimental investigations and optimization of process parameter through high speed hard turning process on C45 steel published in AIP Conference Proceedings Vol.3306, Issue 1, 07005(5th June 2025) by Dr. S. Madhava Reddy.
- Investigation the Mechanical on and Tribological Properties of AA6063 Hybrid Metal Matrix Composites and Optimization of Wear and Friction Behaviour by Taguchi Method published in Advanced Materials Processing and Characterization Technology, **ICPCM** 2023. Springer Book chapter: Proceedings in Materials, vol 2. Springer, Singapore, Published 12 August 2025, ISBN: 978-981-96-4631-9 by Dr. S. Madhava Reddy.
- CFD Analysis of Air Conditioning Effect in Office Chamber using ANSYS published in Organization Development Journal, Volume 12, Issue 8 August 2024, 0889-6402 by Dr. S. Madhava Reddy.
- Meditation Beyond Mindfulness: The Role of Brahmakumaris Rajyoga in Psychological Wellness, International Journal of Multidisciplinary Research, Volume 17, Issue 5(1), May 2025, pp. 257–259, ISSN 2321–4866, by Vaduguri Madhalavi and V. V. N. Satya Suresh.
- Evaluation of Mechanical Properties of Blended PVC Over Virgin PVC Used in Injection Blow Moulding Process, Industrial Engineering Journal, Volume 53, Issue 9, September 2024, ISSN 0970–2555, by B. Govinda Reddy.
- A Comparative Analysis of Single and Multiobjective Process Parameter Optimization of Dissimilar Metal Friction Welds, Journal of Physics: Conference Series, Volume 2837

- Engineering Technology, Volume 13, Issue V, May 2025, pp. 256–264, ISSN 2321–9653, by Ajay Kumar and R. Uday Kumar.
- Numerical Investigation of MWCNT/ZNO
  Hybrid Nano-Fluid Heat Performance of a
  Counter Flow Heat Exchanger, Journal of
  Mechanics of Continua and Mathematical
  Sciences, Volume 20, Issue 2, 2024, pp. 136–
  153, ISSN 2454–7190, by G. Sreenivasa Reddy
  and P. Mahesh Babu.
- PV Panel Thermal Management Under Outdoor Conditions, Engineering and Technology (IJIRSET), Volume 25, Issue 6, 2025, Page 13, ISSN 1660-6795, by D. Kameswara Rao, K. Sudhakar Reddy, and B. Rama Krishna.
- Performance Assessment of Nano-Enhanced Graphene PCM Embedded Aluminium Metal Matrix Composite, Applied Thermal Engineering, Volume 15, Issue 9, September 2024, by K. Sai Krupa Santosh.
- Design and Fabrication of Vapour Compression Refrigeration Cycle and Water Generator, Bulletin for Technology and History Journal, Volume 25, Issue 6, 2025, ISSN 0391– 6715, by B. Ramakrishna, D. Kameswara Rao, and K. Sudhakar Reddy.
- Investigating the Impact of Diethyl Ether (DEE) Additive on the Performance and Emission Characteristics of a Common Rail Direct Injection (CRDI) Diesel Engine Utilizing Diesel and Cotton Seed Oil Blends, Nanotechnology Perceptions, Volume 23, 2024, ISSN 1660–6795, by B. Ramakrishna and P. Usha Sri.
- Effect of Fiber Loading on the Mechanical, Thermal, and Physical Properties of Natural Composites in Applications of Packaging, Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, October 2024, ISSN 0954–4089, by Rakesh Kumar Gunda.

- (2024), pp. 012076, ISSN 1742–6596, by Prathyusha M., Venkata Ramana P., and Prasanthi G.
- Thermal and Phase Change Characteristics of Organic Phase Change Material Enhanced by Carbonaceous Materials, Journal of Thermal Analysis and Calorimetry, March 12, 2025, Springer Publications, by D. Kameswara Rao, K. Sudhakar Reddy, and V. V. Subba Rao.
- Fabrication and Development of a 4-DOF Robot Arm, International Journal of Innovative Research in Science and Engineering, Volume 16, Issue 6, June 2025, by Arya Patel and Abishek Reddy.
- PV Panel Thermal Management Under Outdoor Conditions, Engineering and Technology (IJIRSET), Volume 25, Issue 6, 2025, Page 13, ISSN 0391–6715, by B. Ramakrishna, D. Kameswara Rao, and K. Sudhakar Reddy.
- Dynamic Speed Management Enhancing Traffic Safety with Adaptive Speed Breaker, International Journal on Advanced Engineering Hub (IJRAEH), Volume 13, 2024, ISSN 2584– 2137, by B. Ramakrishna and P. Usha Sri.
- **Evaluation** of Static **Dynamic** and Performance Mechanical **Builds** Manufactured by Selective Laser Melting Under Various Torque Conditions for High-**Performance** Applications, Journal Characterization, Volume 5, Issue 2, May 2025, pp. 61-72, ISSN 2757-9166, by M. Yadi Reddy, Mudda Nirish, and Drugan Samandaka.
- Investigation of the Wear Behaviour of Electrostatistically Coated CN Nano-Composite Compared with Uncoated Dry and MQSL Environmental Conditions, Recent Advances in Mechanical Engineering / Modern Mechanical Engineering, In Press, 2024, ISSN 2195–4369, by Rakesh Kumar Gunda.

- Stealth Propulsion System to Marine Vessels: Design, Analysis, and Fabrication, Organisation Development Journal, Volume 12, Issue 7, 2024, pp. 61–69, ISSN 0889–6402, by K. Srisaila and Sasi Dangeeti.
- Experimental Investigation on Mechanical Behaviour of 3D-Printed Part for Brake Pedal Applications, Archives of Metallurgy and Materials, Volume 70, Issue 1, 2025, ISSN 1734–7440, by T. Niranjan, B. Siva Ganesh, and K. Perumal.
- Performance Optimization of ECM Parameters for Palladium-Coated Tool Electrodes Using Multi-Criteria Decision Analysis Method, Chemical Industry and Chemical Engineering Quarterly, May 2025, pp. 25–35, by T. Niranjan, A. N. S. C. Bose, and G. S. Kanadasan.
- Development of Drones for Healthcare Applications, Robotics and Automation in Healthcare, 2024, pp. 75–83, ISBN 9781–3442–491, by T. Niranjan, A. Gokul, and R. Thanigai Velan.
- Assessing Additive Manufacturing Techniques for Polymer and Metal Matrix Composites in Aerospace Applications, The Indian Institute of Metals Transactions (IIMT), May 2025, pp. 78–82, ISSN 0971–458X, by K. Santosh Kumar, A. Arun Kutten, and B. Thoke Rasu.
- Experimental Investigations and Optimization of Process Parameter Through High-Speed Hard Turning Process on C45 Steel, International Conference on Modelling Strategies in Mathematics (ICMSM 2024), October 22, 2024, Coimbatore, India, by Dr. S. Madhava Reddy.
- Optimization of Injection Moulding Process Parameters for Disposable Specimen Collection Containers, *IJRASET*, Volume 13, Issue V, May 2025, pp. rr256–264, ISSN 2321– 9653, by M. S. Ajay Kumar.

- Optimization of Friction Stir Welding Process Parameters for Joining of 3D Printed Specimens, Materials and Manufacturing Processes, 2025, pp. 279–284, ISBN 978–981–99–3164–3, by T. Niranjan, B. Siva Ganesh, and C. Divya.
- Experimental Investigation of Degradation in Marine Environment of FDM-Based 3D Printed Specimens, International Journal of Lightweight Materials and Manufacture, August 19, 2025, ISSN 2589–7225, by T. Niranjan, P. Lasrivanky, K. Sreenivasulu.
- Evaluation of Mechanical Properties of Blended PVC Over Virgin PVC Used in Injection Blow Moulding Process, Industrial Engineering Journal, Volume 53, Issue 9, September 2024, ISSN 0970–2555, by P. Meghana, P. Shasidharr, and B. Govinda Reddy.
- Modelling and Fabrication of Creel Stand for Filament Winding Machine, International Scientific Journal of Engineering and Management (IJSEM), Volume 4, Issue 5, May 2025, pp. 122–126, ISSN 2583–6129, by P. Shasidhar, M. D. Saquib Zayana, and M. Prasanth.
- Design and Fabrication of Non-Woven Needle Punching Machine, Industrial Engineering Journal, Volume 53, Issue 9, September 2024, ISSN 0970–2555, by K. Santosh Kumar and P. Shashidhar.
- Research Fronts Active Fields: Leading Countries, Appl SciMeet 2025, SYNOPSIS "European Meeting on Applied Science and Engineering", April 14–15, 2025, Berlin, Germany, by Dr. P. Srinivasa Rao (Virtual Speaker).
- Research Fronts Active Fields: Leading Countries, European Congress on Applied Science and Engineering, C2P Forum, April 25, 2025, Paris, France, by Dr. P. Srinivasa Rao (Distinguished Speaker).

