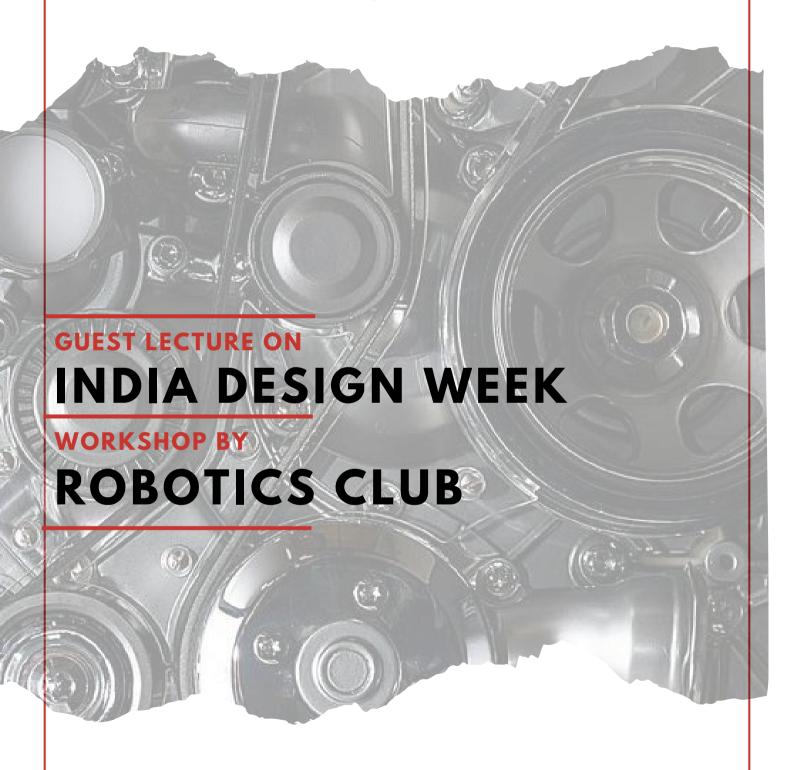
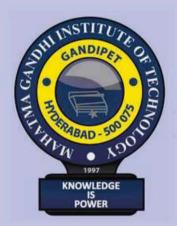
2023-24

MECHANICAL

NEWSLETTER



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 Ph.D holders and 20 faculty members pursuing their Ph.D 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, 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 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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10.AAYUSH SHARMA

FACULTY PUBLICATIONS

- Optimization of Process Parameters in Turning of Hard Steel by Supplying Magnetized Cutting fluid based on the MQL System, High Technology Letters, Jan 2024, Volume 30, Issue 1, Pages: 454-462 by Dr. G. Chandra Mohana Reddy
- Experimental investigation of cutting conditions in turning of Al-MMC in Materials Today Proceedings Volume 76, Part 3, 2023, Pages 488-494 ISSN:ISBN No. 2214-7853 by Dr. G. Chandra Mohana Reddy
- Simulation of cutting forces using DEFORM 3D software and Experimental validation in journal of Strad Research , Feb 2024, Volume 11, Issue 2, Pages: 208-214 by Dr. G. Chandra Mohana Reddy
- Optimization Using DEFORM-3D Software and Experimental Study on The Influence of Magnetized Coolant on Tool Wear in Turning Operation in journal of Industrial Engineering Journal, Dec 2023, Volume: 52, Issue 12, No. 2, Pages: 1-9 by Dr. G. Chandra Mohana Reddy
- PVT Panel efficiency enhancement with cooling methods and sun tracking in i-manager's Journal on Mechanical Engineering, i-manager's Journal on Mechanical Engineering, by Dr K. Ankamma
- Mechanism for Automation in Welding Processes of Pressure Vessels in Journal of Emerging Technologies and Innovative Research Vol.10, Issue 7, July 2023, Pp.439-448 by Dr.S Madhava Reddy
- IoT-Based Smart Hydroponic System and Monitoring of Plant's Health through Image Processing in International Journal of All Research Education and Scientific Methods Volume 12, Issue 1, January-2024, Pp.985-989 by Dr.S Madhava Reddy

- Enhancing Efficiency of PVT systems with Finned PCM technology in i-manager's Journal on Mechanical Engineering, 13(3), 21-35 July September 2023 issue ISSN:2277-5110/2277-5250,(Volume 13, issue no.3) by Dr K.Sudhakar Reddy
- Influence on solar PV performance integrated with heat sinks and nanoenhanced phase change material in journal of Part E:Journal of Process of Mechanical Engineering ,volume 1- 10, 2024 by sage publications by Dr K.Sudhakar Reddy
- Thermal and phase change characteristics of organic phase change material enhanced by carbonaceous materials in journal of Journal of thermal analysis and calorimetry , under review by Dr K.Sudhakar Reddy.
- Improved electrical properties of Ba1 xCaxCe0.8Nd0.2O3 δ solid oxide fuel cells in journal of Inorganic Chemistry
- Experimental and numerical investigation of thermo-hydrodynamic performance of twin tube counter flow heat exchanger using cerium oxide nanofluid in Numerical Heat Transfer, Part A: Applications. An International Journal of Computation and Methodology (Taylor & Francis Publications) by Dr.R.Uday Kumar
- Augmenting heat transfer performance in a heat exchanger with CeO2 nanofluids in Materials Research Innovations(An International Journal), Taylor & Francis Publications, Vol 28, No.1,January 2024, pp.19-31,by Dr.R.Uday Kumar

