



Swami Keshvanand Institute of Technology,
Management & Gramothan (SKIT), Jaipur

Department of **MECHANICAL ENGINEERING**

Innovate. Design. Build.



Newsletter Biannual Bulletin

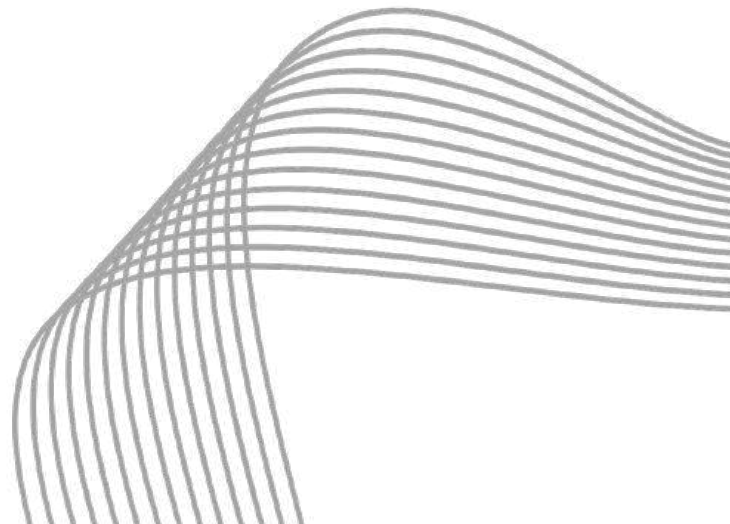
UPDATES AND INNOVATIONS IN ENGINEERING

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Editors

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About the Department

The Department of Mechanical Engineering started its academic activities in the year 2003 with an objective of incorporating excellence in teaching-learning, research and development, entrepreneurship and industry outreach activities. Presently, the department offers B. Tech. (Mechanical Engineering), M. Tech. (Renewable Energy Technology) and PhD programmes. The department has modern laboratories developed and designed from the perspective of the latest requirements of industry and academia. The B.Tech. programme was accredited in 2009 and subsequently re-accredited by NBA.



From the Editor's Desk

"We are pleased to share this new edition of the Mechanical Engineering newsletter, a reflection of the department's pursuit of excellence in teaching, research, and innovation. From academic milestones to creative student initiatives, this issue captures the collective efforts that shape our growth. We hope it brings you valuable insights and a sense of pride in being part of our vibrant community.



Ms. Namita Soni
(Chief Editor)

From the HOD's Desk

As this semester progresses, we welcome new opportunities with focus and determination. It is a time of growth on academic, professional, and personal fronts. Our students and faculty continue to distinguish themselves through innovation, teamwork, and a shared commitment to Mechanical Engineering. Let us move forward together with the spirit of excellence, shaping a future that reflects our collective pride and vision.



Dr. Dheeraj Joshi
(Professor and Head)

Vision and Mission of the Department

Vision

To become a nationally visible mechanical engineering department with excellence in teaching-learning, research and development, entrepreneurship and industry outreach activities.

Mission

M1 - To provide facilities and environment conducive to high quality education and research and development in the field of mechanical engineering.

M2 - To inculcate technical, professional and communication skills in students, staff and faculty members.

M3 - To instil innovative skills, critical thinking, leadership & team work in students through various teaching-learning activities and industry linkages

M4 - To inculcate strong ethical qualities in the students and faculty for realizing lifelong learning and serving the society and nation at large.



DEPARTMENTAL ACTIVITIES



Student Workshop on Heating Ventilation & Air Conditioning (HVAC) (16-18 March, 2023)

A three-day student workshop (16th to 18th March, 2023) on Heating Ventilation & Air Conditioning (HVAC) organized was conducted by the Department of Mechanical Engineering at Swami Keshvanand Institute of Technology Management and Gramothan, Jagatpura. Workshop coordinator was Prof. Amit Kumar Bansal. He said that 100 participants have participated from different disciplines of SKIT college. There were 05 sessions conducted on various themes of HVAC and Efficient building design by experts from industries and other reputed consultants of India. In this workshop, the concept of green building engineering, methods to decrease cooling loads in buildings, terms related to energy efficiency and Carbon foot prints in connection to HVAC were taught in detail to the students. The workshop ended with the talk on career opportunity as consultant engineer in the field of HVAC and ECBC. Kuera software. The 3D printer was operated by Mr. Dinesh Lal Gupta. In the end, the participants learned to print the model on a 3D printer.

