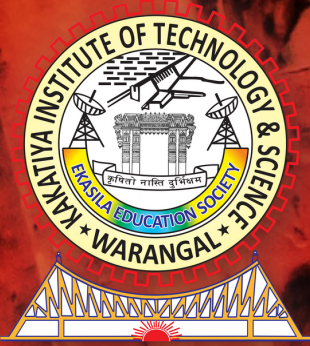




ESTD-1980
KITSW

DEPARTMENT OF MECHANICAL ENGINEERING
KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE: WARANGAL
(An Autonomous Institute under Kakatiya University, Warangal)
Opp. Yerragattu Hillock, Warangal, Telangana-506015

MAGAZINE

THE PRO-DIGY

2023-24

FACULTY EDITORIAL TEAM:

Dr. P. Srikanth, Professor & Head MED
Sri. K. Kishore Kumar, Assistant Professor
Smt. P. Anitha, Assistant Professor
Sri. V. Rajesh, Assistant Professor

STUDENT EDITORIAL BOARD

Kalva Vishnu Vardhan - IV/IV
B20ME119

Mechanical Engineering Student's Association (MESA)



MAGAZINE

THE PRO-DIGY: 2023-24

DEPARTMENT OF MECHANICAL ENGINEERING



Dr. K. Ashoka Reddy
Principal

The Mechanical Engineering department of KITSW has distinguished itself through its achievements and contributions in academics, research and social responsibility.

I feel that bringing out a magazine at departmental level is a breakthrough idea which connects every single person in the department and the content in it surely motivates everyone to put their best effort to improve the performance of the department.

I feel students are the primary benefiter of this work through which they can communicate, learn about the department and finally add another useful skill to themselves by contributing to this work.

As I look forward, I can visualize that this effort by the team will grow the standards of the department and improve its efficiency, quality, and strength.



Dr. P. Srikanth
Prof. & HoD, MED

As the Head of Mechanical Engineering department of this institute, I'm always immensely delighted for its distinction and excellence and feel that great responsibility of improving the standards and efficiency of the department is on my shoulders.

Our annual departmental magazine is one among those extraordinary works which glorifies the department as the title "THEPRODIGY" explains the motto very intensely.

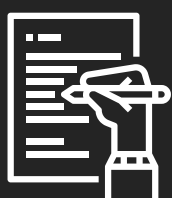
I'm extremely happy that this tradition serves as a good purpose to unite the entire department and displays the strength in our students' thought process.

I wholeheartedly congratulate our team and appreciate for their efforts and I wish all the best.



Chief Editor

Dr. P. SRIKANTH
Professor & Head



Editors-in-charge

K.Kishore Kumar , Assistant Professor
Smt. P. Anitha, Assistant Professor
Sri V. Rajesh, Assistant Professor



Student Editorial Board

Kalva Vishnu Vardhan -7M2
B20ME119



Capt. V. Lakshmikantha Rao
Chairman, Ex M.P. (R.S.)
KITSW

I am very glad that the department of Mechanical Engineering of this Institute has unveiled “THEPRODIGY 2023”, an annual departmental magazine displaying significance of the department and its involvement in improving the value of this institute. It gives me a pleasure reading this magazine consisting of a lot of valuable content and I whole heartedly appreciate the department and its editorial team for building this icon of fame.

I am fully convinced that this institution is self-sufficient in the objectives and values of true education and this work is indubitably a concrete form of this Learning Center’s great Endeavour. I am sure that this book of great value inspires everyone to achieve more and set new bench marks to all the forthcoming generations.

I congratulate the students and Staff and wish a grand success.



P. Narayana Reddy
Treasure, KITSW

From the inception of the institute in 1980, the Mechanical Engineering Department has been involved in imparting quality education and research through various programmes.

I believe that this work of bringing out a departmental magazine “THEPRODIGY” will be of great help to students as they can understand its vision, its mission and the varied ideas of the student community in the best way by witnessing all the happenings of the department in this year and realizing their true essence.

I deem it as a privilege to compliment the faculty and staff for the efforts and commitment put forth for making this a success. I wish the department all the success and I hope everyone enjoys learning from this magazine.

Profile of the Department

The Department of Mechanical Engineering came into existence right from the inception of the KITSW in the year 1980 and has been serving as a catering department to other disciplines. The Department is one of the largest in terms of faculty, and activities, continues to lead and expand its activities in various directions. The department currently runs an undergraduate programme, one post-graduate program in M. Tech Design Engineering, and offers a Ph. D program. Twenty-Seven Research scholars have registered so far, of which six have been awarded with Ph. D degrees and the remaining are pursuing their Ph. D work in the areas of Thermal, Production, Composite Materials, and Design Engineering specialization. The NBA accredited the B. Tech. (Mechanical Engineering) programme six times and M. Tech (Design Engineering) programme first time under Tier-I: in 2023.

The department has a total of 29 qualified, experienced, and committed faculties, and 18 of them have Ph.D. degrees. The remaining faculty members are pursuing their Ph. D with an average experience of 15 years. Seven skilled technical staff members are associated with different laboratories. The faculty have been engaged in research in trending areas like Sustainable design and green Engineering, Computational design, Robotics, Reliability and failure analysis, optimization, product design & development, Automobile Engineering, Additive manufacturing, Battery Thermal Management, Computational Fluid Dynamics, Thermal Engineering Systems and Fuel Cells, Heat Transfer and Energy Analysis, Electric discharge machining, composite materials, and powder metallurgy & Bio Materials.