FACULTY PUBLICATIONS

- RESPONDER HEXAPOD in Organization Development Journal Volume 12, Issue 2, February 2024, Pp.94- 101 by Dr.S Madhava Reddy.
- Study on the Mechanical Behavior of Aramid Epoxy Composites with Coal Ash Filler in Nano World Journal 10(S1): March 20, 2024 Pp.250-258 by Dr. S Madhava Reddy.
- Design And Analysis Of 3D Printed Cable Protector Using PLA/ABS in Bulletin For Technology And History Journal, Volume 24, Issue 05, May 2024, Pp. 423- 434 by Dr. S Madhava Reddy
- Attitude Control system in a freely falling body in Organization development Journal Vol 29, Issue 11 ,November 2023 ,pp.136-149 by Dr. R. Uday Kumar.
- AUTONOMOUS ROCKER BOGIE FOR **PLANT** IRRIGATION SYSTEM in Organization Development Journal (OD Publisher Journal) Volume 29, Issue 11, Nov 2023, Page no. 150-157 by P. V. Prasad Reddy.
- DESIGN AND FABRICATION OF FIRST RESPONDER HEXAPOD in International Journal of Research and Development in Engineering Sciences Volume 6, issue 4, June 2024 by P. V. Prasad Reddy.

- DESIGN AND MODELLING OF FIRST Influence of W-cut twisted tape inserts on heat transfer characteristics of a counter flow heat exchanger using CeO2 nanofluid – an experimental and numerical investigations in Numerical Heat Transfer, Part A: Applications, An International Journal of Computation and Methodology, Taylor & Francis Publications, Published Online: 31.05.2024. by Dr.R.Uday Kumar
 - Workspace Analysis of Calibrated Multi-position Synthesized 3-Prismatic-Revolute-Spherical Manipulator in J. Inst. Eng. India Ser. C Volume 105, Issue 1, March 2024, pp. 195-214 by Dr. P. Srinivasa Rao
 - DESIGN AND ANALYSIS OF 3D PRINTED CABLE PROTECTOR USING PLA/ABS in Bulletin For Technology And History Journal Volume 24, Issue 05, May 2024 Page No:423-434 by P.V.Prasad Reddy.
 - DESIGN AND **MODELLING** OF **FIRST** RESPONDER HEXAPOD Organization Development Journal (OD Publisher Journal) Volume 12, issue 2 Feb 2024, Page No: 94-101 by P.V.Prasad Reddy
 - Enhancing Efficiency of PVT systems with Finned PCM technology in i-manager's Journal on Mechanical Engineering 13(3), 21-35 July -September 2023 issue ISSN:2277-5110/2277-5250, (Volume 13, issue no.3) by D KAMESWARA **RAO**
 - · Influence on solar PV performance integrated with heat sinks and nano-enhanced phase change material in Part E:Journal of Process of Mechanical Engineering, volume 1- 10, 2024 by sage publications by D KAMESWARA RAO

FACULTY PUBLICATIONS

- thermo-hydrodynamic performance of twin tube counter flow heat exchanger using cerium oxide nanofluid in Numerical Heat Transfer. Part Applications. A: International Journal of Computation and Published online: 17 Oct 2023. By Sreenivasulu Reddy Goda
- Augmenting heat transfer performance in a heat exchanger with CeO2 nanofluids in Materials Research Innovations(An International Journal), Taylor & Francis Publications Vol 28, No.1, January 2024, pp.19-31by Sreenivasulu Reddy Goda.
- Influence of W-cut twisted tape inserts on heat transfer characteristics of a counter flow heat exchanger using CeO2 nanofluid – an experimental and numerical investigations, Numerical Heat Transfer. Part A Applications, An International Journal of • Computation and Methodology, Taylor & Francis Publications, Published Online: 31.05.2024 by Sreenivasulu Reddy Goda
- Fabrication and characterization of sic, tio2, and pksa hybrid aluminum-based metal matrix composites MATEC Web of Conferences 392 (01023), 2024 by Konka Prudhvi Raj
- Impact of TiB2 Particles on Improving Processing Parameters of TiB2/Al Metal • Matrix Composites in MATEC Web of Conferences 392 (01022), 2024 by Konka Prudhvi Raj

- Experimental and numerical investigation of Thermal and phase change characteristics of organic phase change material enhanced by carbonaceous materials in Journal of thermal analysis and calorimetry is under review by D KAMESWARA RAO
 - Methodology (Taylor & Francis Publications) Design and fabrication of Intelligent Combat Robot in european journal of engineering in D KAMESWARA RAO
 - Design and Analysis of Multi-Axis Welding With Auto Indexing in International Journal of All Research Education and Scientific Methods (IJARESM) Volume 12, Issue 6, Pg 2711-2717, June-2024 by B Ramakrishna
 - Fabrication of Pneumatic Operated Actuator by Using Reciprocating Mechanism International Journal of All Research Education and Scientific Methods Research Education and Scientific Methods (IJARESM) by B Ramakrishna
 - ·Investigation of Al-7075/Al2O3/SiC by swirl casting and WEDM in MATEC Web Research Education and Scientific Methods (IJARESM) by Konka Prudhvi Raj
 - ·Manufacturing while Investigations of A17075/RHA/A12O3 Composite by Squeeze **MATEC** Casting Approach in Web Conferences 392 (01027), 2024 by Konka Prudhvi Raj
 - Design and Development of Vibrating Seats in Automobiles in Journal of Technology, VOLUME 12 ISSUE 4, 2024 pp:1133-1142 by YVN Chandana