- Modelling & Design of a Hybrid Quadruped Leg System, 2nd International Conference on Contemporary Issues in Science, Engineering & Technology (ICCISET-2K25), May 23, 2025, Aditya College of Engineering, A.P., pp. 369–372, ISBN: 978-93-342-6219-3, by Dr. S. Madhava Reddy
- Research Fronts Active Fields: Leading Countries, The ICONIC Meetings on "International Experts Summit on Aerospace and Aeronautics Engineering", May 26–28, 2025, Valencia, Spain, by Dr. P. Srinivasa Rao (Plenary Speaker).
- Synthesis of multi-position 3-PRS
   Manipulator Based on Spherical Constraints
   by Eliminating the PARA, Peers Alley Media
   2024, Scientific Program, Nano Intellects 2024
   & Advanced Physics 2024, September 20, 2024,
   by Srinivasa Rao Pundru.
- Modelling & Design of a Hybrid Quadruped Leg System, 2nd International Conference on Contemporary Issues in Science, Engineering & Technology (ICCISET-2K25), May 23, 2025, Aditya College of Engineering, A.P., pp. 369–372, ISBN: 978-93-342-6219-3, by Dr. S. Madhava Reddy.
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- Intelligent Moving Robot Used to Acquire Data from Radiation Areas, 2nd International Conference on Contemporary Issues in Science, Engineering & Technology (ICCISET-2K25), May 23, 2025, Aditya College of Engineering, A.P., pp. 369–372, ISBN: 978-93-342-6219-3, by Dr. S. Madhava Reddy.
- Synthesis of multi-position 3-PRS
   Manipulator Based on Spherical Constraints
   by Eliminating the PARA, Advanced Physics:
   Applications and Scientific Innovations 2024,
   September 20, 2024, Peers Alley Media 2024,
   Venue: Canada, by Dr. P. Srinivasa Rao.
- Research Fronts Active Fields: Leading Countries, Appl SciMeet 2025, SYNOPSIS "European Meeting on Applied Science and Engineering", April 14–15, 2025, Berlin, Germany, by Dr. P. Srinivasa Rao (Virtual Speaker).
- Intelligent Moving Robot Used to Acquire Data from Radiation Areas, 2nd International Conference on Contemporary Issues in Science, Engineering & Technology (ICCISET-2K25), May 23, 2025, Aditya College of Engineering, A.P., pp. 369–372, ISBN: 978-93-342-6219-3, by Dr. S. Madhava Reddy.
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   Venue: Canada, by Dr. P. Srinivasa Rao.
- Research Fronts Active Fields: Leading Countries, The ICONIC Meetings on "International Experts Summit on Aerospace and Aeronautics Engineering", May 26–28, 2025, Valencia, Spain, by Dr. P. Srinivasa Rao (Plenary Speaker).
- Evaluation of Mechanical Properties Blended PVC Over Virgin PVC Used in Injection Blow Moulding Process published in Industrial Engineering Journal Volume-53,Issue-9, Sept & 2024, 0970-2555 by K Santosh Kumar, P Shashidhar, P Meghana, B Govinda Reddy, K S Santhosh, G Kirthana Yada

#### **FACULTY ACHIEVEMENTS**

S.No	DATE	NAME OF THE FACULTY	TITLE OF THE AWARD	NAME OF THE ORGANIZATION	VENUE
1	15-09-2023	Dr. G. Chandra Mohan Reddy	Bharat Ratna Sir Mokshagundam Visvesvaraya Award	TS Govt & Institution of Engineers	Telangana state centre
2	12-02-2025	Dr. S. Madhava Reddy	ISTE Best Faculty Chapter of Telangana Section Award	ISTE	Lamrin Tech skills University, Ropar, Punjab
3	05-06-2025	Dr. P. Srinivasa Rao	Nobel Researcher Award	Scientific Laurels International Scientific Awards	Offline
4	2025	Dr. P. Srinivasa Rao	Scopus index international outstanding researcher award	Scopus Index	Offline
5	20,21 Sept 2024	Dr. T. Niranjan	Session Chair for the Int. conference on Advanced Data driven computing and Intelligent Systems	ADCIS	Offline
6	27, 28 July 2024	Dr. T. Niranjan	Session Chair for 3rd IEEE world conference on Applied Intelligence and Computing	IEEE world conference	Offline
7	21-22 October 2024	Dr. T. Niranjan	Best Paper Award at The International Conference on Additive Manufacturing Technologies	Department of Mechanical Engineering Mahendra Institute of Technology	Namakkal, Tamil Nadu
8	23, 24 March 2023	Dr. T. Niranjan	Session Chair for the Int. conference on Advanced Materials, Manufacturing and Industrial Engineering (AMMIE 2023)	by School of Mechanical Engineering VIT	VIT, Chennai
9	11, 12 Dec 2022	Dr. T. Niranjan	Session Chair for the Int. conference CSCT 2022	Congress on Smart Computing Technologies	Online

#### FACULTY DEVELOPMENT PROGRAMS

S.No	NAME OF THE FACULTY, DESIGNATION	PROGRAM NAME	ORGANIZED BY	DATE	RELEVANT AREA	DURATION
1	Dr K Sudhakar Reddy, Professor & Head	2 day Wokshop on AutoDesk-FUSION FUNDAMENTALS	MGIT	29-10-24 to 30-10-24	Mechanical Engineering	2 Days
	Dr. P.Venkata	2 day Wokshop on AutoDesk-FUSION FUNDAMENTALS	MGIT	29-10-24 to 30-10-24	Mechanical Engineering	2 Days
2	Ramana, Professor	Robotics and Industrial Automation	CBIT	4-11-24 to 9-11 2024	Manufacturing	6 Days
		Advances in Automotive Technology	NITTTR, Chandigarh	10-03-25 to 14-03-25	Manufacturing	5 Days
	Dr. K.Ankamma,	Hybrid Machining	NITTTR, Chandigarh	17-02-25 to 21-02-25	Manufacturing	5 Days
		Green Manufacturing	NITTTR, Chandigarh	24-02-25 to 28-02-25	Manufacturing	5 Days
		Harnessing Virtual labs for effective Student Engagement	Lendi Institute of Engineering and Technology, AP	17-03-25 to 21-03-25	Outcome based education	5 Days
3	Professor	Manufacturing Process Technology I & II	NPTEL in coordination with IIT- Madras	Jan to April 2025	Course	12 weeks
		One week National Level online FDP on "Advancements in Battery Technology and Management for Sustainable E- Mobility	MGIT	16-06-25 to 20-06-25	Battery Technology and Management	5 Days
4	Dr. V.V.N. Satya Suresh, Professor	2 day workshop on AutoDesk-FUSION FUNDAMENTALS	MGIT	29-10-24 to 30-10-24	Mechanical Engineering	2 Days