Mr. Husain also suggested that students need to visit the nearby industries, automobile workshop and to refer standard books for mastering their knowledge about the Quality management subject. Dr. Deepak Kumar delivered the vote of thanks for this excellent and informative talk.

Online Expert Talk on 'E-Vehicles'(20 March, 2023)

The SKIT Incubation Cell and Department of Mechanical Engineering, SKIT, Jaipur organized an Expert Talk of Mr. Kartik Muhal (CEO & Founder-UVIK Automobiles Pvt. Ltd.) on "E-Vehicles" from 09:30 AM to 11:00 AM on 20 March, 2023.

In this talk, the expert explained the importance of E-Vehicles in the current scenario and the future. He said that there is ample opportunity for mechanical engineering students to secure their carrier in this sector. He discussed the different research segments of e-vehicles and was also aware of the modification of existing vehicles into e-vehicles or hybrid vehicles.

At the end of the talk, a query session was organized and students gave positive feedback for this talk. A vote of thanks was given by Prof. Dheeraj Joshi, Head, Department of Mechanical Engineering. A total of around 105 participants (90 students and faculty) participated in the talk

DEPARTMENTAL ACTIVITIES



Five days student workshop on Data Analytics (SWDA) (04 to 08 April, 2023)

A five-day student centric workshop on "DATA ANALYTICS" was held on 04 - 08 April, 2023 organised by the Mechanical Engg. Department, SKIT Jaipur under the guidance of Prof. (Dr.) Dheeraj Joshi, HOD ME. The program was inaugurated by Chief Guest Prof. G. S. Dangayach, Department of Mechanical Engg., MNIT Jaipur, Prof S. L. Surana, Director Academics, SKIT Jaipur and Prof Ashish Nayyar, Department of Mechanical Engg SKIT Jaipur. In the inaugural speech Prof. G. S. Dangayach explained the various domain of Data analytics and how it is useful in Industry 4.0. IOT, Robotics, Manufacturing industry and Machine Learning. Prof S. L. Surana Director Academics, SKIT explained the applications of Data analytics in engineering, marketing, finance domain and its role in career advancement. He emphasised that the job market is more and more demanding for data engineers. All the dignitaries were welcomed by Prof. (Dr.) Dheeraj Joshi, Head and Dy. Head, Dr. Vikash Gautam, Department of Mechanical Engg SKIT Jaipur. Dr. Achin Srivastav, Coordinator of DA workshop make aware the participants about the various sessions of the workshop and the importance and various dimensions of Data analytics in Engineering profession. He told the audience that participants were from various streams like Mechanical Engg., Data science and Computer science. Mr. Vinay Singh Marwal gave a vote of thanks to all the dignitaries and guests. Dr. Achin Srivastav taken the two sessions of the DA workshop on SPC tools and Time series.

Two sessions on Basics of data analytics and hypothesis testing in MS-Excel were conducted by Dr. Gunjan Soni, Department of Mechanical Engg., MNIT Jaipur. In these hands-on practice sessions students learnt the use of Excel software for descriptive statistics, hypothesis testing and analysis of the data. Prof. Brijesh Awasthi, well known expert of data analytics, explained the use of R-studio software in inferential statistics, Z test, paired t-test and various useful techniques of data analytics. Dr. Deepak Kumar, also conducted two sessions in the workshop and explained the importance of Correlation & Regression analysis and ANOVA with hands on practice in MS-Excel.

Program's Organizing secretary Dr. Deepak Kumar and organizing committee members were Dr. Vikash Gautam, Mr. Amit Kumar Bansal, Mr. Sudesh Garg, Mr. Chandra Mohan Kumar, Ms. Namita Soni, Ms. Monika Khurana and Vinay Singh Marwal from Mechanical Engg. Department. Hospitality and photography were organised by Mr. Pramod Jain and Mr. Yogesh Sharma. The 5-day workshop came to end with the presentation of workshop report by Dr. Achin Srivastav, distribution of certificates to participants by Prof. Awasthi and Prof. (Dr.) Dheeraj Joshi and with a vote of thanks by Prof. (Dr.) Dheeraj Joshi in the valedictory ceremony. The workshop was relevant to the title and were well-appreciated by the students. After completion of this workshop students have felt encouraged to explore these areas further.