FACULTY PUBLICATIONS

- al7075 metal matrix composite enhanced with fe3o4 and pksa in MATEC Web of Conference in 392 (01023), 2024 Konka Prudhvi Raj
- Effect of coir fiber loading on the mechanical, thermal, and physical properties of natural • composites in applications of packaging in Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering currently In Press by Dr. Rakesh Kumar Gunda.
- Propulsion System In Marine Vessels: Design, Analysis And Fabrication in ORGANISATION DEVELOPMENT JOURNAL Volume-12-issue-7-2024, 7th, page no.61-69) by K. Sirisha
- Geometric Modelling And Analysis Of Camshaft Using FEA in International Journal of Creative Research Thoughts (IJCRT) Volume.12, Issue 4, pp.j141j149, April 2024 by K. Sirisha
- Design and Analysis of Enhanced Electronic Cooling Using Ultra-Thin PCB-Embedded Motor in Nanotechnology Perceptions, 20 No. S1 (2024) 1176-1188 by YVN Chandana
- Experimental Analysis of Process Parameters in Wire-Cut Electric Discharge Machining in Nanotechnology Perceptions, 20 No. S2 (2024) 1162-1171 by YVN Chandana

- Exploration of the mechanical characteristics of Process parameters influence in micro hole drilling of electrochemical micromachining of stainless steel in AIP Conference Proceedings, vol. 3006, no. 1 December 2023 Dr.T.Niranjan
 - · Experimental Investigation on Single Point Incremental Forming **Process** Using Conventional Fluid and Solid Lubrication in NanoWorld 9(S4): S356-S360 Journal, November 2023 by Dr.T.Niranjan.
 - · Performance of Hybrid Micro Textured Drill Tool and Nanofluid in Drilling of Aerospace Alloy in NanoWorld Journal, J 9(S4): S350-S355, November 2023 by Dr.T. Niranjan.
 - Optimization of the Parameters of the Electrochemical Micromachining **Process** Using Artificial Neural Network (ANN) Models to established a Simple Relationship Between Machining Rate (MR), Overcut (OC) and Input Data in Journal of New Materials for Electrochemical Systems, 27, no. 1,pp:25-29, January 2024 by Dr. T. Niranjan.
 - Optimization of Fused Deposition Modeling Control Parameters Using Hybrid Taguchi and TOPSIS Method in Sustainable Machining and Green Manufacturing, WILEY Publishers, May 2024,pp.289-304 by Dr.T.Niranjan.
 - Application Biocarbon Polymer Nanocomposites as Filaments in the FDM Process A Short Review in Biocarbon Composites, Bentham Polymer Science Publisher, December 87-97 2023, by Dr.T.Niranjan

FACULTY PUBLICATIONS

- Identification of Fake Indian Currency Using

 EVALUATION
 Deep Learning Techniques in IEEE
 Technology & Engineering Management
 Conference-Asia Pacific (TEMSCON-ASPAC) In 2023, pp. 1-6. IEEE Xplore, 21
 May 2024 by Dr. T. Niranjan.
 EVALUATION PROPERTIES
 VIRGIN PVC
 MOLDING PROPERTIES

 Engineering Journal Engineering Journal Properties
- Effect of Material type and Process Parameters on Tensile Strength of 3D Printed Specimen in Journal of Physics: Conference Series (Vol. 2779, No. 1, p. 012077). IOP Publishing, 2024 Jun 1 by Dr. T. Niranjan.
- Analytical Study of Geometric Effects on
 Functionally Graded Carbon Nanotube
 Sandwich Shells in Nanotechnology
 Perceptions, Vol. 20 No. S5 (2024) ISSN 1660-6795 by C. Sucharitha.
- Geometric Modelling And Analysis Of Camshaft Using FEA in International Journal of Creative Research Thoughts [IJCRT], Volume 12, Issue 4, April & 2024, 141-149 by S Ajay Kumar.
- Validation and Verification of Remaining Useful Life Prediction for Lithium-Ion • Batteries based on AM- CNN Approach in IEEE XPLORE. 2023 International Conference on Self Sustainable Artificial Intelligence Systems (ICSSAS), 18-20 October 2023. M.P. Nachimuthu Jaganathan Engineering College, Chenimalai, • Erode, Tamil Nadu, India 2023 by Dr. Asheesh Kumar.

- EVALUATION OF MECHANICAL PROPERTIES OF BLENDED PVC OVER VIRGIN PVC USED IN INJECTION BLOW MOLDING PROCESS Volume: 53, Issue 9,No.3, ISSN: 0970-2557 published in Industrial Engineering Journal by K. Sarupya Santosh
- EVALUATION OF MECHANICAL PROPERTIES OF BLENDED PVC OVER VIRGIN PVC USED IN INJECTION BLOW MOLDING PROCESS Volume: 53, Issue 9,No.3, ISSN: 0970-2555 by Dr K Santosh Kumar
- Design And Fabrication Of Non-Woven Needle Punching Machine, Volume: 53, Issue 3, No. 2, ISSN: 0970-2557 published in Industrial Engineering Journal, by Dr K Santosh Kumar
- BLENDING VIRGIN WITH RECYCLED POLYPROPYLENE CHAIRS AND OPTIMIZATION OF INJECTION MOULDING PROCESS PARAMETERS, Volume: 53, Issue 3, No. 2, March: 2024., No. 2,ISSN: 0970-2555 published in Industrial Engineering Journal, by Dr K Santosh Kumar
- Modeling And Exploring Temperature
 Distribution And Heat Flux Analysis of A Coated
 Piston Organized by Research & Development
 Cell in Aditya College of Engineering Madanapalle, A.P by P.V.Prasad Reddy
- Promotion of Article-Article Affiliation-Affiliated Country The 11th Annual World Congress of Ocean (WCO-2023) – The 21st Conference on International Exchange of Professionals – Parallel Session in Japan and Cluster Meeting of Gala Technology by Dr. P. Srinivasa Rao

