



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



# Department of **MECHANICAL ENGINEERING**

## **Newsletter Biannual Bulletin**

Innovate. Design. Build.

**UPDATES AND INNOVATIONS IN ENGINEERING**

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### **Editor**

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Yug Jangir (Student)

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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 with current accreditation status till June 2025.





## From the Editor's Desk

It is our pleasure to present the latest edition of the Mechanical Engineering newsletter—a compelling reflection of our department's academic achievements, pioneering research, and the remarkable initiatives led by our students. This issue highlights the commitment and passion that drive our vibrant community.



Ms. Namita Soni  
(Chief Editor)

## From the HOD's Desk

"As we welcome the new year, we are presented with renewed opportunities to grow, reflect, and redefine our goals. January marks a period of thoughtful planning, academic vigor, and a shared vision for the journey ahead. This year has also brought encouraging developments in student placements, reflecting the hard work of our students and the continued support of faculty and industry partners. Let us continue to uphold the values of excellence, encourage a spirit of innovation, and work together to strengthen the proud legacy of the Mechanical Engineering Department."



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



## **One-Week Student Wellness Program on “Life Skills and Ethics” 8<sup>th</sup> to 12<sup>th</sup> April 2025.**

A one-week Student Wellness Program on “Life Skills and Ethics” was organized from April 8 to 12, 2025, by the Departments of Mechanical Engineering, Management Studies, and the Office of Student Affairs at SKIT, Jaipur. The program began with an inaugural ceremony, where Shree Surja Ram Ji Meel, Chairman of SKIT, delivered a keynote address highlighting the importance of ethics, self-awareness, and responsible decision-making.

On Day 2, Dr. Anchal Uppal conducted a yoga and meditation session, emphasizing physical and mental well-being. Day 3 featured Dr. Neha, a dietitian from EHCC Hospital, who spoke on nutrition and healthy eating habits. On Day 4, motivational speaker Shriman Girdhari Das engaged students with a session on The Art of Mind Control, discussing focus, discipline, and inner peace. The final session on Day 5 was conducted by Prof. B. K. Sharma, who spoke about Human Values and Social Responsibilities.

The program concluded with a vote of thanks by Dr. Ashish Nayyar. Coordinated by Dr. Ashish Nayyar, Dr. Savita Choudhary, and Dr. Chandan Kumar, the program was well-received by around 150 students and proved to be a valuable initiative in promoting ethical, emotional, and personal growth.

# DEPARTMENTAL ACTIVITIES



## Five-day student workshop on “Data Analytics (SWDA)” 14<sup>th</sup> – 18<sup>th</sup> April, 2025.

The five-day student workshop on Data Analytics (SWDA) began on 14th April 2025 with an inaugural function graced by the presence of Prof. Gunjan Soni, Associate Professor, Department of Mechanical Engineering, MNIT, Jaipur, and Prof. Dheeraj Joshi, Head of the Department of Mechanical Engineering, SKIT Jaipur. The organizing team, including Dr. Deepak Kumar, Dr. Achin Srivastav, Dr. Manoj Sain, Mr. Sudesh Garg, Ms. Namita Soni, Mr. Arun Beniwal, Dr. Prem Singh, and Mr. Saurabh Gupta, was also present to coordinate the event and ensure the smooth execution of the inaugural function. In total, there were 60 participants of B.Tech. students of CS, IOT, AI and Mechanical Engineering streams. The objective of the workshop was to introduce the basic concepts and to know about the various tools & techniques of Data Analytics, which were successfully met by the informative lectures of the distinguished Experts.

On the first day, Dr. Gunjan Soni, Associate Professor, Department of Mechanical Engineering, MNIT, Jaipur, conducted a session on Descriptive Analysis, followed by hands-on practice on Excel software. Students learnt the various useful tools and techniques in this session.