DEPARTMENTAL ACTIVITIES



one-week international faculty development programme on “Modelling and Simulation of Renewable Energy Systems-MASRES, 2023”

With an aim to discuss the advanced modelling and simulation software capable to offer accurate and efficient model of renewable energy systems, a one-week international faculty development programme on “Modelling and Simulation of Renewable Energy Systems-MASRES, 2023” was organized by Department of Mechanical Engineering, Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur from April 25 to 29, 2023. The various sessions of this FDP were taken by renowned experts from various institutions of National and International repute including IITs and NITs includes Dr. M V Reddy, Senior Researcher, New Graphite World, Montreal, Hydro-Quebec, Canada, Dr. Alastair McDowell, Director Energy Analysis and Engineering, Australia, Mr. Tushar Sharma, Vela Solaris AG, Switzerland, Dr. S. N. Patel, IIT, Indore, Dr. B. Tripathi, RTU, Kota, Prof. Dilip Sharma, Malaviya National Institute of Technology, Jaipur, Dr. Sudhakar Kumarasamy, Universiti Malaysia Pahang, Malaysia. First day of the FDP started with the Inaugural session which was graced by the presence the Chief Guest Dr. M V Reddy, Senior Researcher, New Graphite World, Montreal, Hydro-Quebec, Canada presented advances in high energy storage materials for electric vehicles.

This FDP covered literally all aspects of modelling and simulation of renewable energy systems and made this event meaningful for our participants. There were over 400 registrations from all corners of the world. The FDP was successfully coordinated by Dr. Chandan Kumar, Associate Professor, Mr. Dinesh Kumar Sharma, Assistant Professor and Mr. Ankit Agarwal, Associate Professor, Mechanical Engineering Department.

FACULTY ACHIEVEMENTS

PAPERS PUBLISHED IN JOURNAL

AUTHOR/S	TITLE	JOURNAL
Dharmendra Hariyani	A descriptive statistical analysis of enablers for integrated sustainable-green-lean-six sigma-agile manufacturing system (ISGLSAMS) in Indian manufacturing industries.	Benchmarking: An International Journal
Raj Kumar	A Review: Aeronautical Components and Systems Should have their weight Reduced throughout the Design Process.	International Journal of Advanced Engineering, Management and Science (IJAEMS), Vol. 9 (3)
Dharmendra Hariyani	A study of the barriers to the adoption of integrated sustainable-green-lean-six sigma-agile manufacturing system (ISGLSAMS) in Indian manufacturing organizations	Cleaner Waste Systems, vol. 5
Prem Singh, Achin Srivastav	Dynamic Performance with Kinematic of Cleaning Unit in Thresher Machine	SKIT Research Journal, Vol. 12(2), 2022
Manoj Kumar Sain, Praveen Saraswat	Advantages and applications of sisal fiber reinforced hybrid polymer composites in automobiles: A literature review.	Materials Today: Proceedings
Sudesh Garg, Amit Kumar Bansal	Development of 3D Printed Bionic Arm Controlled by EMG Sensor	SKIT Research Journal.
Brij Mohan Sharma, Vikash Gautam	Effect of Operating Parameters of Hybrid TIG-MIG Welding on Mechanical Properties and Weld Bead Quality: A Review	Materials Today: Proceedings
Trivendra Kumar Sharma, Monu Gupta, Raj Kumar, Prem Singh, Amit Jhalani	Effect of Power Law Index Variation on Eigen Frequency of Functionally Graded Piezoelectric Round disc	SKIT Research Journal