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- EVALUATION OF MECHANICAL PROPERTIES OF BLENDED PVC OVER VIRGIN PVC USED IN INJECTION BLOW MOLDING PROCESS Volume: 53, Issue 9,No.3, ISSN: 0970-2555 published in Industrial Engineering Journal by B. Govinda Reddy
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- Blending Virgin With Recycled Polypropylene Chairs And Optimization Of Injection Molding Process Parameters, Volume: 53, Issue 3, No. 2, ISSN: 0970-2556 published in Industrial Engineering Journal, by P. Shashidar
- Design And Fabrication Of Non-Woven Needle Punching Machine, Volume: 53, Issue 3, No. 2, ISSN: 0970-2557 published in Industrial Engineering Journal, by P. Shashidar
- A Comparative Analysis of Single and Multi Objective Optimization of Process Parameters of Dissimilar Metal Friction Welding of Pure Copper and Pure Aluminum in Department of Aeronautical and Mechanical Engineering, MLRIT, Hyd by M. Pratyusha
- Synthesizing green hydrogen in industry European Conference on Renewable Energy and Green Chemistry, Scitech series Publishing Limited by Dr. P. Srinivasa Rao

- Synthesis of multi-position 3-PRS manipulator based on spherical constraints by eliminating the PARA Peers Alley Media, Scientific Program, Nano Intellects 2024 & Adv. Physics 2024 by Dr. P. Srinivasa Rao
- A Comparative Analysis of Single and Multi-Objective Optimization of Process Parameters of Dissimilar Metal Recent Advances in Design and Manufacturing (RADM-2024), Department of Mechanical Engineering, National Institute of Technology Patna by Dr.T.Niranjan
- Efficient method for creep Behavior of recycled aggregate concrete using MS-CNN and LSTM Coimbatore, Tamil Nadu by Dr. Asheesh Kumar
- A Comparative Analysis of Single and Multi-Objective Optimization of Process Parameters of Dissimilar Metal Friction Welding of Pure Copper and Pure Aluminum 6th International Conference on Advancements in Materials and Manufacturing in Journal of Physics: Conference Series 2837 (2024) 012076IOP Publishingdoi:10.1088/1742-6596/2837/1/012076 by Dr. P Venkata Ramana in the Department of Aeronautical and Mechanical Engineering, MLRIT, Hyd
- Predictive Service in the Automotive Industry: Coupling Machine Learning and IoT at Birla Institute of Technology Mesra, Ranchi Off-Campus Jaipur, Rajasthan, India. by Dr. Asheesh Kumar

FACULTY PUBLICATIONS

- Design and Fabrication of First Responder
 Modeling And Exploring
 Hexapod Organized by P. V. Prasad Reddy in
 Research & Development Cell Aditya College of
 Engineering, Madanapalle, A.P
 Modeling And Exploring
 Distribution And Heat Flux A
 Coated Piston on 31/05/2024
 2024 for Organized by
- Synthesis of a Three Degree of Freedom Spatial Parallel Manipulator Global Congress on "Advanced Satellite Communications 2023" Organized by Peers Alley Media, 1126 59 Ave
 East, V5X 1Y9, Vancouver BC, CANADA by Dr. P. Srinivasa Rao
- Circular Fashion Supply Chains: An Empirical Study on Overcoming Circular Economy Challenges through Coordination Recent Advances in Design and Manufacturing (RADM-2024), Department of Mechanical Engineering, National Institute of Technology Patna by Dr. T. Niranjan
- Validation and Verification of Remaining Useful Life Prediction for Lithium-Ion Batteries based on AM-CNN Approach Nachimuthu M.Jaganathan Engineering College, Chenimalai, Erode, Tamil Nadu, India,2023 by Dr. Asheesh Kumar

- Modeling And Exploring Temperature Distribution And Heat Flux Analysis of A Coated Piston on 31/05/2024 and 01/06-2024 for Organized by Research & Development Cell Aditya College of Engineering - Madanapalle, A.P, by P. V. Prasad Reddy
- DESIGN AND FABRICATION OF FIRST RESPONDER HEXAPOD on 31/05/2024 and 01/06-2024 for Organized by Research & Development Cell Aditya College of Engineering - Madanapalle, A.P, by P. V. Prasad Reddy
- Parametric Analysis of 3d-Printed Part Using Abs And Pla For Drone Applications on 26-2, 7th April 2024 for NCPCAE'24, organized by Rajalakshmi Engineering College, Chennai by Dr. T. Niranjan

	FACULTY ACHIEVEMENTS								
S.NO.	DATE(S)	NAME OF THE FACULTY MEMBER	TITLE OF THE AWARD	NAME OF THE ORGANIZATION	VENUE				
1	15th September 2023	Dr. G. Chandra Mohan Reddy	Bharat Ratna Sir Mokshagundam Visvesvaraya Award-2023	TS Govt & Institution of Engineers (INDIA)	OFFLINE				
2	23rd & 24th 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				