S.No	NAME OF THE FACULTY, DESIGNATION	PROGRAM NAME	ORGANIZED BY	DATE	RELEVANT AREA	DURATION
		Three days virtual short term course on An Introduction to Fracture Mechanics	The Indian Institute of Metals & Metallurgy and MGIT	10-06-25 to 12-06 2025	Mechanics	3 Days
		3rd International 5- Day FDP on Sustainability and Research in Modern Mechanical Engineering	Department of Mechanical Engineering, Madanapalle Institute of Technology & Science	02-06 to 06-06 2025	Sustainabiliy	5 Days
	D GM II	NPTEL-AICTE Inspection and Quality Control in Manufacturing	Funded by the MoE, Govt. of India, IIT Madras	Jan to Feb 2025	Quality Control	4 weeks
5	Dr. S.Madhava Reddy, Professor	AICTE & ATAL 6- day FDP on Strategic Leadership in Manufacturing & Industry 4.0: Driving Innovation for Future	Dept. of School of Management Studies & Dept. Of CSE, CBIT	10-02 to 15-02 2025	Industry 4.0	One week
		One-Week Workshop on "Recent Advances in Design, Manufacturing & Testing of Composites"	CBIT, collaboration with ASL, DRDO, and ISAMPE	06-01 to 11-01-25	Design and Maufacturing	One week
		NPTEL-AICTE Introduction to Machine Learning	Funded by the MoE, Govt. of India, IIT Madras	July to Septemb er 2024	Machine Learning	8 weeks
		AICTE Recognized FDP on "Outcome based Education and Accreditation	Curriculum Development Centr MGIT	25-11 to 29-11-24	Outcome based education	One week

S.No	NAME OF THE FACULTY, DESIGNATION	PROGRAM NAME	ORGANIZED BY	DATE	RELEVANT AREA	DURATION
		One Week Online FDP on "Robotics and Industrial Automation"	CBIT	04-11 to 09-11 2024	Robotics	One week
		5 Day online FDP on "Recent Trends in Digital Manufacturing Technologies: Scope, Impact, and Applications"	GMRIT, Rajam And NIT Warangal	21-10 to 25-10 2024	Digital Manufacturing	One week
		2 day workshop on AutoDesk-FUSION FUNDAMENTALS	MGIT	29-10 to 30-10 2024	Mechanical engineering	2 Days
		5 Day online FDP on "Sustainability and Research in Modern  Mechanical Engineering"	NPTEL - AICTE SWAYAM	23-09 to 27-09 2024	Mechanical engineering	One week
		FDP on Introduction to Machine Learning	VNR VJIET	July to Septembe r 2024	Machine Learning	8 weeks
		Innovations in Robotics and UAVs: Digital twins, Drone design and Future Trends	Department of Statistics and Mathematics, Amity University, Kolkata	30-06 to 03-07 2024	Robotics	One week
		FDP on Trends in Computational sciences	VNR VJIET	22-07 to 26-07 2024	Computational Science	One week
		One week online International FDP on Advances in Materials and Manufacturing	MGIT	15-07 to 19-07 2024	Manufacturing	One week

S.No	NAME OF THE FACULTY, DESIGNATION	PROGRAM NAME	ORGANIZED BY	DATE	RELEVANT AREA	DURATION
	Dr. R.Uday Kumar,	2 day workshop on AutoDesk-FUSION FUNDAMENTALS	MGIT	29-10 to 30-10 2024	Mechanical Engineering	2 Days
6	Associate Professor	Innovations in Robotics and UAVs: Digital Twins, Drone Design, and Future Trends	VNR VJIET	30-07 to 03-08 2024	Mechanical Engineering	One week
7	B.Govinda Reddy, Assistant Professor	2 day Wokshop on AutoDesk-FUSION	Autodesk Authorized Academic Partner	29-10 to 30-10 2024	Mechanical Engineering	2 Days
8	Dr. K.V.Kasi Viswanadham, Assistant Professor	2 day workshop on AutoDesk-FUSION FUNDAMENTALS	MGIT	29-10 to 30-10 2024	Mechanical Engineering	2 Days
9	Dr.P.Srinivasa Rao, Assistant Professor	2 day workshop on AutoDesk-FUSION FUNDAMENTALS	MGIT	29-10 to 30-10 2024	Mechanical Engineering	2 Days
10	Dr K.C.Sabitha,	One Week Online FDP on "Advancements in Battery Technology and Management for Sustainable E- Mobility"	Department of Electrical Engineering, MGIT	16-06 to 20-06 2025	Battery Technology	5 Days
10	Dr K.C.Sabitha, Assistant Professor	One Week Online AICTE Training and Learning Sponsored (ATAL -FDP) "Sustainable Manufacturing and Advanced Automation in Industries"	Department of Mechanical Engg., IGIT	24-2 to 1- 03 2025	Manufacturing	One week

S.No	NAME OF THE FACULTY, DESIGNATION	PROGRAM NAME	ORGANIZED BY	DATE	RELEVANT AREA	DURATION
		AICTE Recognized FDP on "Outcome based Education and Accreditation Process"	NITTTR, Chandigarh and MGIT	25-11 to 29-11 2024	Outcome based education	One week
		One Week Online FDP on "Robotics and Industrial Automation"	СВІТ	04-11 to 09-11 2024	Robotics	One week
11	Mr.P.V.Prasad Reddy,	5 Day online FDP on "Recent Trends in Digital Manufacturing Technologies: Scope, Impact, and Applications"	GMRIT, Rajam And NIT Warangal	21-10 to 25-10 2024	Digital Manufacturing	One week
	Assistant Professor	5 Day online FDP on "Sustainability and Research in Modern Mechanical Engineering"	Department of Mechanical Engineering MITS	23-09 to 27-09 2024	Mechanical Engineering	5 Days
		2 day workshop on AutoDesk-FUSION FUNDAMENTALS	MGIT	29-10 to 30-10 2024	Mechanical engineering	2 Days
		FDP on Sustainable Energy Transition through phase Changing Materials (PCMs)	Department of Mechanical Engineering, Murugappa Polytechnic College	27-01 to 31-01 2025	Mechanical Engineering	5 days
12	Dr M. Pratyusha, Assistant Professor	Recent Advancements in Mechanical Engineering & Its Applications"	Swarnandhra College of Engineering & Technology	21-04 to 26-04 2025	Mechanical Engineering	one week
		Harnessing Virtual Labs for Effective Student Engagement	Dept of Mechanical Engineering, LIET	17-03 to 21-03 2025	Virtual Labs	5 days
		2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering	29-10 to 30-10 2024	Mechanical Engineering	2 days

S.No	NAME OF THE FACULTY, DESIGNATION	PROGRAM NAME	ORGANIZED BY	DATE	RELEVANT AREA	DURATION
13	Ms.B.Haritha Reddy, Assistant Professor	2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	29-10 to 30-10 2024	Mechanical Engineering	2 days
14	Dr.G. Sreenivasulu 14 Reddy, Assistant Professor	One week ATAL FDP on Emerging Technologies in Optimizing Renewable Energy Systems with Smart Materials and Storage Solutions	University College of Engineering Kakinada, JNTUK, AP	20-01 to 25-01 2025	Renewable Energy Sources	one week
		One Week Online FDP on "Robotics and Industrial Automation"	Department of Mechanical Engineering CBIT(A), Gandipet, Hyderabad	04-11 to 9-11 2025	Robotics	one week
		One week fdp Advanced ANSYS Mechanical Software	Ark and CBIT	25-11 to 29-11 2024	Simulation	5 days
15	Dr. D Kameswara Rao, Assistant Professor	2 day workshop on AutoDesk-Fusion fundamentals	Department of Mechanical Engineering, MGIT	29-10 to 30-10 2024	Mechanical Engineering	2 days
		Technological Advancement in Synthesis of Novel Materials	Chaitanya Bharathi Institute of Technology	05-08 to 10-08 2024	Materials	one week
	Mr. K Sarupya Santhosh, Assistant Professor	One Week Online FDP on "Robotics and Industrial Automation"	Department of Mechanical Engineering CBIT	04-11 to 9-11 2024	Robotics	one week
16		2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	29-10 to 30-10 2024	Mechanical Engineering	2 days
		Recent Trends in Digital Manufacturing Technologies	GMRIT, Rajam, and NIT, Warangal	21-25 October 2024	Digital Manufacturing	5 days