FACULTY ACHIEVEMENTS

PAPERS PUBLISHED IN JOURNAL

AUTHOR/S	TITLE	PROCEEDING
Prem Singh, Achin Srivastav, Sudesh Garg, Trivendra Kumar Sharma, Chandra Mohan Kumar	Renewable Energy Utilization for Development of Portable Charging Station	SKIT Research Journal Vol. 13(1)
Prem Singh, Trivendra Kumar Sharma, Md. Suhaib , Sunil Kumar	Selection of Parameters for Electro-Chemical Machining (ECM) using genetic algorithm	International Research Journal of Innovations in Engineering and Technology (IRJIET), Vol. 7(4)
Chandra Mohan Kumar, Trivendra Kumar Sharma	Solar Air Conditioning System	International Journal For Research in Applied Science and Engineering Technology, vol. 11(5)
Amit Kumar Bansal , Madhukar Kumar ,Chandra Mohan Kumar , Vishnu Jangid	Solar power green energy leading to net zero carbon emissions	International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), 12(3)
Vishnu Jangid, Madhukar Kumar,Amit Kumar Bansal ,Chandra Mohan Kumar	Thermal Regulation and Performance Enhancement of Solar PV Panel using PCM OM29.	Sustainable industries in India viz. Plastic, wastewater, metal, food, dye etc.
Manoj Kumar Sain, Praveen Saraswat	Systematic literature review on thermal and acoustic characteristics of natural fibre polymer composites for automobile applications	Materials Today: Proceedings
Manoj Kumar Sain, Praveen Saraswat	Systematic literature review on thermal and acoustic characteristics of natural fibre polymer composites for automobile applications	Materials Today: Proceedings

FACULTY ACHIEVEMENTS

PAPERS PUBLISHED IN CONFERENCE PROCEEDING

AUTHOR/S	TITLE	PROCEEDING
Manoj Kumar Sain	A Postural Risk Assessment of Manual Dairy Farm Workers Using REBA Technique	Lecture Notes in Mechanical Engineering: Advances in Modelling and Optimization of Manufacturing and Industrial Systems: Select Proceedings of CIMS 2021
Manoj Kumar Sain, Praveen Saraswat	TITLE: Advantages and Applications of Natural Fiber Reinforced Hybrid Polymer Composites in Automobiles: A Literature Review	Lecture Notes in Mechanical Engineering: Advances in Modelling and Optimization of Manufacturing and Industrial Systems: Select Proceedings of CIMS 2022
Praveen Saraswat	Design and Development of a Touchless Hand Sanitizer Dispenser Machine	Conference proceeding of international conference on “Advancements in Smart Electronics, Materials and Communication Technologies” (ICASEMCT-2023).
Naveen Kumar Sain, Chandan Kumar, Ashish Nayyar	Naveen Kumar Sain, Chandan Kumar, Ashish Nayyar	IEI proceedings, Institution of Engineers and MNIT Jaipur.
Chandan Kumar, Achin Srivastav	Study of Additives-Diesel Fuel Blend	IEI proceedings, Institution of Engineers and MNIT Jaipur.
Vikash Gautam, Deepak Kumar	Parametric studies of dry abrasion wear behavior of stone industrial waste added (natural/synthetic) fiber reinforced polymer composites	CPIE-2023, NIT Jalandhar, 10-12 March 2023

FACULTY ACHIEVEMENTS

NPTEL / MOOKIT / IITBX / SWAYAM COURSE COMPLETED

COURSE/ TOPIC: Production and Operation Management

COMPLETED BY: Dheeraj Joshi

DURATION&CATEGORY: January to April, 2023 (12 -week). Awarded Elite+Gold (Topper in 1%)

COURSE/ TOPIC: Air Pollution and Control

COMPLETED BY: Chandra Mohan Kumar

DURATION&CATEGORY: January to April, 2023 (12 -week). Awarded Elite+Silver (Topper in 5%)

COURSE/ TOPIC: Operations Management

COMPLETED BY: Dharmendra Hariyani

DURATION&CATEGORY: January to April, 2023 (12 -week). Awarded Elite+Gold (Topper in 1%)

COURSE/ TOPIC: IC Engines and Gas Turbines

COMPLETED BY: Prem Singh

DURATION&CATEGORY: January to April, 2023 (12 -week). Awarded Elite+Silver (Topper in 5%)

COURSE/ TOPIC: Environmental Impact Assessment

COMPLETED BY: Raj Kumar

DURATION&CATEGORY: January to April, 2023 (12 -week). Awarded Elite+Silver (Topper in 5%)

COURSE/ TOPIC: Computer Integrated Manufacturing

COMPLETED BY: Sunil Kumar

DURATION&CATEGORY: January to April, 2023 (12 -week). Awarded Elite+Gold (Topper in 5%)

COURSE/ TOPIC: Introduction to Abrasive Machining and Finishing Processes

COMPLETED BY: Vinay Singh Marwal

DURATION&CATEGORY: January to March, 2023 (8 -week). Awarded Elite+Gold (Topper in 1%)

COURSE/ TOPIC: Manufacturing Guidelines for Product Design

COMPLETED BY: Vinay Singh Marwal

DURATION&CATEGORY: January to March, 2023 (8 -week). Awarded Elite+Gold (Topper in 5%)

FACULTY PARTICIPATIONS

FDP ATTENDED

TITLE: Modelling and Simulation of Renewable Energy Systems (MASRES - 2023)

DATE: 25 to 29 April, 2023.