S NO.	NAME OF THE FACULTY,DESI GNATION	PROGRAM NAME	ORGANISED BY	DATE	RELEVANT AREA	Duration In Days
		Recent Trends in Green Energy Initiatives and	Dept of EEE, MGIT	11-07-2023 to 15-07- 2023	Energy	1 week
		Aiming towards 3Ds in Electrical	Dept of EEE, MGIT	11-03-2024 to 15-03-	Energy	1 week
		Manifold Design and solution P8	Automation Studio	16-01-2024	PLC	1 day
		Introduction to new features of	Automation Studio	18-01-2024	PLC	1 day
1	Dr. K. Ankamma,	Hydraulics + Virtual Trainer	Automation Studio	18-03-2024	PLC	1 day
	Professor	Pneumatics + Virtual Trainer	Automation Studio	19-03-2024	PLC	1 day
		Electrical + Virtual Trainer	Automation Studio	20-03-2024	PLC	1 day
		Advanced Hydraulics-	Automation Studio	23-01-2024	PLC	1 day
		Pneumatics + PLC E8	Automation Studio	25-01-2024	PLC	1 day
		Effective Curriulum	NITTTR, Chandigarh.	08-01-2024 to 12-01-	curriculu m design	5 days
2	Dr. S.Madhava Reddy, Professor	Contemporary Issues in Science, Engineering & Technology	Aditya College of Engineering, Madanapalle, Chittor Dist.,	31-05-2024- 01-06-2024	Manufactu ring	2 days
		Navigating the opportunites in Innovation &	Akhil Bharthiya Rashtriya Shaikshik	05-04-2024	Innovation & Technolog	1 day
		Advancement in Materials and	MLRIT, Hvderabad	16-02-2024 - 17.02-2024	Manufactu ring	2 days

Application of AI/ML using Pattern Recognition &	Chaitanay Bharathi Institute of	29-01-2024 - 02.02.2024	Al and ML	5 days
National Intellectual Property	Intellectual Property Office, India	19-01-2024	Intellectu al Property	1 day
Effective Curriculam Implemenation	NITTTR, Chandigarh	0801- 2024 - 12.02.2024	FOSS	5 days
Machine learning applications for Mechanical	CVR College of Engineering	18-12-2023 - 23- 12.2023	Machine Learning	6 days
Unlocking the future: Mechatronics Technological Innovation	NITTTR, Chandigarh & NIT Kurukshetra	07-11-2023	Mechatro nics	1 day
AI Cloud Apps	AI Technologies	04-11-2023	Al and ML	1 day
Advanced Manufacturing & Materials	Anant Gyan Knowledge and Skills	25-09-2023 - 29-09- 2023	Manufact uring	5 days
Cloud Computing- NPTEL-AICTE	IIT Madras, Chennai	July-Oct 2023	Computin g	12 weeks
Recent Trends in Green Energy Initiatives and Soft	Mahatma Gandhi Institute of	11-07-2023 - 15-07- 2023	Green Energy	5 days
Role of 3D printing in Digital	Anurag University	03-07-2023	3D Printing	5 days
Recent Advances in Sustainable Materials	PGP College of Engineering &	27-07-2023 - 28- 07.2023	Sustainab le Materials	2 days
Advances in Materials and Manufacturing	Chitkara University, Punjab	03-11-2023 - 04- 11.2023	Manufact uring	2 days

		Unlocking Innovation: Exploring	SVERI's College of Engineering,	17-07- 2023-22- 07-2023	Patents	6 days
3	Dr. R.Uday Kumar, Associate Professor	Future Scopes for additive	Aditya Engineering College,	17.07.2023- 21.07.2023	Additive manufact uring	5 days
	11010001	International Virtual FDP on "Global	Department of Mechanical	19-02- 2024 to 23- 02-2024	Mechanic al engineeri	5 days
	Mr.P.V.Pra sad 4 Reddy,Assi stant Professor	2nd National Conference on Contemporar y Issues in Science, Engineering and	Research & Developme nt Cell Aditya College of Engineering- Madanapall e, A.P	31-05- 2024 & 01- 06-2024	Engineeri ng	2 days
		2nd National Conference on Contemporar y Issues in Science, Engineering and	Research & Developme nt Cell Aditya College of Engineering- Madanapall e, A.P	31-05- 2024 & 01- 06-2024	Engineeri ng	2 days
4		online International Faculty Development Program on "Advancemen ts in	Department of Automobile Engineering, VNR Vignana Jyothi Institute of	24-06- 2024 to 28- 06-2024	Engineeri ng	1 week
		Current trends in mechanical Engg- Case Studies from indutries and acedimia to	Department of Mechanical Engineering sri vishnu engg college, hhimavaram	20-05- 2024 to 25- 05-2024	R & D	5 days

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5	M. Pratyusha, Assistant Professor	Unlocking Innovation: Exploring Research, Innovation and Patents (UIFRIP-2023)"	Department of Mechanical Engineering, , Shri Vithal Education & Research	17/07/2023 to 22/07/2023	Innovatio n and Patents	6 Days
6	Mr. D Kameswar a	Unlocking Innovation: Exploring	College of Engineeing Pandharpur	17-07-2023 to 22-07- 2023	Innovatio n, Startup	6
7	Mr.B RamaKrish na,	Advances in Material Technology	Ballari Institute of Technology	1-2-2024 to 5-2- 2024	Materials & Manufact	5
8	Dr. G Rakesh Kumar,	Emerging technologies for Thermal	BVRIT, Narsapur	13-09- 2023 to 17- 09-2023	Thermal Energy	5
Ü	Asst.Profe ssor	Product Design using Fusion 360	ICT Academy	22-08- 2023 to 25- 08-2023	CAD	4
		SCIENT -Need for Entrepreneurs	Cyient , IIT Hyd	16-10- 2023 to18- 10-2023	Entrepre nuership	3
	Ma	Current Trends in Mechanical	SVECW, Bhimavaram	20-05- 2024 to 25- 05-2024 .	Innovatio n, Startup	6
9	Ms. K.Sirisha, Asst.Profe ssor	Artificial Intelligence & Information	IIT Hyderabad	9th Jan 2024 to 12th	AI & IOT	4
	SSOI	Effective Curriulum Implimentatio	NITTTR, Chandigarh.	08-01- 2024 to 12- 01-2024	PLC	5
		ARISTOSIM software and 6 axis	МТАВ	09-09-2023	Robotics	
10	Ms. Y.V.N. Chandana,	NI Academic Conclave 2024	VVDN Technologie s	25-04-2024	Intrumen tation and	
10	Assistant Professor	PCB Designing	The National small Industries	6-5-2024 to 20-5- 2024	PCB designing	2 weeks