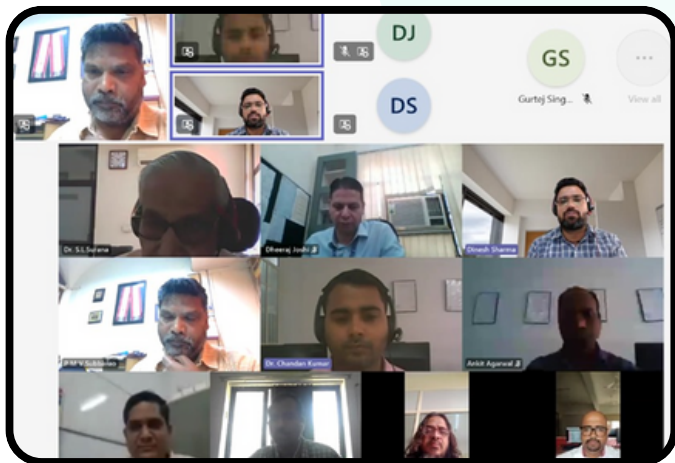
The Second and third session was conducted by Dr. Devesh Kumar, Assistant Professor, ICAI University, Dehradun, in which the significance of Time Series with various methods like moving average, Naïve-based, and exponential smoothing was discussed. Holt's method of forecasting, Correlation, and regression analysis was also discussed.

On the fourth day, Dr. Achin Srivastav explained the use of machine learning and the ROC curve with various examples.

On the fifth day, Prof. Gunjan Soni explained the significance of hypothesis testing in research with various examples, and a hands-on practice session was conducted with a few statistical tests in MS Excel. Students learnt about the significance of Null and alternative hypotheses. During the valedictory session, Dr. Deepak Kumar presented a comprehensive summary of the five-day Data Analytics workshop and expressed gratitude by delivering the vote of thanks to the resource persons, Prof. Gunjan Soni and Dr. Devesh Kumar. He expressed his heartfelt gratitude towards Prof. Dheeraj Joshi, Head of the Department of Mechanical Engineering, SKIT, for his continuous support and encouragement throughout the workshop. He also thanked the organizing team members for their valuable contributions and the participants for their enthusiastic engagement and patient learning throughout the workshop. The valedictory session was coordinated by Dr. Achin Srivastav and the organizing team.



# DEPARTMENTAL ACTIVITIES



## One-Week FDP on “Next Generation Renewable Energy Technologies” 6<sup>th</sup> to 10<sup>th</sup> May, 2025.

The Department of Mechanical Engineering at SKIT Jaipur successfully organized a five-day online Faculty Development Programme (FDP) on “Next Generation Renewable Energy Technologies” from May 6 to May 10, 2025. The programme aimed to upskill faculty members and researchers in emerging areas of sustainable and renewable energy.

The FDP was inaugurated with a keynote address by Prof. P.M.V. Subbarao, IIT Delhi, who spoke on "New Measures for Suitability to Highlight the Superiority of Bio Energy." The following days featured expert sessions by eminent speakers including Dr. B.L. Salvi (CTAE Udaipur) on green hydrogen, Dr. K.B. Rana (RTU Kota) on nanomaterials for solar receiver tubes, Dr. Abhishek Tripathi (ACE, Andhra Pradesh) on solar energy for sustainable mining, and Prof. Dilip Sharma (MNIT Jaipur) on ethanol fuelling in IC engines.

Over 275 participants from 100+ institutions across India attended the FDP. The sessions were interactive, and participants appreciated the technical depth and relevance of the topics. The FDP concluded with a valedictory session and the presentation of the technical report. The department expressed gratitude to all speakers, participants, and organizers for making the event a grand success.



## SKIT Organizes “Blood Donation Camp-2025” 14th May 2025.

In response to the directive from the Food Safety and Drug Control Commissionerate, Jaipur (Letter No.: CFSDC/Blood Centre/2025/2363), emphasizing the need for adequate blood availability across the country, Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT), Jaipur, organized a Blood Donation Camp on May 14, 2025.

The event, held at the SKIT campus, was a joint initiative by the SKIT Red Cross Club and SKIT NSS Club. Demonstrating their commitment to societal welfare, students, faculty, and staff turned up in large numbers to support the noble cause.

The camp resulted in the collection of 133 units of blood, which were donated to SMS Hospital Jaipur and RDBP Jaipuria Hospital Jaipur, helping meet the emergency blood requirements in these major healthcare centers. Each unit of blood can save up to three lives, making this initiative a significant contribution to public health. SKIT has consistently conducted such mega donation drives, reinforcing its role in community service. Participants were also educated about the health benefits of regular blood donation.