ATTENDED BY: Manu Augustine, Dinesh Kumar Sharma, Chandra Mohan Kumar, Sandeep Kumar Bhaskar, Sumita Hemrom, Sanjay Bairwa, Sunil Kumar, Naveen Kumar Sain

ORGANIZED BY: Department of Mechanical Engineering, SKIT, Jaipur.

TITLE: FDP Smart Grid Enabling Technologies for Sustainable Future (SGETSF-2023)

DATE: 13 to 17 March, 2023

ATTENDED BY: Deepak Kumar, Dharmendra Hariyani, Monika Khurana, Sandeep Kumar Bhaskar, Sumita Hemrom, Sanjay Choudhary, Saurabh Gupta, Sanjay Bairwa, Sunil Kumar, Namita Soni, Yogesh Kumar Sharma, Manoj Kumar

ORGANIZED BY: Department of Mechanical Engineering, SKIT, Jaipur.

TITLE: FDP Machine learning Concepts and Applications.

DATE: 14 to 20 March, 2023

ATTENDED BY: Deepak Kumar,

ORGANIZED BY: Department of Mechanical Engineering, University of Jammu.

TITLE: Future Developments in Civil Engineering.

DATE: 06 to 10 Feb, 2023

ATTENDED BY: Vinay Singh Marwal, Sanjay Bairwa

ORGANIZED BY: Anand International College of Engineering, Jaipur.

TITLE: Industry 4.0 and Smart Manufacturing

DATE: 27 Feb to 03 March, 2023

ATTENDED BY: Achin Srivastav, Monika Khurana, Sandeep Kumar Bhaskar, Sumita Hemrom, Sanjay Choudhary, Sanjay Bairwa, Namita Soni, Yogesh Kumar Sharma

ORGANIZED BY: Anand International College of Engineering Jaipur

TITLE: Machine Learning: Concepts and Applications

DATE: 14 to 20 March, 2023

ATTENDED BY: Achin Srivastav

ORGANIZED BY: Department of Computer Science and IT, Kathua Campus, University of Jammu.

TITLE: Recent trends of Machine Learning Application in Grid Integrated Electric System

DATE: 31 Jan to 04 Feb, 2023

ATTENDED BY: Nitin Goyal, Chandan Kumar, Monu Gupta, Sanjay Choudhary, Saurabh Gupta, Trivendra Kumar Sharma, Manoj Kumar

ORGANIZED BY: Department of EE, SKIT, Jaipur.

TITLE: Smart Use of Renewable Energy Resources for Sustainable Future

DATE: 21 to 25 Feb, 2023

ATTENDED BY: Trivendra Kumar Sharma

ORGANIZED BY: Department of ME, SKIT, Jaipur.

TITLE: Innovations in Engineering Design and Management

DATE: 20 to 25 Feb, 2023

ATTENDED BY: Vikash Gautam

ORGANIZED BY: Alliance University, Karnataka.

FACULTY PARTICIPATIONS

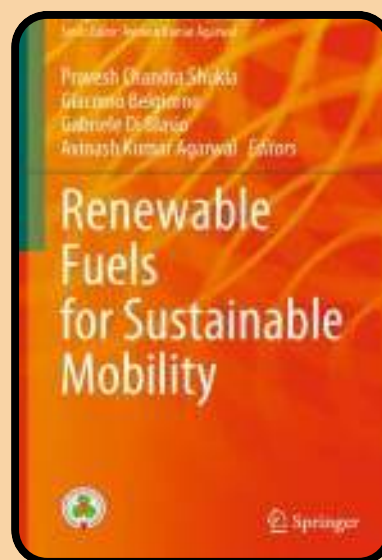
CONFERENCE ATTENDED

TITLE: International Conference on New Vistas of Development in Aerospace Engineering and Societal Development.
DATE: 07 to 09 April, 2023
ATTENDED BY: Chandan Kumar
ORGANIZED BY: IEI RSC-Jaipur.