	Dr. T	METAL ADDITIVE	ICFAI Hyderabad	25–30 December	Additive Manufact	6 Days
11	Niranjan, Assistant	Optimization Techniques	NIT Warangal	11-22nd March	Advance d	12 Days
	Professor	Viksit Bharat- 2047 Role of	IIIT RK Valley	29/01/202 4 to	Viksit Bharat	05 Days
	Ma C	Emerging Trends and Technologies	GATES Institute of Technology	05 to 09 Feb 2024	Renewab le Energy systems	05 Days
12	Ms. C. Sucharitha , Assistant Professor	Advanced Trends in Mechanical	KSRM College of Engineering,	26/02/202 4 to 01/03/202	MAnufac turing	05 Days
		Navigating the opportunites in Innovation	Akhil Bharthiya Rashtriya	04/05/2024	Innovatio n & Technolo	1 day
13	Mr. S. Ajay kumar, Assistant Professor	Navigating the Opportunities in Innovation & Technology for Future	Akhil Bharthiya Rashtriya Shaikshik Mahasangh	05th April 2024	Innovatio n & Technolo gy	1 day
14	Mr. P Shashidar, Assistant Professor	Navigating the Opportunities in Innovation & Technology for Future	Akhil Bharthiya Rashtriya Shaikshik Mahasangh	05th April 2024	Innovatio n & Technolo gy	1 day
	Mr. K	Advancement s in Mechanical	Lakireddy Bali Reddy College of	19/06/202 3 to 24/06/202	Technolo gy	6
15	Santosh Kumar, Assistant	Unlocking Innovation: Exploring	SVERI's College of Engineering,	17th July to 22nd July, 2023	Innovatio n & Technolo	6
	Professor	Learning 3D Printing	LINKEDIN LEARNING	11/05/2024	Additive Manufact uring	3
16	Ms. P Meghana,	Learning Analytics	NPTEL	Jul-Oct 2023	Analytics	Twelve Weeks

		AICTE Training and Learning (ATAL) A One Week ATAL Faculty	CBIT Hyderabad	18–23 December 2023	loT	One Week
		Mechanics of Machining	NPTEL- SWAYAM- AICTE	Jan-Mar 2024	Manufact uring	Eight Weeks
		NEP 2020 Orientation & Sensitization Programme - 6	UGC Malaviya Mission Teacher Training Centre	16-28 February 2024	Teachers Training Program	Two Weeks
17	Dr. Asheesh Kumar, Assistant Professor	Module – 5: Technology Enabled Learning and Lifelong Self-	NITTT- AICTE- SWAYAM	September 2023, Eight Weeks	Teachers Training Program	Eight Weeks
		Module – 6: Student Assessment and Evaluation	NITTT- AICTE- SWAYAM	September 2023, Eight Weeks	Teachers Training Program	Eight Weeks
		Module – 7: Creative Problem Solving, Innovation	NITTT- AICTE- SWAYAM	September 2023, Eight Weeks	Teachers Training Program	Eight Weeks
		Module – 8: Institutional Management and Administrative	NITTT- AICTE- SWAYAM	September 2023, Eight Weeks	Teachers Training Program	Eight Weeks

CO-CURRIC	CO-CURRICULAR & EXTRA CURRICULAR ACHIEVEMENTS OF THE STUDENTS: ACADEMIC YEAR: 2023-24						
S.NO.	NAME OF STUDENT	ROLL NO.	EVENT	ORGANAIZED	DATE	PARTICIPATI ON / AWARD	
1	Shaik Mohammed Mastana Parvez	22261A0331	Outstanding Academic Excellence	MAHATMA GANDHI INSTITUTE OF TECHNOLOG	2023-24	First	
2	Yasaswi Pisupati	23261A0340	Academic Excellence	MAHATMA GANDHI INSTITUTE OF TECHNOLOG	2023-24	2nd Position	
3	S.K.Priya	22265A0309	Introduction To Embedded & IoT	Maker Faire T-Works	2023-24	Participation	
4	S.K.Priya	22265A0309	Papertronics	Maker Faire T-Works	2023-24	Participation	
5	S.K.Priya	22265A0309	Pyramid Puzzle	Maker Faire T-Works	2023-24	Participation	
6	Khizer	20261A0341	Mgit Mun 24	Nova,Literary Club	2023-24	Participation	
7	K Edam Jayaraj	21265A0309	Auto Cad	Learn Data	01/06/2024	Participation	
8	A Venkata Sai Vardhan	22261A0301	Inernet of Things on Robotics	Bits Pilani, Hyderabad	11/05/2023	Participation	
9	A Venkata Sai Vardhan	22261A0301	Robotics	Ye Robotics Academy	2023-24	Participation	
10	Ramani Aakash Patel	22261A1429	Poster & Paper Presentation	IGNITO, March - 2024	22-03-2024	Participation	
11	Vadlamudi Venkata Sai Nikhil	24265A0319	Poster & Paper Presentation	IGNITO, March - 2024	22-03-2024	Participation	
12	Jatoth Jampanna	22261A1414	Poster & Paper Presentation	IGNITO, March - 2024	22-03-2024	Participation	