The department has received grants under MODROBS from AICTE and Minor Research Projects from UGC, SERB and others. The department is very well equipped with resources both in terms of equipment and the latest software. The Department has computing systems and workstations loaded with a wide range of engineering software products covering all areas of mechanical engineering like ANSYS, CFD, CREO, AUTOCAD, and MATLAB. It has a central workshop facility (1000 Sqm) well equipped with the state of art equipment viz CNC wood router, CO2 laser cutter, Robotics, 3D printers, PCB & IoT to impart technical training to students of all disciplines.

The academic activities are supported by 12 laboratories and one centre of excellence Indo-American Artificial Heart Project (IAAHP) in collaboration with Pittsburgh University, USA and also our department has two clubs Force Racing under SAE, and ISHRAE for HVAC seminars and webinars. The department has strong industry-institute links and is extending services for industrial consultancies. Mechanical engineering students consistently achieve high rankings and scores in competitive examinations such as UPSC, GATE, GRE, CAT, GMAT, TOEFL, and IELTS. Alumni of the department are spread across the globe.

VISION OF THE INSTITUTE

- To make our students technologically superior and ethically strong by providing quality education with the help of our dedicated faculty and staff and thus improving the quality of human life.

MISSION OF THE INSTITUTE

- To provide latest technical knowledge, analytical and practical skills, managerial competence and interactive abilities to students, so that their employability is enhanced.
- To provide a strong human resource base for catering to the changing needs of the Industry and Commerce.
- To inculcate a sense of brotherhood and national integrity.

VISION OF THE MECHANICAL DEPARTMENT

- To be a centre of excellence in Mechanical Engineering, to provide the best teaching-learning and research environment, to produce high quality professionals and entrepreneurs to cater the needs of society.

MISSION OF THE MECHANICAL DEPARTMENT

- To impart quality education that builds strong ethical attitude, technical knowledge and professional skills by providing congenial teaching-learning environment.
- To nurture the reasoning, problem solving and research capabilities of learners by providing the state-of-the-art facilities, to meet the changing needs of society.
- To inculcate life-long learning and leadership traits for successful professional careers, by counseling and mentoring.

Program Educational Objectives (PEOs) of B. Tech in Mechanical Engineering Program

PEO1: To provide comprehensive knowledge in basic sciences, mechanical engineering and multi disciplinary areas.

PEO2: To apply modern tools and techniques to design, analyze, interpret and solve mechanical and allied engineering problems and communicate them effectively.

PEO3: To impart responsibility towards socio-technical, economical, environmental and energy related issues

PEO4: To inculcate professionalism, ethical attitude, team spirit and lifelong learning to achieve career goals.

Program Outcomes (POs) of B. Tech in Mechanical Engineering Program Engineering Graduates will be able to:

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods, including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and teamwork: Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs) of B.Tech in Mechanical Engineering Program

PSO1: To apply learned principles and knowledge in various applications of materials, design, thermal, production, and industrial engineering.

PSO2: To model, analyze, design, develop, and implement advanced mechanical systems or processes.

Program Educational Objectives (PEOs) of PG - M. Tech (Design Engineering) Program

The postgraduates of DESIGN ENGINEERING will be able to...

PEO1 (Research and Innovation): engage in research, innovation and in teaching in Higher education institutions

PEO2 (Technical expertise and Successful career): excel in profession in industry, and entrepreneurship with updated technologies in the domain of design engineering

PEO3 (Soft skills and Lifelong learning): exhibit professional ethics, effective communication and teamwork in solving engineering problems by adapting contemporary research towards sustainable development of society

Program Outcomes (POs) of PG - M. Tech (Design Engineering) Program

At the time of graduation, the postgraduates of Design Engineering will be able to ...

PO1: independently carry out research /investigation and development work to solve practical problems

PO2: write and present an effective technical report/document

PO3: demonstrate competence in the area of design engineering

Program Specific Outcomes (PSOs) of PG - M. Tech (Design Engineering) Program

The postgraduates of Design Engineering will be able to...

PSO1: apply knowledge of design engineering for development of effective and innovative solutions to engineering problems

PSO2: apply appropriate methodology, contemporary hardware and software tools to solve complex engineering problems in the domain of design engineering

FACULTY PROFILE



Dr. K. Sridhar
Professor



Dr. K. Raja Narendra
Reddy Professor



Dr. P. Srikanth
Professor & Head



Dr. U. Shrinivas Balraj
Professor



Dr. G. Ganesh Kumar
Associate Professor



Dr. P. Prabhakara Rao
Associate Professor



Dr. A. Deva Raju
Associate Professor



Sri P.S.S. Murthy
Assistant Professor



Dr. J. Laxman
Assistant Professor



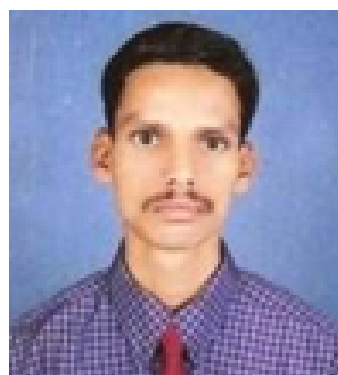
Sri S. Chandramouli
Assistant Professor



Dr. G. Srinivasa Rao
Assistant Professor



Sri Ch. Karunakar
Assistant Professor



Sri S. Ramesh
Assistant Professor



Sri A. Hari Kumar
Assistant Professor



Sri S. Anil Kumar
Assistant Professor



Sri K.Kishor Kumar
Assistant Professor



Sri M. Anil Kumar
Assistant Professor



Dr. MD. Sameer
Assistant Professor



Dr. G. Sai Kumar
Assistant Professor



Dr. G. Srinu Assistant
Professor



Smt. P. Anitha
Assistant Professor



Sri S. Sripathy
Assistant Professor



Sri V. Srikanth
Assistant Professor



Sri V. Prasanna
Assistant Professor



Sri V. Rajesh
Assistant Professor

FACULTY PROFILE



Sri V. Rakesh
Assistant Professor



Sri P. Anil Kumar
Assistant Professor



Sri V. Pradeep,
Assistant Professor



Dr. E. Ramesh
Assistant Professor

NON TEACHING STAFF



Sri M. Madhukar
Computer Programmer



Sri D. Kishan
Mechanic I.T.I



Sri K. Venkata Ramana
Mechanic I.T.I



Sri K. Ravi Kumar
Mechanic, D.M.E



Sri M. Sumath
Computer Programmer



Rubeena Begum
Jr. Assistant



Mechanical Engineering Students Association (MESA)

The Mechanical Engineering Student Association (MESA) is the premier body of Mechanical Engineering department in KITSW and is formed out of voluntary enthusiasm and extreme passion of its students to discover the deepest knowledge of their interests.