TITLE: International Conference on Production and Industrial Engineering (CPIE-2023)
DATE: 10 to 12 March, 2023
ATTENDED BY: Vikash Gautam
ORGANIZED BY: NIT Jalandhar.

BOOK CHAPTERS PUBLISHED

BOOK: Renewable Fuels for Sustainable Mobility
AUTHOR/S: Chandan Kumar, Praveen Saraswat
BOOK CHAPTER: A Bibliometric Review of Alcohol–Diesel Blend in CI Engines
PUBLISHER: Springer



**FACULTY
PARTICIPATION**



"True education signifies empowering others and leaving the world a little better than the one we found."

— Mahatma Jyotiba Rao Phule

STUDENT ACHIEVEMENTS

NAME OF STUDENT	NAME OF THE AWARD/MEDAL	TEAM/INDIVIDUAL	UNIVERSITY/STATE/NATIONAL/INTERNATIONAL	SPORTS/CULTURAL/TECHNICAL
Ayush Vaishnav	Winner in Arya Cup football Tournament	Team	University	Sports
Aditya Raj Sharma	Winner in Arya Cup football Tournament	Team	University	Sports
Ajay Pratap	Winner in Arya Cup football Tournament	Team	University	Sports
Bhaskar	First position Pravah Tug of Bar	Individual	University	Sports
Gaurav Dubey	Second Position in Aaveg Chess Competition	Individual	University	Sports
Pritul Nehra	Second Position in Aaveg volleyball competition	Team	University	Sports
Punit Kejriwa	Winner in Arya Cup football Tournament	Team	University	Sports
Rohit Haridarsan	First position in Aaveg Football Tournament	Team	University	Sports
Rohit Haridarsan	Winner in Arya Cup football Tournament	Team	University	Sports
Samarth Jain	First position in Aaveg Football Tournament	Team	University	Sports
Akash Sharma	Second Position Pravah Tug of Bar	Individual	University	Sports
Navneet Sagar	Second Position in Aaveg Chess Competition	Individual	University	Sports
Pururaj Singh	Third Position in Pravah Carrom Tournament	Individual	University	Sports
Rohan Singh	First Position in Aaveg Kabaddi Competition	Team	University	Sports
Rohan Singh	Runner-up in Arya Cup Kabaddi Tournament	Team	University	Sports
Yash Thakur	First Position in Pravah Rubik's Cube	Individual	University	Sports

PLACEMENT STATISTICS



The placement drive for Mechanical Engineering students this year witnessed remarkable participation from top recruiters across core, allied, and emerging sectors. Reputed companies such as Torrent Gas, Mahindra & Mahindra, Bosch, Daikin, Pinnacle Infotech, Cognizant, Polycab, ICICI, Thrillophilia.com, Celebal Technologies, Junomoneta Finsol, Consultadd, Zenoti, Grew, Design2Occupancy, Nessco, and many others offered diverse roles to graduating students.

Highlights of Placements:

- Highest Package Offered: ₹8.5 LPA by Quantiphi
- Second Highest Package: ₹7.5 LPA by Byju's
- Other High Offers: Celebal Technologies (₹6.5 LPA), Thrillophilia.com (₹6 LPA), Mahindra & Mahindra (₹5.4 LPA), NBC Jaipur (₹5.6 LPA), and Consultadd (₹5 LPA).
- Average Package: ₹3.6 LPA
- Lowest Package: ₹1.8 LPA

Top Recruiters:

- Torrent Gas recruited multiple students with offers up to ₹3.75 LPA.
- Pinnacle Infotech and Design2Occupancy were among the largest recruiters, collectively absorbing a significant number of students.
- Mahindra & Mahindra hired students at packages of ₹4.2 LPA and above, highlighting strong industry demand for mechanical engineers.

Diverse Career Pathways:

- Many students opted for placements in leading IT and consulting firms such as Cognizant, TCS, Tech Mahindra, and Consultadd, reflecting the growing multidisciplinary opportunities for mechanical engineers.
- A few students have chosen to pursue higher education, further strengthening their academic and professional foundation.
- Encouragingly, some graduates are also venturing into entrepreneurship, carrying forward the spirit of innovation nurtured in the department.

Overall, the placement outcomes reflect a positive trend with core, manufacturing, IT, and energy sectors showing active participation. The achievements underscore the department's commitment to preparing students for dynamic career opportunities and its strong industry linkages.



Contact Us

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