13	Karnakanti Shashi Kumar	22265A0304	Poster & Paper	IGNITO, March - 2024	22-03-2024	Participation
14	Rupnar Nikitha	22265A0307	Poster & Paper	IGNITO, March - 2024	22-03-2024	Participation
15	Daggupati Durga Babu	21261A0306	Poster & Paper	IGNITO, March - 2024	22-03-2024	Participation
16	Dharavath Sumanth	22261A0308	Poster & Paper	IGNITO, March - 2024	22-03-2024	Participation
17	Gannu Abhiram	22265A0304	Poster & Paper	IGNITO, March - 2024	22-03-2024	Participation
18	Kommu Bhargav	24265A0310	Poster & Paper	IGNITO, March - 2024	22-03-2024	Participation
19	Mohammed Misbahuddin	21261A1426	Poster & Paper	IGNITO, March - 2024	22-03-2024	Participation
20	Mohammed Abuzar	22265A0306	Poster & Paper	IGNITO, March - 2024	22-03-2024	Participation
21	Alluri Venkata Sai	22261A0301	One Day Work Shop	IGNITO, March - 2024	22-03-2024	Participation
22	Depa Sri Lakshmi	24265A0305	One Day Work Shop	IGNITO, March - 2024	22-03-2024	Participation
23	R Jayanth	20261A1436	One Day Work Shop	IGNITO, March - 2024	22-03-2024	Participation
24	Ithamraju Sai Pranay	21261A0311	One Day Work Shop	IGNITO, March - 2024	22-03-2024	Participation
25	Gongalla Abhilash	21261A1420	One Day Work Shop	IGNITO, March - 2024	22-03-2024	Participation
26	Macha Shivaram	24265A0315	One Day Work Shop	IGNITO, March - 2024	22-03-2024	Participation
27	Varthya Ashok	22265A0312	One Day Work Shop	IGNITO, March - 2024	22-03-2024	Participation
28	A Harshini	23261A1401	One Day Work Shop	IGNITO, March - 2024	22-03-2024	Participation
29	Pendem Nithvananda	21261A0319	One Day Work Shop	IGNITO, March - 2024	22-03-2024	Participation
30	Gaddam Abhinav	22261A0311	One Day Work Shop	IGNITO, March - 2024	22-03-2024	Participation
31	Arya Vardhan Reddv	21261A0303	One Day Work Shop	IGNITO, March - 2024	22-03-2024	Participation
32	Bobbili Sai Nikith Reddy	21261A0328	Tool Recognition	IGNITO, March - 2024	22-03-2024	Participation



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'23 was hosted at the Mechanical Engineering block in MGIT on 22nd March 2024.





Following were the events that were a part of IGNITO 24:

Technical

- 1. Paper Presentation
- 2. Poster Presentation
- 3. Project Expo
- 4. Fusion 360
- 5. Auto Quiz

Non-Technical

- 1. Gear Hunt
- 2. Find the Word
- 3. Answer Wrong
- 4. Tug of war
- 5.RC Racing
- 6. Photo Competition And Photo Booth
- 7. Jigsaw, Darts and Jenga



Fusion 360

The Department of Mechanical Engineering successfully hosted a hands-on Fusion 360 3D Printing Workshop during IGNITO '24. The event guided participants through the complete design-to-prototype pipeline. The workshop covered everything from creating complex 3D models from scratch in Fusion 360 to understanding the core principles and operation of 3D printing technology. It was a highly interactive session, and the response from students was overwhelming, filling the B-Block venue.

Some of the key topics and skills covered were:

- What is the difference between a 'body' and a 'component'?
- How to fully define a 2D sketch using parametric constraints.
- Expand FDM (Fused Deposition Modeling).
- What is the purpose of 'slicing' a model and 'infill' in 3D printing?
- What is the difference between direct modeling and parametric modeling?
- How do you use 'joints' to create a functional assembly in Fusion 360?



INDIA DESIGN WEEK



The main objective of the event is to ignite the creativity from the young minds in the area of Design Thinking, Product Design & Day 3 (Design Thinking), The Student Student





Robotics Club 2023-24



Robotics workshop was conducted on 19 th March 2024 as a part of Technovation-2K24 by Robotics club, Mechanical Engineering, MGIT. It is a robotic training program conducted by young Engineers Robotic Academy in a view to encourage learners to gear up for Hackathons in future. The program took place with a participant strength of 42, 11 faculty members and 5 student organizers counting to total 58. The program started with challenging three levels of tasks to the participants.



Projects were assigned to the students first two based on structure and Automation and third based on micro-controllers. Participants enthusiastically engaged and competitively projected their creative skills. All participants were given participation certificates from the Young Engineers Robotic Academy.

The Workshop created a huge scope to practice problem solving and critical thinking. Students acquired hands on knowledge of building robots physically based on the application given and learnt interfacing with microcontrollers and other components.

Md. Abdul Bari, Founder Young Engineer Robotics Academy, Mohammed Khaja-Trainer, are the speakers of this event. Their root idea is to impose STEM (Science, Technology, Engineering and Mathematics) among students. Young Engineer Robotics Academy has a vision to impart Robotics training to students and has been training many students inside various educational Institutions.