S.No	NAME OF THE FACULTY, DESIGNATION	PROGRAM NAME	ORGANIZED BY	DATE	RELEVANT AREA	DURATION
		AICTE Recognized FDP on "Outcome based Education and Accreditation Process"	Curriculum Development Centre Department, NITTTR, Chandigarh and MGIT	25-11- 2024 to 29-11- 2024	Outcome based Education	5 days
		Advances in Thermal Engineering and their Applications	Malaviya Mission Teacher Training Centre (UGC-MMTTC) and JNTUH	20-01- 2025 to 1- 02-2025	Thermal Systems	10 days
		Optimizing Renewable Energy Systems with Smart Materials and Storage Solutions	Organized by University College of Engineering Kakinada	20-01- 2025 to 25-01- 2025	Renewable Energy	5 days
		Advancements in Metal Forming Technology: Innovations, Future scope and Challenges	organized by Department of Metallurgical Engineering, OP Jindal University, Raigarh	02-12- 2024 to 6- 12-2024	Materials	5 days
17	Dr. B Ramakrishna, Assistant Professor	Technological Advancement in Synthesis of Novel Materials	Chaitanya Bharathi Institute of Technology	05.08.202 4 to 10.08.202 4	Materials	one week
		One week fdp "Advanced ANSYS Mechanical Software"	Ark Info Solutions Pvt Ltd and CBIT, Hyderabad	25-11- 2024 to 29-11- 2024	Analysis	5 days
		2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	29-10- 2024 to 30-10- 2024	Mechanical Engineering	2 days
		2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	29-10- 2024 to 30-10- 2024	Mechanical Engineering	2 days

S.No	NAME OF THE FACULTY, DESIGNATION	PROGRAM NAME	ORGANIZED BY	DATE	RELEVANT AREA	DURATION
18	Mr K.Prudhvi Raj, Assistant Professor	2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	29-10- 2024 to 30-10- 2024	Mechanical Engineering	2 days
19	Mr. M. Yadi Reddy, Assistant Professor	2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	30-10- 2024	Mechanical Engineering	one day
20	Dr. G Rakesh Kumar, Asst.Professor	AICTE Recognized FDP on "Outcome based Education and Accreditation Process"	Curriculum Development Centre Department, NITTTR, Chandigarh and MGIT	25-11- 2024 to 29-11- 2024	Outcome based Education	5 days
		Technological Advancement in Synthesis of Novel Materials	Department of Mechanical Engineering CBIT(A)	05 -10 August 2024	Materials	one week
		One Week Online FDP on "Robotics and Industrial Automation"	Department of Mechanical Engineering CBIT(A)	04 - 09 Novembe r 2024	Robotics	one week
		2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	29-10- 2024 to 30-10- 2024	Mechanical Engineering	2 days
21	Ms. K.Sirisha, Asst.Professor	Harnessing Virtual Labs for Effective Student Engagement	Lendi Institute of Engineering and Technology	17-03- 2025 to 21-03- 2025	Outcome based education	5 days
		Level 2 laboratory training on semiconductor packaging" workshop	Central Manufacturing Technology Institute, CMTI Bengaluru	12-05- 2025 to 16-05- 2025	Semiconductor chip Manufacturing	5 days
		5 Day online FDP on "Recent Trends in Digital Manufacturing Technologies: Scope, Impact, Applications"	Department of Mechanical Engineering GMRIT, and NIT, Warangal	21-25 October 2024	Digital Manufacturing	5 days

S.No	NAME OF THE FACULTY, DESIGNATION	PROGRAM NAME	ORGANIZED BY	DATE	RELEVANT AREA	DURATION
		Harnessing Virtual Labs for Effective Student Engagement	Dept of Mechanical Engineering ,Len di Institute of Engineering and Technology	17-03- 2025 to 21-03- 2025	Outcome based education	5 days
	Ms. Y.V.N. Chandana, Assistant Professor	All India Women Academicians Conference Envisioning New Bharath	Akhil Bharthiya Rashtriya Shaikshik Mahasangh (Technical Education) in association with JNTUH	21st Septembe r 2024	Innovation & Technology	one day
		2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	29-10- 2024 to 30-10- 2024	Mechanical Engineering	2 days
22		Recent Advances in Design, Manufacturing & Testing of Composites	Chaitanya Bharathi Institute of Technology	06/01/202 5 to 11/01/202 5	composite materials	one week
		Module – 5: Technology Enabled Learning and Lifelong Self-Learning Sepember, 2023	NITTT-AICTE- SWAYAM	Oct to Nov 2024	Teachers Training Program	Eight Weeks
		Module – 6: Student Assessment and Evaluation	NITTT-AICTE- SWAYAM	Oct to Nov 2024	Teachers Training Program	Eight Weeks
		Module – 8: Institutional Management and Administrative Procedures	NITTT-AICTE- SWAYAM	Oct to Nov 2024	Teachers Training Program	Eight Weeks
		Module – 7: Creative Problem Solving, Innovation and Meaningful Research & Development	NITTT-AICTE- SWAYAM	Oct to Nov 2024	Teachers Training Program	Eight Weeks

S.No	NAME OF THE FACULTY, DESIGNATION	PROGRAM NAME	ORGANIZED BY	DATE	RELEVANT AREA	DURATION
		Metal Additive Manufacturing	NPTEL	Oct 2024	3d printing	12 weeks
		Digital Manufacturing & Design Technology	Panimalar engineering college	09/12/202 4 to 14/12/202 4.	Digital manufacturing	one week
		Advanced analytics for next-generation Industrial processes	ABV-IIITM, Gwalior	23/12/202 4 to 28/12/202 4.	Industry 4.O	one week
23	Dr. T Niranjan, Assistant Professor	AICTE Recognized FDP on "Outcome based Education and Accreditation Process"	Curriculum Development Centre Department, NITTTR, Chandigarh and MGIT	25-11- 2024 to 29-11- 2024	OBE	5 days
		3D Printed Composites: Materials, Technologies, and Applications	Maharshi karve stree shikshan samstha's cummins college of engineering for women	06/01/202 5 to 11/01/202 5.	3d printing	one week
		2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	29-10- 2024 to 30-10- 2024	Mechanical Engineering	2 days
24	Ms. C. Sucharitha, Assistant Professor	Recent Advances in Design, Manufacturing & Testing of Composites	Chaitanya Bharathi Institute of Technology	06/01/202 5 to 11/01/202 5	Composite Materials	one week
		2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	29-10- 2024 to 30-10- 2024	Mechanical Engineering	2 days

S.No	NAME OF THE FACULTY, DESIGNATION	PROGRAM NAME	ORGANIZED BY	DATE	RELEVANT AREA	DURATION
		One Week AI/ML Tools for Advanced Materials, Manufacturing and Thermal Systems (ATAMMTS-2024)	Lakireddy Bali Reddy College of Engineering, Mylavaram, NTR (Dt.), Andhra Pradesh, India	24/06/202 4 to 28/06/202 4.	Mechanical Engineering	one week
25	Mr. S. Ajay kumar, Assistant Professor	Sustainability and Research in Modern Mechanical Engineering	Madanapalle Institute of Technology & Science	02-06 to 06-06 2025	Mechanical Engineering	5 days
		Advancements in Metal Forming Technology: Innovations	O.P. Jindal Univeristy, Raigarh	02/012/20 24 to 06/12/202 4	Mechanical Engineering	5 days
		NPTEL AICTE FDP Automation in manufacturing	NPTEL AICTE SWAYAM	July- October 2024	Automation	12 weeks
		One Week Online FDP on Machine drawing through auto CAD	CVR College of engineering	30-09 to 05-10 2024	Modelling	One week
		Recent Advances in Design, Manufacturing & Testing of Composites	CBIT Hyd	06/01/202 5 to 11/01/202 5	Manufacturing	One week
26	Mr. P. Shashidar, Assistant Professor	2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	29-10- 2024 to 30-10- 2024	Mechanical Engineering	2 days
		Strategic Leadership in Manufacturing & Industry 4.0: Driving Innovation for Future	ATAL FDP, Dept of Management Science, CBIT.	10th-15th February, 2025	Automation	one week
		NPTEL AICTE FDP Automation in manufacturing	NPTEL AICTE SWAYAM	July- October 2024	Automation	12 weeks