# FACULTY ACHIEVEMENTS

## PAPERS PUBLISHED IN JOURNAL

AUTHOR/S	TITLE	JOURNAL
Deepak Kumar, Achin Srivastav, Manoj Kumar Sain, Vikash Gautam.	Exploring Regression Analysis in Predictive Modelling with Python tool.	SKIT Research Journal, Vol. 14; Issue 2; (2025) pp. 52-55.
Chandan Kumar	Performance assessment of solar PV panels under varying environmental conditions: a laboratory and field-based approach for sustainable energy in mining operations.	Environmental Science and Pollution Research, (2025).
Dharmendra Hariyani	A literature review on lean tools for enhancing the quality in the outcome-based education system.	Thinking Skills and Creativity, Vol. 57; (2025) pp. 101793.
Dr. Dharmendra Hariyani	A literature review on waste management treatment and control techniques.	Sustainable Futures, Vol. 9; (2025) pp. 100728.
Dharmendra Hariyani	Digital technologies for the Sustainable Development Goals.	Green Technologies and Sustainability, Vol. 3; (2025) pp. 100202
Dharmendra Hariyani	Drivers for the adoption of integrated sustainable green lean six sigma agile service system (ISGLSASS) in the service organizations.	Sustainable Futures, Vol. 9; (2025) pp. 100571.
Amit Jhalani, Raj Kumar	Recovery strategies for EoL solar panels: sustainable and circular economy practices.	Green Materials, (2025); pp. 1-10.
Deepak Kumar, Monu Gupta	Mitigation of the surface defects in plastic injection moulded parts.	Journal of Emerging Trends in Engineering, Sciences and Technology, Vol. 8; Issue 1; (2025) pp. 116-121.



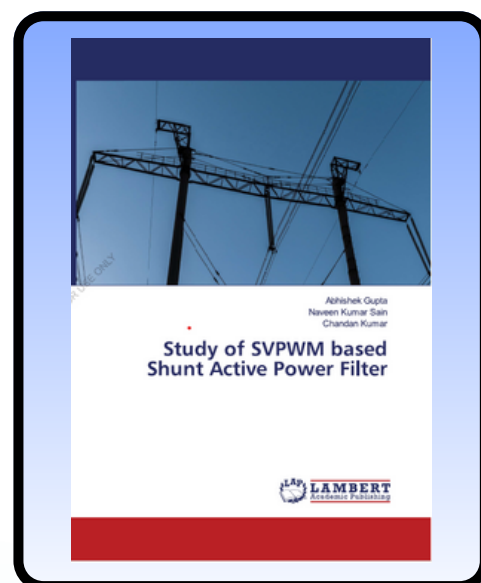
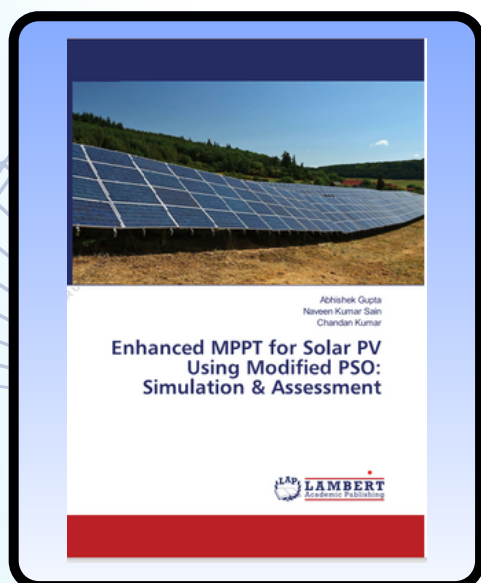
# FACULTY ACHIEVEMENTS

## BOOKS PUBLISHED

AUTHOR/S	BOOK	PUBLISHER
Dr. Chandan Kumar	Study of SVPWM based shunt Active Power Filter.	Lambert Academic Publishing, 2025.
Dr. Chandan Kumar	Enhanced MPPT for Solar PV Using Modified PSO: Simulation & Assessment.	Lambert Academic Publishing, 2025.

## BOOK CHAPTER PUBLISHED

AUTHOR/S	BOOK	BOOK CHAPTER	PUBLISHER
Sumit Sharma, Dr. Ajay Kumar Pagare, Pratish Rawat, Yogesh Kumar Sharma.	Journal of Electrical Systems	Nano material quality detection system	Lambert Academic Publishing, 2025.