S.NO	NAME OF THE COMPANY	VISIT DATE	NO. OF STUDENTS VISITED
01.	M/S. Triveni Industries (P) Ltd.	19/08/2023	49
02.	M/S. Rajeshwari Industries	19/08/2023	49
03.	M/S. Mahindra and Mahindra Automotive (D) LTD, Zaheerabad	29/08/2023	58
04.	M/S. Mahindra and Mahindra Automotive (D) LTD, Zaheerabad	9/11/2023	62

Industrial Visits

M/S. Mahindra and Mahindra Automotive (D) LTD, Zaheerabad

An industrial visit to Mahindra & Mahindra Ltd., located at Mahindra Nagar, Zahirabad, Telangana, was organized for the students of Mechatronics/ Mechanical Engineering, IV Year, VII Semester, Mahatma Gandhi Institute of Technology. The visit was coordinated under the supervision of faculty members Mr. D. Kameswara Rao, Ms. K. Sirisha,

Mr. B. Rama Krishna, and Mr. K.S. Santhosh (Assistant Professors). The facility, which specializes in the assembly of commercial utility vehicles, was segmented into four major operational blocks: Engine Shop, Job Shop, Painting Unit, and Storage Block.



Through this visit, students were exposed to real-time industrial practices, enabling them to witness the integration of pneumatic and hydraulic systems, automated robotics, and quality control mechanisms. The experience provided valuable insights into the application of theoretical concepts in a practical setting, bridging the gap between academic learning and industrial expectations. Students including [insert names here] reported enhanced understanding of assembly line operations, component testing procedures, and the role of automation in modern manufacturing. Post-visit discussions were conducted to consolidate observations and encourage further exploration of industry-relevant technologies. The visit served as a vital step in fostering career preparedness, professional networking, and a deeper appreciation of evolving industrial dynamics.



Students interaction with Technical manager during company visit on 29/8/23 M/s Mahindra & Mahindra & Automotive (D) Ltd, Zaheerabad





M/S. Rajeshwari Industries:

An industrial visit to M/s Rajeswari Industries, Kukatpally, was organized for IV Year, VII Semester Mechatronics students Gandhi Mahatma Institute Technology. Under faculty supervision, students toured production units and R&D facilities, interacted with professionals, and participated in Q&A and networking sessions. The visit provided practical exposure to manufacturing processes, bridging academic concepts industrial applications. Safety protocols were followed, and post-visit reflections were conducted to consolidate learning and enhance career preparedness.



M/S. Triveni Industries (P) Ltd.

An industrial visit to M/s Triveni Industries (P) Ltd., located in Gandhi Nagar Industrial Area, Balanagar, Hyderabad, was organized for students of Mahatma Gandhi Institute of Technology. Under the supervision of Mr. D. Kameswara Rao, Ms. K. Shirisha, and Mr. G. Srinivasulu Reddy (Assistant Professors), students were guided through production units, laboratories, and R&D facilities. The visit offered insights into multifunctional systems developed for naval applications, with interactive sessions, Q&A, and networking opportunities. Practical exposure to industrial processes, technological advancements, and real-time operations helped bridge the gap between academic learning and industry expectations. Safety protocols were followed, and post-visit reflections were conducted to consolidate learning and enhance career preparedness.



	Students Placement details for	the Academic Year C	AY M1:2023-24
S.No.	Name of the student	Enrollment No.	Name of the Employer
1	BAIDYA SANJAY	20261A0302	M/s JSW Steel Limted , Bellary
2	BATHULA THARUN	20261A0303	M/s Ambula Cement Limited, Nalgonda
3	BOJJA ROHITHA SREE	20261A0305	N/s Cameron Manufacturing India Private Limited - A SLB Company,
4	C Naresh	20261A0307	M/s Global Aluminium Pvt Ltd, Hvderabad
5	E PRABHAKAR GOUD	20261A0309	M/s Ambula Cement Limited, Nalgonda
6	GUDIPALLI ARJUN	20261A0313	M/s Synatech Solutions, Hyderabad
7	GUMMADAVELLI PRANAY KUMAR	20261A0315	M/s BigDay , Hyderabad.
8	GUNDETI RAGHAV	20261A0316	M/s Aith Cloud Solutions Pvt Ltd, Hyderabad
9	KANNA ARAVIND	20261A0320	M/s Mahindra and Mahindra Ltd , Zaheerabad . Telangana
10	LINGALA SIVVANATH GOUD	20261A0324	M/s R.V Engineers, Hyderabad.
11	PUPPALA RAMSAI DIWAKAR BABU	20261A0335	M/s Mahindra and Mahindra Ltd , Zaheerabad . Telangana
12	RAVULA SANTOSH KUMAR	20261A0336	M/s M2nxt Solutions Pvt Ltd.Bengaluru
13	S B SAI DEEPIKA	20261A0337	M/s Arth DesignBuild India Pvt Ltd, Hvderabad
14	SHERALA PRIYANKA	20261A0342	M/s Mahindra and Mahindra Ltd , Zaheerabad . Telangana
15	VISSA NAGA PRABHAV	20261A0344	M/s Mahindra and Mahindra Ltd , Zaheerabad . Telangana
16	Y SAANDEEP SAGAR	20261A0345	M/s JSW Steel Limted , Bellary
17	BADAM YESHWANTH	21265A0301	M/s Satyam Venture Engineering Services Pvt Ltd. Hvderabad
18	CH KIRAN KUMAR	21265A0303	M/s Global Aluminium Pvt Ltd, Hyderabad
19	DURGAM SADVI MANI	21265A0304	M/s Mahindra and Mahindra Ltd , Zaheerabad . Telangana
20	DUSSA AJAY KUMAR	21265A0305	M/s Satyam Venture Engineering Services Pvt Ltd. Hvderabad
21	G S MANISH KUMAR	21265A0307	M/s TCS Limited , Hyderabad
22	KEDAM JAYARAJ	21265A0309	M/s Mahindra and Mahindra Ltd , Zaheerabad . Telangana
23	MOHAMMAD SALMAN	21265A0310	M/s Mahindra and Mahindra Ltd , Zaheerabad , Telangana





Department of Mechanical Engineering