Under the extraordinary guidance of Head of the department, faculty and with their unconditional and invaluable support, students here in the association improve their every skill and strive with an obsession of carving their capabilities to perfection and mastery.

The executive council of MESA is constituted for the academic year 2023-24. The following are the office bearers nominated for various positions of MESA.

Prof. P. Srikanth, Head, MED

Sri. K. Kishor Kumar, Asst. Prof, Faculty In-charges (MESA)

Smt. P. Anitha, Asst. Prof, Faculty In-charges (MESA)

Sri V. Rajesh, Asst. Prof Faculty In-charges (MESA)

S.No	Position	Details of Students
1	President	IV/IV Mech Kalva Vishnu Vardhan(7M2) B20ME119
2	General Secretary	IV/IV Mech-I Thalla Ajay Kumar (7M1) B20ME047 IV/IV Mech-II M. Kavya sree(7M2) B20me109
3	Joint secretary	III/IV Mech-I Porika Abhinay Naik B21me020 III/IV Mech-II MOHAMMED SUMEER(5M2) B21ME037
4	Treasurer	IV/IV Mech Akash kanagala (7M1) B20ME007 R.Shravani B22ME139L(5M2)
5	Media & PR Head	IV/IV Mech RUPESH KUMAR NEERLA(7M2) B21ME130L Y. V. V. Sai Sri Sumanth (5M2) (B22ME121L)

6	Publications Head	IV/IV Mech Saini Ganesh Kumar (7M1) B20ME059 VINITHA SUNKU(5M2) B22ME132L
7	Discipline Head	Nandan Darak (7M1) B20me008 A. Srinidhi nayak(5M2) B21ME051 Syed Shadman Hussain(3M1) B22ME001
8	EVENT COORDINATORS	7M1 M. Deekshitha B20ME038 J. Bindu B20ME045 7M2 S. Nithin Kumar B21ME137L K. Niharika B20ME116 5M1 Saranya Louise Marie B21ME012. BITLA VARUN B22ME123L 5M2 MALOTHU SATHISH B21ME042 S. Ravalika(5M2) B21ME057 3M1 S. Adithya B22ME004 Shoib Ali Khan B22ME017

Events Proposed under Mechanical Engineering Student Association for the academic year 2023-2024

All the activities in MESA have been handpicked by the veterans of the department with meticulous efforts put into the design process and the following gives the detail information and schedule of various programs to be conducted in this year.

An hour i.e. from 11.40 am to 12.30pm on every Tuesday is completely devoted to MESA activity with the information properly disseminated to every corner of student community prior to the event.

S.no	Date	Name of the event
1	25.07.2023 (Tuesday)	Inauguration of MESA andIntroduction of MESA Body
2	01.08.2023 (Tuesday)	Interactive session to understand the importance of mechanical engineering in daily life.”Unveiling the Marvels: The Indispensable Role of Mechanical Engineering in Our Daily Lives”
3	08.08.2023 (Tuesday)	A game based on the basic mechanical components in a vehicle- “Tech Dumb charades”
4	19.08.2023 (Saturday)	World photography day
5	21.08.2023 (Monday)	World Entrepreneur’s Day Celebration.
6	22.08.2023 (Tuesday)	A session to understand the importance of AI to automate mechanical things-"AI-Mech Fusion"
7	29.08.2023 (Tuesday)	Problem statement and Idea pitching.
8	05.09.2023 (Tuesday)	Teachers' Day Celebration
9	15.09.2023 (Friday)	Engineer’s Day’ Celebration
10	19.09.2023 (Tuesday)	Importance of SAE activities for Mechanical Engineering students
11	26.09.2023 (Tuesday)	Career opportunities for mechanical engineering students
12	03.10.2023 (Tuesday)	A brief Explanation of successful mechanical start-ups in India- "MechTech India"
13	10.10.2023 (Tuesday)	Introduction to basic electrical components and TinckerCAD software for prototyping of PCB-"ElectroCAD Essentials"

14	14.10.2023 (Saturday)	World Standards day
15	17.10.2023 (Tuesday)	Build Your Own Robot
16	20.10.2023 (Friday) - 21.10.2023 (Saturday)	SUMSHODHINI TECHNICAL FEST
17	31.10.2023 (Tuesday)	Auto-quiz & Ingenious Solutions
SEMESTER BREAK		
18	19.12.2023 (Tuesday)	Group discussions and Debate
19	26.12.2023 (Tuesday)	Exploring new methods of recycling waste and idea development
20	02.01.2024 (Tuesday)	Mock press
21	09.01.2023 (Tuesday)	Design competition using CAD software's
22	23.01.2024 (Tuesday)	General Quiz
23	30.01.2023 (Tuesday)	Poster Presentation
24	06.02.2024 (Tuesday)	Business Plan Presentation.
25	28.02.2024 (Wednesday)	National Science day
26	05.03.2024 (Tuesday)	Hands-on session to understand basic electronics using IOT- "IOT Electrified"
27	12.03.2024 (Tuesday)	Introduction to FEA through ANSYS.
28	19.03.2024 (Tuesday)	JAM (Just a minute)
29	26.03.2024 (Tuesday)	Role play, National Girl Child day of India
30	02.04.2024 (Tuesday)	MESA Valedictory

Mechanical Engineering Student Association actively planned and organized several activities to make students enthusiastic in learning other things apart from the curriculum. Main motto of the association is to develop the students in the path of technical and also improvement in the communicational skills. We organized few expert lectures to expose the students of Mechanical engineering to new methodology adopted.