S.No	NAME OF THE FACULTY, DESIGNATION	PROGRAM NAME	ORGANIZED BY	DATE	RELEVANT AREA	DURATION
		Advanced ANSYS Mechanical Software	CBIT Hyd	25-29 Novembe r 2024	Simulation	5 days
		2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	29-10- 2024 to 30-10- 2024	Mechanical Engineering	2 days
		Strategic leadership in Manufacturing & Industry 4.0: Driving innovation for Future.	ATAL FDP, Dept of Management Science, CBIT.	10th to 15th Feb 2025	Automation	6 days
27	Dr. K Santosh Kumar, Assistant Professor	Advancements in Metal Forming Technology: Innovations, Future scope and Challenges	O.P Jindal University, Raigarh.	02-05 Dec 2024	Manufacturing	5 days
		Advancements in Battery Technology and Management for Sustainable E- Mobility	Dept. of EEE, MGIT	16th to 20th Jun 2025	Advancement in Battery Technology	5 days
		Recent Advances in Design, Manufacturing & Testing of Composites	CBIT Hyd	06/01/202 5 to 11/01/202 5	Manufacturing	6 days
		Industry Academia Connect – 1 Day Seminar – Additive Manufacturing Technologies	Siemens &, NIT Warangal	13th March, 2025	Additive Manufacturing	one day

S.No	NAME OF THE	PROGRAM	ORGANIZED	D.A. IEEE	RELEVANT	DVID A TVON
	FACULTY, DESIGNATION	NAME	BY	DATE	AREA	DURATION
		Emerging Innovations and Challenges in Modern Data Analytics Applications	Department of Information Technology, MGIT.	20th to 25th Jan 2025	Data Analutics	one week
		Recent Advances in Design, Manufacturing & Testing of Composites	Department of Mechanical Engineering CBIT(A), Gandipet, Hyderabad	06th to 11th Jan 2025	Design, Manufacturing, Composites	one week
		FDP on Advanced ANSYS Mechanical Software.	CBIT	25 to 29 Nov 2024	Analysis	one week
28	Ms. P. Meghana, Assistant Professor	2 day workshop on AutoDesk-FUSION Fundamentals	Department of Mechanical Engineering, MGIT	29-10- 2024 to 30-10- 2024	Mechanical Engineering	2 days
		All India Women Academicians Conference Envisioning New Bharath	Akhil Bharthiya Rashtriya Shaikshik Mahasangh (Technical Education) in association with JNTUH	21st Septembe r 2024	Innovation & Technology	one day
		2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	29-10- 2024 to 30-10- 2024	Mechanical Engineering	2 days
29	Ms. K. Kruthi Sharma,	All India Women Academicians Conference Envisioning New Bharath	Akhila Bharthiya Rashtriya Shaikshik in association with JNTUH	21-09 2024	Innovation & Technology	one day
	Assistant Professor	2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	29-10- 2024 to 30-10- 2024	Mechanical Engineering	2 Days
30	Mr G. Ashok, Assistant Professor	NPTE Introduction to Machine Learning	NPTEL AICTE SWAYAM	July -Sept 2024	Computing	Eight Weeks

S.No	NAME OF THE FACULTY, DESIGNATION	PROGRAM NAME	ORGANIZED BY	DATE	RELEVANT AREA	DURATION
		Advanced ANSYS Mechanical Software	Department of Mechanical Engineering CBIT(A)	25-29 Novembe r 2024	Design	One Week
		One week FDP " Technology Advancement in Synthesis of Novel Materials	Department of Mechanical Engineering CBIT(A)	05-10 August 2024	Manufacturing	one week
31	Dr. Asheesh Kumar, Assistant Professor	Advances in Materials and Manufacturing	Automobile Engineering Department, VNR VJIET	15-19 July 2024 Manufacturing		one week
		One Week Online FDP on "Robotics and Industrial Automation"	Department of Mechanical Engineering CBIT(A)	04-09 Novembe r 2024	Automation	one week
		2 day workshop on AutoDesk-FUSION FUNDAMENTALS	Department of Mechanical Engineering, MGIT	29-10- 2024 to 30-10- 2024	Mechanical Engineering	2 days
32	Dr. V Vijaya Bhaskar,	One Week Online FDP on "Robotics and Industrial Automation"	Department of Mechanical Engineering CBIT(A)	04-09 Novembe r 2024	Automation	one week
32	Assistant Professor	Advanced ANSYS Mechanical Software	Department of Mechanical Engineering CBIT(A)	25-29 Novembe r 2024	Design	one week

#### CO-CURRICULAR AND EXTRA CURICULAR ACHIEVEMENTS OF THE STUDENTS: AY 2024-25

SNO	NAME OF STUDENT	ROLL NO.	EVENT	ORGANIZED	DATE	PARTICIPATION/AW ARD
1	S.K.Priya	22265A0309	Paper & Poster Presentation	MAGISTECH - 2024	13/14-09- 2024	Participation
2	Abhinav Peddapati	21261A0301	Aakruti Global-2024	Dassault Solidworks	2024-25	Participation
3	Abhinav Peddapati	21261A0301	Rbi90 Quiz	Reserve Bank Of India	20-09- 2024	Participation
4	Dodde Vyshnavi	21261A0307	Rbi90 Quiz	Reserve Bank Of India	20-09- 2024	Participation
5	Dodde Vyshnavi	21261A0308	Aakruti Global-2024	Dassault Solidworks	2024-25	Participation
6	A Venkata Sai Vardhan	22261A0301	Introduction To Aero Drone Technology: Design, Assembly And Application	Mahindra University	25-012025	Participation
7	Dc Ashmitha	22261A0309	Introduction To Aero Drone Technology: Design, Assembly And Application	Mahindra University	25-01- 2025	Participation
8	Shaik Md Mastana Parvez	22261A0331	Introduction ToAero Drone Technology: Design, Assembly And Application	Mahindra University	25-012025	Participation
9	K Hanuman Dhanush	24265A0314	Intoduction To Aerospace Engineering	NPTEL	2024-25	Participation
10	Md. Zahoor uddin Khan	22261A0324	Introduction To Aero Drone Technology: Design, Assembly And Application	Mahindra University	25-01- 2025	Participation
11	Md. Zahoor uddin Khan	22261A0324	Online Assesment Of hp Power Lab	HPC Ltd	2024-25	Participation

SNO	NAME OF STUDENT	ROLL NO.	EVENT	ORGANIZED	DATE	PARTICIPATION/ AWARD
12	Md Zahooruddin Khan	22261A0324	Tata Crucible Campus Quiz 2024	Tata Group	2024-25	Participation
13	Md Hasan Ali Quadri	22261A0323	Introduction To Aero Drone Technology: Design, Assembly And Application	Mahindra University	25-01- 2025	Participation
14	Md Hasan Ali Quadri	22261A0323	Innoovations Ingreen Sustainable Production Practices For Futuristic Industries	IEI, Hyderabad	30-11- 2024	Participation
15	A Venkata Sai Vardhan	22261A0301	Innoovations Ingreen Sustainable Production Practices For Futuristic Industries	IEI, Hyderabad	30-11- 2024	Participation
16	A Venkata Sai Vardhan	22261A0301	Introduction To Drone technology Design, Assembly And Application	Mahindra University	25-01- 2025	Participation
17	A Venkata Sai Vardhan	22261A0301	Paper & Poster Presentation	MAGISTECH - 2024	14-09- 2024	Participation
18	A.N.Aneesh	23261A0301	One Day Workshop on CAD/CAM	Mahatma Gandhi Institute of Technology	13-09- 2024	Participation
19	A.N.Aneesh	23261A0301	One Day Workshop On 3d Printing	Mahatma Gandhi Institute of Technology	13-09- 2024	Participation
20	A.N.Aneesh	23261A0301	Smart India Hackathon	Mahatma Gandhi Institute of Technology	04-09- 2024	Participation
21	Nikhil Chandra	23261A0331	Emerging Technologies	MGIT	14-09- 2024	Participation