# FACULTY ACHIEVEMENTS

## NPTEL ACHIEVEMENTS

NAME OF FACULTY	ACHIEVEMENT
Vinay Singh Marwal	NPTEL Discipline Star (Jan Jun 2025)
Monu Gupta	NPTEL Discipline Star (Jan Jun 2025)
Dr. Prem Singh	NPTEL Discipline Star (Jan Jun 2025)
Brij Mohan Sharma	Topper of 1% (Jan Jun 2025) (Principles of Casting Technology)
Dr. Raj Kumar	Topper of 2% (Jan Jun 2025) (Cooling Technology: Why and How utilized in Food Processing and allied Industries)
Vinay Singh Marwal	Topper of 2% (Jan Jun 2025) (Manufacturing Process Technology I & II)
Dr. Dharmendra Hariyani	Topper of 5% (Jan Jun 2025) (Product Design and Manufacturing)
Dr. Prem Singh	Topper of 5% (Jan Jun 2025) (Basics of Mechanical Engineering - 2)



NPTEL



# FACULTY PARTICIPATIONS

## FDP ATTENDED

**TITLE:** Data Analytics for Decision Making: Tools, Techniques, and Applications.

**DATE:** 3 to 8 Feb 2025.

**ATTENDED BY:** Deepak Kumar, Chandan Kumar

**ORGANIZED BY:** SKIT, Jaipur.

**TITLE:** Welding in the Digital Age: Emerging Trends and Advanced Technologies.

**DATE:** 7 to 11 April 2025.

**ATTENDED BY:** Achin Srivastav

**ORGANIZED BY:** Kongunadu College of Engineering and Technology, Trichy.

**TITLE:** Harnessing Virtual Labs for Effective Student Engagement.

**DATE:** 17 to 21 March 2025.

**ATTENDED BY:** Saurabh Gupta, Pramod Jain.

**ORGANIZED BY:** Lendi Institute of Engineering & Technology with NITK SURATHKAL.

**TITLE:** Navigating the Green Revolution: Integrating Electric Vehicles and Hydrogen Fuel Technologies for Sustainable Mobility.

**DATE:** 3 to 8 Feb, 2025

**ATTENDED BY:** Ankit Agarwal

**ORGANIZED BY:** AICTE Training and Learning (ATAL) Academy at Kamaraj College of Engineering & Technology.

**TITLE:** Energizing Sustainability: Electric Vehicles and their Contribution in Environmental Conservation.

**DATE:** 10 to 15 Feb, 2025.

**ATTENDED BY:** Ankit Agarwal

**ORGANIZED BY:** AICTE Training and Learning (ATAL) Academy at Kamaraj College of Engineering & Technology.

**TITLE:** Next Generation Renewable Energy Technologies- (NGRES-2025).

**DATE:** 6 to 10 May, 2025

**ATTENDED BY:** Monika Khurana

**ORGANIZED BY:** SKIT, Jaipur.

**TITLE:** Demystifying Outcome-Based Education.

**DATE:** 29 April to 3 May, 2025.

**ATTENDED BY:** Dharmendra Hariyani, Manoj Kumar Sain, Amit Jhalani, Sudesh Garg, Vishnu Jangid, Brij Mohan Sharma, Namita Soni, Mohammed Suhaib, Sunil Kumar, Chandra Mohan Kumar.

**ORGANIZED BY:** SKIT, Jaipur.

**TITLE:** ATAL FDP on Energizing a Sustainable Future: E-Waste Management and Climate Action.

**DATE:** 27 Jan to 1 Feb, 2025.

**ATTENDED BY:** Manoj Kumar Sain

**ORGANIZED BY:** MNIT Jaipur and AICTE

**TITLE:** Advancements in Marine Engineering: Integrating Materials, Systems, and Technologies for Modern Shipbuilding and Operations.