MESA INAUGURAL 2023

On July 25, 2023, the inaugural session of the Mechanical Engineering Students Association marked the beginning of the academic year 2023-24. The event unfolded smoothly, thanks to the collaborative efforts of the backstage team. Attendees included esteemed faculty members from the Department of Mechanical Engineering: Dr. K. Raja Narender Reddy HoD, Dr. K. Sridhar, Dr. P. Srikanth, Dr. U. Shrinivas Balraj, as well as our MESA coordinators, Sri. K. Kishor Kumar, smt. P. Anitha, and Mr. V. Rajesh. Additionally, students from the department joined in to participate.

Summary of the Inaugural Session:

The session commenced during the MESA hour, scheduled from 11:40 am to 12:30 pm. To begin, the session anchor, Srinidhi Nayak, welcomed the dignitaries to the platform, followed by the lighting of the lamp and introductory remarks. Sri. K. Kishor Kumar, the faculty coordinator of MESA, then took charge of the session, inviting Mr. K. Vishnu Vardhan, the President of MESA 2023-2024, to join him on the dais.



29 AUGUST, 2023

The session commenced punctually, focusing on the DUMSHARATS game to enhance engineering thinking skills. However, the poster launch, initially scheduled for the first week, faced delays due to unforeseen circumstances. Thanks to the collaborative efforts of the entire team, Y.V.V. SRI SAI SUMANTH and P. ABHINAV NAIK successfully prepared the poster.



Following the unveiling of the poster, the game commenced, eliciting excitement from the participants. The orator began by posing simpler questions before gradually escalating to more difficult ones as the game unfolded.



Faculty Publications

1. Srinivasa Reddy Badduri, G. Naga Srinivasulu, S. Srinivasa Rao, V. Venkateswarlu, Ch. Karunakar, K. Sridhar, and A. V. S. Ramanuja Charyulu, “Effect of interdigitated leaf channel design bipolar plate on the performance of proton exchange membrane fuel cell”, Chem. Papers Vol. 77 (2) PP. 1095–1106, Sep 2023, DOI: 10.1007/s11696-022-02517-1.
2. Ramu .T and Karuka Raja Narender Reddy, “Exploring the potential of Tamarindus indica stem short macro fibers reinforced guar gum resin green composites”, Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, <https://doi.org/10.1177/09544089241239326> , 2024
3. Ojha, S., Raghavendra, G., Prudhvidhar, K., Karuka Raja Narender Reddy , Vasavi Boggarapu, “A study on the mechanical and erosion wear of functionally-layered polymer composites and hybrid functionally-layered polymer composites”, Iran Polym J 33, pp. 647–657 (2024). <https://doi.org/10.1007/s13726-024-01282-0>
4. Srikanth V, Reddy KRN,”Investigation of thermo-mechanical properties of Cochlospermum Gossypium composite materials with inserted OPM fibre. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering. 2024; 238(3):1288-1300. doi:10.1177/09544089231152714
5. Shrinivas Balraj Uyala , Shrimayee Uyala , Sunny Jannu , Vijay Shankar Gadakh,” Multi-objective optimization of machining parameters for edm of magnesium alloy- ze41 using MARCOS algorithm and different weighing methods: SD, CRITIC and MEREC”, International Journal of Modern Manufacturing Technologies, ISSN 2067–3604, Vol.16 (1), 2024, <https://doi.org/10.54684/ijmmt.2024.16.1.124>
6. Battula, N.K., Daravath, S. and Gampa, G.K. (2024), "Numerical studies on conjugate convection from discretely heated electronic board", World Journal of Engineering, Vol. 21 No. 1, pp. 107-114. <https://doi.org/10.1108/WJE-01-2022-0018>.
7. Murahari Kolli, Dasari Sai Naresh, Aruri Devaraju, Kosaraju Satyanarayana, “Investigation of mechanical properties in friction stir processing parameters of Cu-TiB2 composite using Taguchi approach”, International Journal on Interactive Design and Manufacturing (IJIDeM), 4 October 2023, <https://link.springer.com/article/10.1007/s12008-023-01586-0>.
8. E. Sadanandam, N.V.Srinivasulu, A. Krishnaiah, Aruri Devaraju, “Effect of Tic & Tungsten Nano particles on Microstructure and Tensile Properties of 6061T6 Alloy Surface Nano Composite Via Friction Stir Processing”, Journal of Survey in Fisheries Sciences, 10(1) pp.3550-3558, 2023
9. Srinivasa Reddy Badduri, G. Naga Srinivasulu, S. Srinivasa Rao, V. Venkateswarlu, Ch. Karunakar, K. Sridhar, and A. V. S. Ramanuja Charyulu, “Effect of interdigitated leaf channel design bipolar plate on the performance of proton exchange membrane fuel cell,” Chem. Papers Vol. 77 (2) PP. 1095–1106, September 2023. DOI: 10.1007/s11696-022-02517-1.
10. Naresh, C., Sameer, M.D., Bose, P.S.C.,”Comparative Analysis of RSM, ANN and ANFIS Techniques in Optimization of Process Parameters in Laser Assisted Turning of NITINOL Shape Memory Alloy”, Lasers in Manufacturing and Materials Processing, Vol. 11(2), pp. 371–401, 2024.
11. Srikanth V, Reddy KRN,”Investigation of thermo-mechanical properties of Cochlospermum Gossypium composite materials with inserted OPM fibre. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering. 2024; 238(3):1288-1300. doi:10.1177/09544089231152714
12. P. Rukmini and K. Sridhar, “A review on thermal performance Enhancement Technique of Solar Air Heater”, Journal of Technology, Vol. 12 (2), pp. 412-428 2024, doi:18.15001/JOT.2024/V12I2.24.3091