SNO	NAME OF STUDENT	ROLL NO.	EVENT	ORGANIZED	DATE	PARTICIPATION/AWA RD
22	Nikhil Chandra	23261A0332	One day Workshop on 3D printing	Mahatma Gandhi Institute of Technology	14-09- 2024	Participation
23	M. Sai Harshavardh an	24261A0333	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22-11- 2024	Participation
24	Panuganti Vinay	24261A0347	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.20 24	Participation
25	B. Muzahid Azeez	24265A0301	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.20 24	Participation
26	Khanumandh anush	24265A0314	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.20 24	Participation
27	R. Saketh Himanshu	24261A0351	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.20 24	Participation
28	Majji Tagore	22261A0316	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.20 24	Participation
29	N. Nischal	24261A0344	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.20 24	Participation
30	M. Chandra Shekar	24261A0337	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.20 24	Participation
31	Tammali Dheeraj Ratan	24261A0357	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.20 24	Participation
32	Chinta Bhuvan Rao	24261A0312	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.20 24	Participation
33	K. Tarun	24261A0324	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.20 24	Participation
34	Phani Sairam Devarakonda	24261A04A8	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.20 24	Participation

S.No	NAME OF STUDENT	ROLL NO.	EVENT	ORGANIZED	DATE	PARTICIPATION/AWA RD
35	Ch Pavan Kalyan	24261A0310	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
36	Pavansai Bhukya	24261A0307	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
37	Keyaan Adeeb	24261A0340	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
38	C Pavan Kumar Raj	24261A0311	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
39	M. Shiva Sai	24261A0338	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
40	B. Sai Teja	24261A0305	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
41	G. Bhanu Chandar	24261A0319	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
42	Srinivas Yadav	24261A0308	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
43	R.Thakshith a	24261A0353	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
44	M. Srinivas	24261A0336	Solidworks Workshop & CAD Competition	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
45	Keyaan	24261A0340	Paper Presentation	IGNITO - 2024	22.11.2024	Participation

S.No.	NAME OF STUDENT	ROLL NO.	EVENT	ORGANIZED	DATE	PARTICIPATION/AWA RD
46	G. Bhanu Chandar	24261A0319	Paper Presentation	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
47	Abhijay Murugan	23261A1801	Paper Presentation	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
48	R. Preeti	21261A6748	Paper Presentation	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
49	T. Vivek Vagdhan	24261A0359	Poster Presentation	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
50	Kinnera Sai Srinivas	21261A0314	Poster Presentation	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
51	Ramavath Varun	24261A1455	Project Expo	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
52	Rutik Chary	23261A0334	Auto Quiz	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
53	Syed Farhan Ahmed	23261A3253	Auto Quiz	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
54	Mohammed Abdul Rafay	23261A0329	Auto Quiz	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
55	Yajat Ch.	24261A0313	Auto Quiz	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
56	Keyaan Adeeb	24261A0340	Auto Quiz	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
57	Aditya K.	24265A0311	Aviation Quiz	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
58	Chandu	23261A0303	Aviation Quiz	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation

						PARTICIPATION/
S.No.	NAME OF STUDENT	ROLL NO.	EVENT	ORGANIZED	DATE	
59	J. Ganesh	23261A0314	Aviation Quiz	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	AWARD  Participation
60	Vasant	24265A0313	Aviation Quiz	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
61	Akash	24265A0303	Aviation Quiz	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
62	Varun Gaddipalli	24265A0307	Aviation Quiz	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
63	Mohammad Abdul Ahad	24261A0339	Aviation Quiz	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
64	B. Rajiv	22261A0302	Find The Word	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
65	G. Yashwanth	24265A0308	Find The Word	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
66	P. Kushala	23261A0329	Find The Word	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
67	D. Vyshnavi	21261A0307	Find The Word	IGNITO - 2024, Dept. of MECH, MGIT	22.11.2024	Participation
68	Gannu Abhiram	22265A0304	INTERNATIONAL CONFERENCE (ICAMCMME- 2025)	VASAVI CE HYDERABAD	15-02- 2025	Participation
69	Abhinav.P	21261A0301	LOREAL SUSTAINABILITY CHALLENGE 2024	LOREAL	2024-2025	Participation

S.No	NAME OF STUDENT	ROLL NO.	EVENT	ORGANIZED	DATE	PARTICIPATION/ AWARD
70	Md Zahoorudin Khan	22261A0324	Innovation In Green Sustainable Production Practises for Futuristic Insdustries	The Institution of Engineers	2024-25	Participation
71	Md Zahoorudin Khan	22261A0324	IGNITO	Mahatma Ghandhi Institute of Technology	2024-25	Co-Ordinator
72	Abhinav.P	21261A0301	RBI90 Nationwide Online Quiz 2024	RESERVE BANK OF INDIA	20-09-2024	Participation
73	Vemula Vishnu Varma	22265A0313	Workshop on Autodesk - Fusion Fundamentals	Autodesk	30-10-2025	Participation
74	Nithyananda	21261A0319	Advanced ANSYS Mechanical Software	Mahatma Ghandhi Institute of Technology	29-11-2024	Participation
75	Vemula Vishnu Varma	22265A0313	Hackthon on Digital Design And 3D Printing	Mahatma Ghandhi Institute of Technology	22-03-2025	Participation
76	Abhinav.P	21261A0301	Paper And Poster Presentation	Mahatma Ghandhi Institute of Technology	14-09-2024	Participation
77	Mudavath Sunil	21261A0318	AAKRUTI Global	SOLIDWORKS	2024-25	Participaiton
78	Ashutosh Muraharikar	22265A0308	Hackthon on Digital Design And 3D Printing	MECHARENA 2025	22-03-2025	Participaiton
79	Gannu Abhiram	22265A0304	VCADD ENGINEERIN GSOLUTIONS	MECHANICAL DESIGN WORKSHOP	19-01-2025	Participaiton

S.No	NAME OF STUDENT	ROLL NO.	EVENT	ORGANIZED	DATE	PARTICIPAT ION/AWARD
80	Addagatla Aryan	21261A0302	BEST PERFORMER OF THE MONTH	UNLOCK DISCOUNTS	Dec-24	Participaiton
81	Ithamraju Sai Pranay	21261A0311	AAKRUTI Global	SOLIDWORKS	2024-25	Participaiton
82	Vislavalath Avinash	21261A0326	AAKRUTI Global	SOLIDWORKS	2024-25	Participaiton
83	Gandla Sukumar	22265A0303	AAKRUTI Global	SOLIDWORKS	2024-25	Participaiton
84	Sagar Lakhan	21261A0322	AAKRUTI Global	SOLIDWORKS	2024-25	Participaiton
85	Roshan Vyas	21261A0327	AAKRUTI Global	SOLIDWORKS	2024-25	Participaiton
86	Balaji Sathya Sai Sravan .B	22265A0301	AAKRUTI Global	SOLIDWORKS	2024-25	Participaiton
87	Vyshnavi Dodde	21261A0307	AAKRUTI Global	SOLIDWORKS	2024-25	Participaiton
88	Sai Nikith Reddy Bobbili	21261A0328	AAKRUTI Global	SOLIDWORKS	2024-25	Participaiton
89	Ronit Singh Badikishn	21261A0305	AAKRUTI Global	SOLIDWORKS	2024-25	Participaiton
90	Abhinav .P	21261A0301	Innovation In Green Sustainable Production Practises for Futuristic Insdustries	The Institution of Engineers	30-11- 2024	Participaiton
91	Vyshnavi Dodde	21261A0307	Innovation In Green Sustainable Production Practises for Futuristic Insdustries	The Institution of Engineers	30-11- 2024	Participaiton
92	Kattula Sai Krishna	21261A0313	Innovation In Green Sustainable Production Practises for Futuristic Insdustries	The Institution of Engineers	30-11- 2024	Participaiton
93	Kinnera Sai Srinivas	21261A0314	Innovation In Green Sustainable Production Practises for Futuristic Insdustries	The Institution of Engineers	30-11- 2024	Participaiton