**DATE:** 21 to 29 April, 2025.

**ATTENDED BY:** Amit Jhalani, Sunil Kumar, Vinay Singh Marwal

**ORGANIZED BY:** AMET University.

**TITLE:** Digital Transformation in Additive Manufacturing.

**DATE:** 19 to 23 May, 2025.

**ATTENDED BY:** Brij Mohan Sharma, Vinay Singh Marwal

**ORGANIZED BY:** Electronics & ICT Academy, MNIT Jaipur.

# STUDENT ACHIEVEMENTS

NAME OF THE STUDENT	SEMESTER	NAME OF THE AWARD/MEDAL	TEAM/INDIVIDUAL	UNIVERSITY/STATE/NATIONAL/INTERNATIONAL	SPORTS/CULTURAL/TECHNICAL
Saurabh Sharma	IV Semester	Pravah Drag Race 1st Position	Individual	University	Sports
Hari Shankar Kumar	IV Semester	Pravah Gully Cricket 2nd Position	Individual	University	Sports
Saurabh Sharma	IV Semester	Pravah Super Stricker 1st Position	Individual	University	Sports
Praveen Kumar	IV Semester	Throttle a Robo Race Competition 1st Position	Team	State	Technical
Saurabh Sharma	IV Semester	Throttle a Robo Race Competition 1st Position	Team	State	Technical
Saurabh Sharma	IV Semester	Renaissance Formula Zero 2nd Position	Individual	State	Technical
Abhishek Kulariya	VI Semester	Pravah Kabaddi 1st Position	Team	State	Sports
Khushiram Choyal	VI Semester	Pravah Kabaddi 1st Position	Team	State	Sports
Priyankar Kumawat	VI Semester	Pravah IOT NEXUX 3rd Position	Individual	State	Technical
Arthad Singh	VI Semester	Pravah Sci Biz Tech 1st Position	Individual	State	Technical
Manthan Akar	VI Semester	Pravah V-Stock Market 1st Position	Individual	State	Technical



# STUDENT ACHIEVEMENTS



I am happy to share you all, that our team from mechanical department secured first position out of 82 teams (LPU Punjab) in INDIA DESIGN WEEK 2025, Sponsored by ICT Academy and Powered by AUTODESK Competition held on 29-30 April 2025.

The students whose design got honoured first prize with a cash award of 50000 INR

1. Arthad singh
2. Madhvendra singh

All the students are from final year Mechanical Engineering Deptt

Faculty coordinator  
Yogesh kumar sharma  
Arun Beniwal



# PLACEMENT STATISTICS

## Placement



The placement data for the Mechanical Engineering students reflects successful recruitment across several reputable companies, offering a range of compensation packages. Large number of companies like Torrent Gas, Pinnacle Infotech Solutions, Daikin, E-Neuf Energy Pvt. Ltd., Airiffic Solutions Pvt. Ltd., MD Microtech, etc. visited the institute and recruited all eligible students.

**Top Recruiter:** Torrent Gas emerged as the top recruiter, hiring 4 students, each with a package of 4.5 LPA, the highest among all offers.

**Second Highest Package:** E-Neuf Energy Pvt. Ltd. offered a package of 3.6 LPA to one student. Pinnacle Infotech Solutions recruited 2 students with a package of 3.3 LPA.

Airiffic Solutions Pvt. Ltd. hired 1 student at 3.0 LPA.

Daikin recruited 2 students at the lowest package offered, 1.92 LPA.

**Placement Highlights:**

**Highest Package Offered:** ₹4.5 LPA

**Lowest Package Offered:** ₹1.92 LPA

**Most Offers by a Single Company:** 4 offers by Torrent Gas

The placement outcomes reflect a positive trend, with core and allied industry sectors actively recruiting mechanical engineering graduates. The data also highlights growing interest from energy and infrastructure-related firms.





# ALUMNI CONNECT

## Pride of SKIT

### Jaijeet Singh Rathore

EV System Engineer | 1D System Model | Battery Thermal Runaway  
Testing/Abuse modelling | Battery Electrochemical modelling |  
Coupled Multiphysics Modelling | Thermal Management  
Bengaluru, Karnataka, India.

#### Summary

Professional with 5+ years (research experience in simulating thermal and battery system behaviour. Skilled in performing multi-scale multi-physics simulations using OpenFOAM, Fluent, and COMSOL. Experienced in modeling and simulation of charge and mass transfer in the lithium-ion battery using the reduced-order model. Currently working on developing the system-level digital twin model for the battery thermal system.

#### Experience

Mahindra Group  
2 years 10 months  
Manager/Lead Engineer



# ALUMNI CONNECT





# Contact Us

## HOD

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