Conferences attended by the faculty, for presenting research papers, during 2023-24:

S. No.	Name of the Faculty	Details of conference where papers were presented	Venue	Dates of the conference	Title of the paper presented, including page numbers
1	Dr. K. Raja Narender	ICMech-REC-2024	NIT, Warangal	29th to 31st May 2024.	Thermo-mechanical Characteristics of Water hyacinth fiber rein- forced Guar Gum composites
2	Sri M. Anil Kumar	ICMech-REC-2024	NIT, Warangal	29th to 31st May 2024.	Design and fabrication of a smart solar tracking device for Wheel chair automotor
3	Dr. V. Srikanth	ICMech-REC-2024	NIT, Warangal	29th to 31st May 2024.	Thermo-mechanical Characteristics of Water hyacinth fiber rein- forced Guar Gum composites
4	Sri V. Rakesh	ICMech-REC-2024	NIT, Warangal	29th to 31st May 2024.	Design and fabrication of a smart solar tracking device for Wheel chair automotor

Details of expert lectures delivered by the faculty inside & outside the institution during 2023-24

S. No.	Name	Expert lectures delivered	Date	Venue
1	Dr. K. Sridhar	Balance & Enjoying Life	24.08.2023	KITS, Warangal
2	Dr. K. Raja Narender Reddy	Significance of I2RE in Engineering	22.08.2023	KITS, Warangal
		Importance of YOGA in daily Life	18.08.2023	KITS, Warangal
3	Dr. P. Srikanth	An Overview of Mechanical Engineering	25.08.2023	KITS, Warangal
		Outcome Based Education	09.02.2024	KITS, Huzurabad
4	Dr. U. Shrinivas Balraj	Outcome Based Education	19.08.2023	KITS, Warangal
5	Dr. G. Ganesh Kumar	Overview of Mechanical Engineering & Advancements	23.08.2023	KITS, Warangal
6	Dr. P. Prabhakara Rao	Overview of Mechanical Engineering & Advancements	24.08.2023	KITS, Warangal
7	Dr. A. Devaraju	Overview of Mechanical Engineering & Advancements	21.08.2023	KITS, Warangal
8	Sri S. Ramesh	Importance of YOGA in daily Life	19.08.2023	KITS, Warangal
9	Dr. MD. Sameer	Filament to Fantastic 3D printing workshop at Sumshodhini' 2023	02.02.2024	Digital Manufacturing Lab at C-i2RE-KITSW

Project Funding Received: AICTE/DST/UGC/others

S. No	Scheme	Title of the Project	Funding Agency	Funding Amount (Rs. in lakhs)	Coordinator	Co-coordinator, if any
1	Technology Innovation	Mechanical properties and micro structural evaluation of underwater friction stir additive manufactured Marine grade AA5086 Aluminum and alloy	IIT Guwahati Technology Innovation & Development Foundation	14	Dr. MD Sameer, Assistant Professor of ME, KITSW	Dr. A. Kumar, Professor of ME, NITW & Dr. Anil Kumar Professor of ME, NIT, Manipur
2	Technology Innovation	Mechanical properties and micro structural evaluation of underwater friction stir additive manufactured AA6082 Aluminum alloy		8		

Students Publications

S. No	Name of Students	Title of publication	Conference / Journal details	Faculty associated
1	S. Harish	Thermo-mechanical Characteristics of Water hyacinth fiber rein- forced Guar Gum composites	ICMech-REC-2024, NIT, Warangal 29th to 31st May 2024.	Dr. K. Raja Narender Reddy & Dr. V. Srikanth
2	Sunny Jannu , Vijay Shankar Gadakh	Multi-objective optimization of machining parameters for EDM of magnesium alloy- ze41 using MARCOS algorithm and different weighing methods: SD, CRITIC and MEREC	International Journal of Modern Manufacturing Technologies, ISSN 2067–3604, Vol.16 (1), 2024, https://doi.org/10.54684/ijmmt.2024.16.1.124 (Scopus)	Dr. U. Shrinivas Balraj
3	D. Nandan, Sathivk Reddy, Mirza Afzal & Awaid Mazher	“Design and fabrication of a smart solar tracking device for Wheel chair automotor”	ICMech-REC-2024, NIT, Warangal 29th to 31st May 2024.	Sri M. Anil Kumar & Sri V. Rakesh

Co- Curricular/ Extra Curricular activity participation by students

S. No	Name & Roll number of Students	CO / Extra Curricular Activity Details along with dates	Participation Details
1	K.Rakesh Vardhan & B20ME001	Athletics (M), 18.12.2023	Participated ICAC KU
2	B.Sherisha & B21ME005	Athletics (W), 18 & 19.12.2023	Participated ICAC KU
3	M.Thanuj & B21ME041	Handball (M), 18.12.2023	Participated in KU Selections
4	MD.Sameer & B21ME048	Handball (M), 18.12.2023	Participated in KU Selections
5	M.Devendar & B23ME016	Athletics (M), 18 & 19.12.2023	Participated ICAC KU

Workshops arranged during 2023-24:

S. No.	Date	Workshop Title & Topics	Delivered by (please give the details of speakers)	Attended by
1	02.02.2024	One Day Workshop on Build your electric kart	Sri K. Sai Kiran, Senior Engineer, Mahindra & Mahindra, Bangalore	Students
2	15.04.2024	One Day Workshop on MATLAB	Experts from Capricot Technologies Hyderabad	Students
3	23.04.2024	Workshop on Latest Technologies in Industry 4.0	Mr. Sandeep, Marconi Technologies Pvt. Ltd., Hyderabad	Students

Details of Students presented CP/CRP during the A.Y 2023-24

S. No	Name of the course	Student Name	Roll No	CP/CRP Topic presented
1	U18ME604: Heat Transfer	Mohammed Nashit	B21ME059	Experimental study on the effect of perforations shapes on vertical heated fins performance under forced convection heat transfer
2	U18OE803C: Entrepreneurship Development	M Kavyasree	B19ME109	Design and implementation of intelligent manufacturing project management system based on bill of material
3	U18OE803C: Entrepreneurship Development	Dheekshitha Madikonda	B20ME008	Design and implementation of intelligent manufacturing project management system based on bill of material
4	U18ME802B:Automobile Engineering	G Sai Charan	B20ME026	MEMS-Enabled Retrofitting of Automobile Wheel Balancer for Automatic Unbalance Detection
5	U18ME606: Theory of Metal Cutting	M.Sathish	B21ME042	Multi-objective optimization of EDM process parameters using TAGUCHI method, PCA and GRA
6	U18ME406: Manufacturing Process	Syed Shadman Hussain	B22ME001	Microstructure and Shear strength of Novel Aluminium to steel resistance spot welding
7	U18ME404: Design of Machine Elements	Mohammad Nadeem	B23ME071L	Failure analysis and fatigue performance evaluation of a failed connecting rod of reciprocating air compressor
8	U18ME405: Kinematics of Machinery	Bairi Deekshitha	B23ME078L	Wear analysis and simulation of small module gear based on Archard model
9	P20DE102: Computer Aided Design	Mohammad Fayaz	M23DE001	Simulation-oriented Transformation of CAD Models
10	U18OE602B: Project Management	Md Sumeer	B21ME037	Digitalization of project management: Opportunities in research and practice
11	P20DE102: Computer Aided Design	Vindeela Giri Chandan	M23DE002	Simulation -oriented Transformation of CAD Models
12	U18ME407: Applied Thermodynamics	Syed Shadman Hussain	B22ME001	Study about efficiency improvement of thermal power plant & advance technologies in different types of plants
13	U18ME603A: Finite Element Methods	Sunku Vinitha	B22ME132L	A Thermo mechanical Analysis of Conformal Cooling Channels in 3D Printed Plastic Injection Molds
14	U18MH601: Universal Human Values-II	Shazia Parveen	B22ME135L	Self-Development through Human Value Education
15	U18ME603A: Finite Element Methods	J. Niharika	B22ME129L	Applying Finite Element Based Limit Load Analysis Methods To Structures Under Dynamic Loads
16	U18ME801A:Power Plant Engineering	Chatllapalli Shravya Sree	B20ME034	Cost and performance of fossil fuel power plants with Carbon dioxide capture and storage
17	P20DE104C: Computational Fluid Dynamics	Mohammad Fayaz	M23DE001	CFD study on mixing enhancement in a channel at a low reynolds number by pitching a square cylinder
18	P20DE101: Mechanical Vibrations	Md . Fayaz	M23DE001	Modeling of vibration damping in composite structures
19	U18ME802A:Additive Manufacturing	M.Deekshitha	B20ME038	Selective Laser Melted Magnesium Alloys: Fabrication, Microstructure and Property
20	U18OE602A : Disaster Management	S Ravalika	B21ME051	Disaster Science and Management: Mitigating the Impact of Catastrophes

Details of FDPs/ STTPs / Workshops/ Conferences organized by the Department during 2023-24:

S. No.	Organized STTP/ FDP/ Workshop/ Conference	Title of STTP/ FDP/ Workshop/ Conference	Coordinators	Duration & Dates	No. of participants
1	FDP	Two weeks FDP on Rapid Prototyping and CFD Analysis	1. Sri CH. Karunkar 2. Dr. G. Srinu 3. Dr. E. Ramesh	18th June-1st July, 2024	28
2	Workshop	One Day Workshop on MATLAB	Dr. P. S.S.Murthy	15.04.2024	38
3	Workshop	One Day Workshop on Build your electric kart	1. Sri K. Kishor Kumar 2. Smt. P. Anitha 3. Sri V. Rajesh	02.02.2024	49
4	Webinar Series under Inculcating innovative thoughts(IIT@ME)	Growth trajectory of Skoda Auto-Founder of Skoda	Sri P. Anil Kumar	05.07.2023	30
5	Webinar Series under Inculcating Inspiration Making (IIM@ME)	Manufacturing of rack and pinion	Sri V. Rakesh	21.07.2023	35
6	Webinar Series under Inculcating Inspiration towards self-discipline & commitment (IISC@ME)	Biography of an Industrialist, Social Reformer and Philanthropist -Jamnalal Baja	Sri V. Rajesh	24.07.2023	34
7	IIT@ME	Growth trajectory of Siddharth Sharma-Founder of Usha International	Sri P. Anil Kumar	12.07.2023	30
8	IIT@ME	Growth trajectory of S Somanath-present chairman of ISRO	Sri P. Anil Kumar	19.07.2023	25
9	IIT@ME	Growth trajectory of CARL PEI-director of OnePlus Global	Sri P. Anil Kumar	26.07.2023	35
10	IISC@ME	Learnings from the Indian Revolutionary Freedom Fighter-Kartar Singh Sarabha	Sri V. Rajesh	31.07.2023	20
11	IIT@ME	Growth trajectory of Stephan Winkelmann-CEO of Lamborghini	Sri P. Anil Kumar	02.08.2023	25
12	IIM@ME	Manufacturing of Brake Caliper	Sri V. Rakesh	11.08.2023	34
13	IIT@ME	Growth trajectory of OM PRAKASH JINDAL- Founder of Jindal steel & power Ltd.	Sri P. Anil Kumar	06.09.2023	35
14	IIT@ME	Growth trajectory of Shri. Neralla Naveen Chandra garu Managing Director, Indian Agencies, Warangal	Sri P. Anil Kumar	13.09.2023	32
15	IIT@ME	Growth trajectory of Sonam Wangchuk- Founder of The Students Educational and Cultural Movement of Ladakh	Sri P. Anil Kumar	27.09.2023	21