S.No	NAME OF	POLL NO		ODGANIZED	D.A.TE	PARTICIPATION/
	STUDENT	ROLL NO.	EVENT	ORGANIZED	DATE	AWARD
94	Arya Vardhan Reddy	21261A0303	AAKRUTI Global	SOLIDWORKS	2024-25	Participaiton
95	Vyshnavi Dodde	21261A0307	Al Driven Digital Twins in Mechanical and thermal Engineering systems	The Institution of Engineers	01-02-2025	Participaiton
96	Sk Priya	22265A0309	Al Driven Digital Twins in Mechanical and thermal Engineering systems	The Institution of Engineers	01-02-2025	Participaiton
97	Abhinav .P	21261A0301	Al Driven Digital Twins in Mechanical and thermal Engineering systems	The Institution of Engineers	01-02-2025	Participaiton
98	V.Ashok	21261A0312	Al Driven Digital Twins in Mechanical and thermal Engineering systems	The Institution of Engineers	01-02-2025	Participaiton
99	Telu Tanuja	22265A0310	MAGISTIC- 24	Mahatma Ghandhi Institute of Technology	14-09-2024	Participaiton
100	Arya Vardhan Reddy	21261A0303	MAGISTIC- 24	Mahatma Ghandhi Institute of Technology	14-09-2024	Participaiton
101	Md Abuzer	22265A0306	MAGISTIC- 24	MGIT	14-09-2024	Participaiton
102	Kotagiri Bookailash	22265A0305	MAGISTIC- 24	MGIT	14-09-2024	Participaiton

S.No	NAME OF STUDENT	ROLL NO.	EVENT	ORGANIZED	DATE	PARTICIPATION/ AWARD
103	S.Hari Vamshik Reddy	21261A0323	MAGISTIC- 24	Mahatma Ghandhi Institute of Technology	14-09-2024	Participaiton
104	Sk Priya	22265A0309	MAGISTIC- 24	Mahatma Ghandhi Institute of Technology	14-09-2024	Participaiton
105	Vyshnavi Dodde	21261A0307	MAGISTIC- 24	Mahatma Ghandhi Institute of Technology	14-09-2024	Participaiton
106	Md Abuzer	22265A0306	MAGISTIC- 24	Mahatma Ghandhi Institute of Technology	14-09-2024	Participaiton
107	M.Ashutosh	22265A0308	MAGISTIC- 24	Mahatma Ghandhi Institute of Technology	14-09-2024	Participaiton
108	Bookailash Rao	22265A0305	ICRAES-25	BHARATI VIDYAPEETHS CE PUNE	23-04-2025	Participaiton
109	Arya Vardhan	21261A0303	ICRAES-25	BHARATI VIDYAPEETHS CE PUNE	23-04-2025	Participaiton
110	Mohammed Abuzar	22265A0306	ICRAES-25	BHARATI VIDYAPEETHS CE PUNE	23-04-2025	Participaiton
111	S.Hari Vamshik Reddy	21261A0323	Workshop on Autodesk - Fusion Fundamentals	Mahatma Ghandhi Institute of Technology	30-10-2024	Participaiton
112	Gandla Sukumar	22265A0303	Workshop on Autodesk - Fusion Fundamentals	MGIT	30-10-2024	Participaiton
113	M.Ashutosh	22265A0308	Workshop on Autodesk - Fusion Fundamentals	MGIT	30-10-2024	Participaiton

S.No	NAME OF STUDENT	ROLL NO.	EVENT	ORGANIZED	DATE	PARTICIPATION/ AWARD
114	Arya Vardhan Reddy	21261A0303	Workshop on Autodesk - Fusion Fundamentals	MGIT	31-10-2024	Participaiton
115	B.Balaji Satya Sai Sravan	22265A0301	Workshop on Autodesk - Fusion Fundamentals	MGIT	01-11-2024	Participaiton
116	Addagatla Aryan	21261A0302	Workshop on Autodesk - Fusion Fundamentals	MGIT	02-11-2024	Participaiton
117	Bobbili Sai Nikith Reddy	21261A0328	Workshop on Autodesk - Fusion Fundamentals	MGIT	03-11-2024	Participaiton
118	Roshan Vyas	21261A0327	Workshop on Autodesk - Fusion Fundamentals	Mahatma Ghandhi Institute of Technology	04-11-2024	Participaiton
119	B. Muzahid Azeez	24265A0301	Vikas saptah Quiz-2025	MyGov	2025	Participaiton
120	K. Bhargav	24265A0310	Blood Donation	Mahatma Gandhi Institute of Technology	13-11-2024	Participaiton
121	Shaik Md Mastana Parvez	22261A0331	Innoovations Ingreen Sustainable Production Practices For Futuristic Industries	IEI, Hyderabad	30-11-2024	Participaiton
122	Shaik Md Mastana Parvez	22261A0331	IGNITO-2024	MGIT	22-11-2024	Participaiton
123	Shaik Md Mastana Parvez	22261A0331	Introduction To Aero Drone Technology: Design, Assembly And Application	Mahindra University	25-012025	Participaiton
124	Mastana Parvez	22261A0331	Smart India Hackathon coordinator	MGIT	04-09-2024	Participaiton



IGNITO is the annual fest conducted by the mechanical engineering branch in MGIT. It is a part of "NIRVANA" - an annual event of the institution. IGNITO is a completely student run technical fest with faculty supervision. Students present their ideas and conduct several technical and non-technical events which give them exposure to different aspects of management. IGNITO'24 was hosted at Mechanical Engineering block in MGIT on  $22^{nd}$ November 2024.





Following are the technical and non-technical events that were the part of IGNITO'24:

#### **Technical Events:**

- 1. AVIATION QUIZ
- 2. SOLIDWORKS WORKSHOP AND CAD COMPETITION
- 3. AUTO QUIZ
- 4. PROJECT EXPO
- 5. PAPER AND POSTER PRESENTATION

#### **Non-Technical Events:**

- 1. FIND THE WORD
- ANSWER WRONG
- 3. RC RACING
- 4. TUG OF WAR
- 5. DARTS

#### **INDIA DESIGN WEEK**

#### **FUSION – 360**



A two-day hands-on workshop on Fusion 360 was conducted on **29**<sup>th</sup> and **30**<sup>th</sup> **of October 2024,** with 57 students and 35 faculty members participating. It was organized by Design labs, in collaboration with **Autodesk, India** at MGIT, Hyderabad in CAD CAM Lab.

The workshop was designed to train the participants in **Fusion 360 Software** for essential solid modelling skills, sketching, assembling, and drafting techniques along with rendering and simulation analysis techniques. Participants gained practical experience in Fusion **360**.

Additionally, the workshop introduced the fundamentals of generative design, providing an overview of its applications and benefits in modern engineering and product development. A session on simulation was also conducted, giving participants insights to analyze and optimize designs for real-world performance.

The two-day workshop also provided participants with practical experience in solid modeling, sketching, assembling, and drafting techniques using Fusion 360. Attendees gained a foundational understanding of generative design, exploring its applications in modern engineering. Moreover, the session covered an overview of simulation, helping participants analyze and optimize their designs for real-world performance.

The Fusion 360 hands-on workshop received high positive feedback from both students and faculty. Participants appreciated the interactive learning approach, which provided valuable hands-on experience in CAD modeling, generative design, and simulation. They also praised the clarity of instruction and the opportunity to work on industry-relevant design challenges. The workshop encouraged further exploration of advanced Fusion 360 tools, leaving participants motivated to enhance their expertise in product design and manufacturing and to participate in the upcoming competition like IDW 2025 etc.

#### MAGISTECH 2024-25





ISTE Students' Chapter Institution's and Innovation Council of Mahatma Gandhi Institute of Technology (MGIT) have jointly organized a two days National Level Technical Symposium for Engineering students MAGISTECH-2024 during 13-14 September, 2024. This event was organized as part of celebrations of Engineers' Day, the birth day of Bharath Ratna Sir, Mokshagundam Visvesvaraya. Around 650 students from various parts of the country have participated in various events viz Paper/Poster presentations, Circuit Amending, Robotics, 3D Printing, Disturb Code, Idea presentation, Code Unseen, Guess the Output, Electro Cache and Techie Quiz conducted during the event. CAD Design Competitions and Technical Quiz were also conducted.