Faculty Visits to Industries during 2023-24

S. No.	Name of the faculty	Visited Industry & location	Dates	Details including purpose
1	Dr. P. Srikanth	Prathiraj Metal Masters Pvt. Ltd., Hyderabad	22nd May to 5th June, 2024	Industrial Training
2	Dr. U. Shrinivas Balraj	Laxmi Drucken Komponenten Pvt. Ltd., Solapur	20th May to 5th June, 2024	Industrial Training
3	Dr. G. Ganesh Kumar	Tecumseh Product Pvt. Ltd., Hyderabad	3-15 June, 2024	Industrial Training
4	Dr. K. Sridhar	Kakatiya Thermal Power Plant, Chelpur, Jayashankar Bhupalapally	29th May to 11th June, 2024	Industrial Training
5	Dr. K. Raja Narender Reddy			
6	Dr. P. Prabhakara Rao			
7	Dr. A. Devaraju			
8	Dr. P.S.S. Murthy			
9	Dr. J. Laxman			
10	Dr. S. Chandramouli			
11	Dr. G. Srinivasa Rao			
12	Sri Ch. Karunakar			
13	Sri S. Ramesh			
14	Sri A. Hari Kumar			
15	Sri S. Anil Kumar			
16	Dr. MD. Sameer			
17	Dr. G. Srinu			

Details of Placed Students

S.no	Name of The Student	Roll Number	Name of The Company
1	Nandan Darak	B20ME008	FOXCONN International
2	Siripuram Harshith	B20ME013	Accenture/ Hyundai Motor
3	Jadi Nagaraju	B20ME021	R&D Engineers, Hyderabad
4	Poleboina Sai Kiran	B20ME024	HBL Power Systems Ltd.
5	Padhimala Vinay Kumar	B20ME025	FOXCONN International
6	Guguloth Nutan Kumar	B20ME027	AGI GLASPAC
7	Gande Ruthvikmani	B20ME028	AGI GLASPAC
8	Nampally Tharun	B20ME030	AGI GLASPAC
9	Nenavath Devendar	B20ME035	FOXCONN International
10	Manga Divyamsh	B20ME044	AGI GLASPAC
11	Jatoth Bindu	B20ME045	Kaveesha Engineers India Pvt. Ltd.
12	Thalla Ajay Kumar	B20ME047	HBL POWER SYSTEMS LTD.
13	Nunavath Sathish	B20ME055	AGI GLASPAC
14	Saini Ganesh Kumar	B20ME059	FOXCONN International
15	Korapati Manisha	B20ME071	Genpact
16	Koppula Jagadish	B20ME077	Kaveesha Engineers India Pvt. Ltd.
17	Karny Rohithkumar	B20ME080	FOXCONN International
18	Bhukya Vinod Kumar	B20ME091	Genpact
19	Damera Akshay	B20ME092	Kaveesha Engineers India Pvt. Ltd.
20	Sarva Shivakrishna	B20ME106	Kaveesha Engineers India Pvt. Ltd.
21	Marri Kavyasree	B20ME109	Genpact
22	Bonagiri Sanjeetha	B20ME118	Kaveesha Engineers India Pvt. Ltd.
23	Mitkul Aditya Vyankatesh	B21ME123L	AGI GLASPAC
24	Challa Dinesh Reddy	B21ME124L	AGI GLASPAC
25	Vanam Murali Chaitanya	B21ME128L	AGI GLASPAC
26	Esampally Prasanna Kumar	B21ME132L	Soni brothers, Hyderabad
27	Maskam Viraj	B21ME133L	FOXCONN International
28	Thalla Radhakrishna	B21ME138L	FOXCONN International
29	Kontu Sai Kamal	B21ME140L	AGI GLASPAC
30	Suthrapu Nishanth	B21ME142L	HBL Power Systems Ltd.
31	Mohd Abdul Qhadeer	B21ME143L	FOXCONN International
32	Dharma Sahithi	B21ME146L	Genpact

Details of Students completed Honors/ Minors /SWAYAM NPTEL Courses in A.Y 2023-24