The Symposium was inaugurated by the Chief Guest Prof. P. Krishna Reddy, Data Science and Analytics Center & IT for Agricultural Research Center, IIITH- Hyderabad on 13th September, 2024. Dr. P. Chandra Sekhar, Technical Director - Management Consultant 7S Technologies & Technical Advisor- Ramoji Film City was the Guest of Honor. Others present were Principal Prof. G. ChandraMohan Reddy, Vice Principal, Prof. K. Sudhakar Reddy, Prof. S.Madhava Reddy, Faculty Advisor, ISTE Students' Chapter –MGIT & Convener MAGISTECH 2024 and B.Srinivasa Reddy, Student convener.

In the valedictory function held on September 14th, 2024 the prizes to the winners of the competitions were given away by Dr.G.Chandra Mohan Reddy, Principal, MGIT and Prof.K.Sudhakar Reddy Vice Principal, MGIT.









#### HACKATHON (SIH), Dec – 2024

MGIT students achieved a remarkable milestone by winning the **First Prize in the "Hardware" category** at the Smart India Hackathon (SIH) 2024, held from December 11th to 15<sup>th</sup>, 2024 at Forge Innovations and Venture, Coimbatore. Their innovative project, titled *Solar Panel Tracker Without Electricity*, focused on developing a non-electrical device to track the sun's movement and enhance solar panel efficiency (ID 1545). The team utilized various advanced lab facilities including the Engineering Workshop, Machine Tools Lab, Metrology Lab, CAD/CAM Lab, and 3D Printing Machine to bring their concept to life.

#### The student team:

- 1. P. Chanakya
- 2. P. Aditya
- 3. M. Karthik
- 4. S. Pranay
- 5. V. Anurag
- 6. V. Prasanna



This achievement highlights MGIT's commitment to nurturing innovation and practical problem-solving among its students. Winning at SIH 2024 has not only brought pride to the institution but also inspired future engineers to pursue impactful and sustainable solutions.



#### **INDUSTRIAL VISITS:**

S.NO	NAME OF THE COMPANY	VISIT DATE	NO. OF STUDENTS VISITED
01.	Abhinidhi Industries	23/01/2025	72
02.	Rajeshwari Industries	23/01/2025	72

#### **Abhinidhi Industries:**

An industrial visit to M/s Sri Abhinidhi Industries, located in the Industrial Estate, Kukatpally, was organized for the students of Mahatma Gandhi Institute of Technology, Department of Mechanical Engineering (Mechatronics), IV Year, VII Semester. The visit was conducted under the supervision of faculty members Ms. K. Shirisha, Mr. Prasad Reddy, and Ms. Meghana (Assistant Professors). The enterprise, recognized as a microscale unit specializing in the fabrication of metal products (excluding machinery and equipment), provided students with a comprehensive overview of its operations. A guided tour of the production units, sheet metal processing facilities, and surface treatment sections was facilitated, followed by interactive sessions with industry professionals. Safety protocols were briefed prior to the visit, and transportation was arranged by the institution.





#### M/s Rajeswari Industries:





An industrial visit to M/s Rajeswari Industries, located in the Industrial Estate, Kukatpally, was organized for the students of Mechatronics / Mechanical Engineering, IV Year, VII Semester, Mahatma Gandhi Institute of Technology. The visit was conducted under the supervision of faculty members Ms. K. Shirisha, Mr. Prasad Reddy, and Ms. Meghana (Assistant Professors).

The company, engaged in the manufacturing and development of industrial and commercial products, facilitated a comprehensive agenda including a guided tour of production units, laboratories, and R&D facilities. Students were briefed on safety protocols prior to departure, and transportation was arranged by the institution. Interactive sessions with professionals, including Sri Harinath Garu, enabled students to gain insights into operational workflows, technological advancements, and industry expectations.



Through this initiative, students were provided with firsthand exposure to industrial practices, bridging the gap between academic instruction and practical implementation. Observations of manufacturing processes, machinery, and surface treatment techniques contributed to a deeper understanding of theoretical applications.



The visit fostered career preparedness, encouraged professional networking, and highlighted the evolving dynamics of the industrial sector. Students including [insert names here] reported enhanced awareness of fabrication workflows, industrial challenges, and the significance of continuous learning in a competitive landscape. Post-visit reflections were conducted to consolidate insights and encourage further engagement with industry-aligned competencies.

#### Acoustic-Structural Coupling Structural Analysis for Modified SISO Muffler

The acoustic–structural coupling structural analysis is performed to study the interaction between the acoustic pressure field inside the muffler and the structural response of its casing. In the case of a Modified Single Inlet Single Outlet (SISO) muffler, this analysis helps evaluate how sound pressure waves influence the mechanical vibrations of the muffler shell and, conversely, how the shell's deformation affects the acoustic behavior. This coupled analysis considers the mutual influence of sound pressure waves and structural vibrations to ensure the muffler's acoustic performance and mechanical durability.

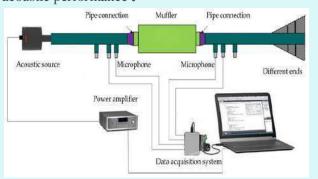
#### Objective:

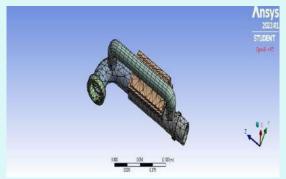
- To assess the coupled behavior between acoustic pressure variations and structural deformation.
- To ensure the modified muffler design maintains structural integrity under acoustic loading and does not amplify unwanted noise (structure-borne noise).

#### Methodology:

- Finite Element Analysis (FEA) and Boundary Element Method (BEM) are commonly used.
- The **acoustic domain** (air inside the muffler) and **structural domain** (muffler body) are meshed and coupled using an **acoustic–structure interface**.
- Material properties, boundary conditions, and acoustic excitation frequencies are applied.
- The solver performs **bidirectional coupling**, meaning pressure acts as a load on the structure, and structure deformation alters the acoustic field.

The finite element method (FEM) models the acoustic cavity and muffler shell, with coupling at internal walls where pressure acts as dynamic loading. Material, geometry, and boundary conditions follow the modified muffler setup. Frequency response analysis identifies resonance frequencies and vibration modes influencing acoustic performance.





#### **Conclusion and Discussion:**

The results show sound pressure and deformation variations in the muffler, with resonance peaks from acoustic—structural coupling. High-stress areas indicate noise leakage. Modifying shell thickness and chamber geometry reduces resonance and enhances noise control and structural strength



Dr. K. Santosh Kumar

#### STUDENT PLACEMENTS

S.No.	Name of the student	Enrollment No.	Employee Name
1	ABHINAV PEDAPATI	21261A0301	M/s Cyient Limited, Hyderabad
2	K ARYA VARDHAN REDDY	21261A0303	M/s Aveva Industrial Solutions, Hyderabad
3	D DURGA BABU PRASAD	21261A0306	M/s Sattva Group, Hyderabad
4	DODDE VYSHNAVI	21261A0307	M/s Cyient Limited, Hyderabad
5	PENDEM NITHYANANDA	21261A0319	M/s Mahindra and Mahindra Ltd , Zaheerabad , Telangana
6	ВНИКҮА ВНООМІКА	22265A0302	M/s Mahindra and Mahindra Ltd , Zaheerabad , Telangana
7	MOHAMMED ABUZAR	22265A0306	M/s Mahindra and Mahindra Ltd , Zaheerabad , Telangana
8	MURAHARIKAR ASHUTOSH	22265A0308	M/s Cyient Limited, Hyderabad
9	SHIVA KAVATHALAM PRIYA	22265A0309	M/s FMC Technologies India Pvt Ltd, Hyderabad
10	TELU TANUJA	22265A0310	M/s Mahindra and Mahindra Ltd , Chennai.
11	VEMULA VISHNU VARMA	22265A0313	M/s Medha Servo Drives Pvt. Ltd,Hyderabad





# Department of Mechanical Engineering