Sl. No.	Name of the Student	Roll Number	Honors/ Minors/ SWAYAM NPTEL Course Completed	Duration of the course	Result
1	T Vamshi Krishna	B19ME129	Advanced Robotics	Jan-Apr 2023 12 week course	Successfully completed
			Industrial Automation and Control	Jan-Apr 2023 12 week course	Successfully completed
			Work system design	July-Oct 2023 12 week course	Successfully completed
			Heat exchangers: Fundamentals and design analysis	July-Oct 2023 12 week course	Successfully completed
			Rapid Manufacturing	July-Oct 2023 12 week course	Successfully completed
2	Akash Kanagala	B20ME007	CMOS Digital VLSI Design	Jan-Mar 2023 12 week course	Successfully completed
			Computer Vision and image Processing- Fundamentals and applications	Jan-Apr 2023 12 week course	Successfully completed
			Digital Image Processing	July-Oct 2023 12 week course	Successfully completed
			Machine Learning, ML	Jan-Mar 2024 12 week course	Successfully completed
			Introduction to Internet of Things	Jan-Apr 2024 12 week course	Successfully completed
			Signals and systems	Jan-Apr 2024 12 week course	Successfully completed
3	Siripuram Harshith	B20ME013	Rapid Manufacturing	July-Oct 2022 12 week course	Successfully completed
			Automation in Manufacturing	July-Oct 2022 12 week course	Successfully completed
			Advanced Robotics	Jan-Apr 2023 12 week course	Successfully completed
			Work system design	July-Oct 2023 12 week course	Successfully completed
			Waste to Energy Conversion	Jan-Mar 2023 8 week course	Successfully completed
			Mechanical Measurements	Jan-Mar 2024 8 week course	Successfully completed
4	Radhakrishna Thalla	B21ME138L	Introduction to Internet of Things	July-Oct 2022 12 week course	Successfully completed
			Work system design	July-Oct 2023 12 week course	Successfully completed
			Rapid Manufacturing	July-Oct 2023 12 week course	Successfully completed
			Industrial Automation and Control	Jan-Apr 2023 12 week course	Successfully completed
			Mechanical Behaviour of Materials (Part-I)	Jan-Apr 2024 12 week course	Successfully completed

5	Nenavath Devendar	B20ME035	Introduction to Mechanical Micro Machining	Jan-Apr 2024 12 week course	Successfully completed
			Design, Technology and Innovation	Jan-Mar 2024 8 week course	Successfully completed
			Entrepreneurship Essentials	Jan-Apr 2024 12 week course	Successfully completed
6	Banoth Pavan	B20ME042	Introduction to Mechanical Micro Machining	Jan-Apr 2024 12 week course	Successfully completed
			Design, Technology and Innovation	Jan-Mar 2024 8 week course	Successfully completed
			Entrepreneurship Essentials	Jan-Apr 2024 12 week course	Successfully completed
7	Thalla Ajay Kumar	B20ME047	Introduction to Mechanical Micro Machining	Jan-Apr 2024 12 week course	Successfully completed
			Design, Technology and Innovation	Jan-Mar 2024 8 week course	Successfully completed
			Entrepreneurship Essentials	Jan-Apr 2024 12 week course	Successfully completed
8	MD. Zaid Mazher	B20ME053	Introduction to Mechanical Micro Machining	Jan-Apr 2024 12 week course	Successfully completed
			Design, Technology and Innovation	Jan-Mar 2024 8 week course	Successfully completed
			Entrepreneurship Essentials	Jan-Apr 2024 12 week course	Successfully completed
8	Guguloth Mounika	B20ME056	Design, Technology and Innovation	Jan-Mar 2024 8 week course	Successfully completed
			Entrepreneurship Essentials	Jan-Apr 2024 12 week course	Successfully completed
6	S. Nithin Kumar	B21ME137L	Non-Conventional Energy Resources	Jan-Apr 2024 12 week course	Successfully completed
			Design, Technology and Innovation	Jan-Mar 2024 8 week course	Successfully completed
			Entrepreneurship Essentials	Jan-Apr 2024 12 week course	Successfully completed
10	Thalla Radha Krishna	B21ME138L	Non-Conventional Energy Resources	Jan-Apr 2024 12 week course	Successfully completed
			Design, Technology and Innovation	Jan-Mar 2024 8 week course	Successfully completed
			Entrepreneurship Essentials	Jan-Apr 2024 12 week course	Successfully completed
11	Abdul Qhadeer	B21ME143L	Power Plant System Engineering	Jan-Apr 2024 12 week course	Successfully completed
			Design, Technology and Innovation	Jan-Mar 2024 8 week course	Successfully completed
			Entrepreneurship Essentials	Jan-Apr 2024 12 week course	Successfully completed
12	Shek Hazarath	B21ME149L	Power Plant System Engineering	Jan-Apr 2024 12 week course	Successfully completed
			Design, Technology and Innovation	Jan-Mar 2024 8 week course	Successfully completed

13	Deepika Peddi	B20ME003	Financial Accounting	July-Sept. 2023 8 Week course	Successfully completed
			Refrigeration And Air-Conditioning	July-Sept. 2023 8 Week course	Successfully completed
			Heat Exchangers: Fundamentals And Design Analysis	July-Oct. 2023 12 Week course	Successfully completed
			Automation In Manufacturing	July-Oct. 2023 12 Week course	Successfully completed
14	Akash Kanagala	B20ME007	Financial Accounting	July-Sept. 2023 8 Week course	Successfully completed
			Refrigeration And Air-Conditioning	July-Sept. 2023 8 Week course	Successfully completed
			Functional And Conceptual Design	July-Oct. 2023 12 Week course	Successfully completed
			Automation In Manufacturing	July-Oct. 2023 12 Week course	Successfully completed
15	Siripuram Harshith	B20ME013	Financial Accounting	July-Sept. 2023 8 Week course	Successfully completed
			Refrigeration And Air-Conditioning	July-Sept. 2023 8 Week course	Successfully completed
			Heat Exchangers: Fundamentals And Design Analysis	July-Oct. 2023 12 Week course	Successfully completed
			Introduction To Industry 4.0 And Industrial Internet of Things	July-Oct. 2023 12 Week course	Successfully completed
16	Saikiran Poleboina	B20ME024	Heat Exchangers: Fundamentals And Design Analysis	July-Oct. 2023 12 Week course	Successfully completed
			Introduction to Industry 4.0 And Industrial Internet of Things	July-Oct. 2023 12 Week course	Successfully completed

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