



MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P.), INDIA

माधव प्रौद्योगिकी एवं विज्ञान संस्थान, ग्वालियर (म.प्र.), भारत

DEEMED UNIVERSITY

(Declared under Distinct Category by Ministry of Education, Government of India)

NAAC ACCREDITED WITH A++ GRADE

DEPARTMENT OF MECHANICAL ENGINEERING

FALL 2024 E-NEWSLETTER

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INSIDE

VISION AND MISSION	1
CHAIR'S LETTER	2
EVENTS & ACTIVITIES	3
FACULTY NEWS	9
STUDENTS NEWS	13
STUDENT WRITINGS	16
PROGRAM OUTCOMES	17

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Vision

"To develop innovative and creative Mechanical Engineers catering the global industrial requirements and social needs"

Mission

- To prepare effective and responsible graduate engineers for global requirements by providing quality education.
- To enhance knowledge through project and internship in the field of Mechanical and allied engineering.
- To guide students in acquiring career- oriented jobs in the field of Mechanical engineering.
- To provide academic environment of excellence, leadership, ethical values and lifelong learning to cater the need of society by sustainable solutions.

**“विद्या ददाति विनयं, विनयाद् याति पात्रताम् ।
पात्रत्वात् धनमाप्नोति, धनात् धर्मं ततः सुखम् ॥”**

CHAIR'S LETTER


I am happy to note that the Department of **Mechanical Engineering** is releasing its Newsletter for **Fall 2024 (October - December)** enumerating the various activities and achievements of our faculty and students. Department of Mechanical Engineering is one of the oldest departments established in 1957 at **MITS Gwalior**. The department endeavors to produce confident professionals tuned to real time working environment. The department offers excellent academic environment with a team of highly qualified faculty members to inspire the students to develop their technical skills and inculcate the spirit of team work in them. The department has been steadily growing into an impressive dimension, which strives to encourage excellence in academic and co-curricular activities. I congratulate the entire Mechanical Engineering department faculties, staff and students for their contribution to department activities and look forward for future developments. The department focuses on the holistic development of the students and to engage them in creativity, innovation, entrepreneurial/start up activities.

I wish a good learning to all the students!
Warm Regards.



Dr. Chandra Shekhar Malvi
(Head of the Department)

– **Dr. Chandra Shekhar Malvi**
Head of the Department
Mechanical Engineering
MITS Gwalior



MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute, Affiliated to R.G.P.V. Bhopal)
Vision & Mission of Department of Mechanical Engineering

VISION
"To develop innovative and creative Mechanical Engineers catering the global industrial requirements and social needs"

MISSION

- M1** To prepare effective and responsible graduate engineers for global requirements by providing quality education.
- M2** To enhance knowledge through project and internship in the field of Mechanical and allied engineering.
- M3** To guide students in acquiring career-oriented jobs in the field of Mechanical engineering.
- M4** To provide academic environment of excellence, leadership, ethical values and lifelong learning to cater the need of society by sustainable solutions.

EVENTS AND ACTIVITIES



The Institution of Engineers (India)

Established 1920, Incorporated by Royal Charter 1935

Gwalior Local Center estd 2015

Recipient of Royal Charter in 1935 *"A century of Service to the Nation"*

And Recognized as a Scientific and Industrial Research Organization



Dr. Manjaree Pandit
Professor, Electrical Engineering
FIE



Webinar
On



Dr. C. S. Malvi
Professor, Mechanical Engineering

Electronics involved in Solar System

Event Coordinator
Dr. S. K Chourasiya

Organized by
Department of Mechanical Engineering

Program Date: 28/10/2024
TIME: 4 PM

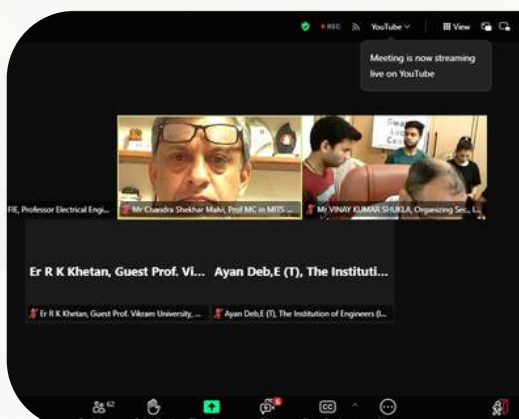
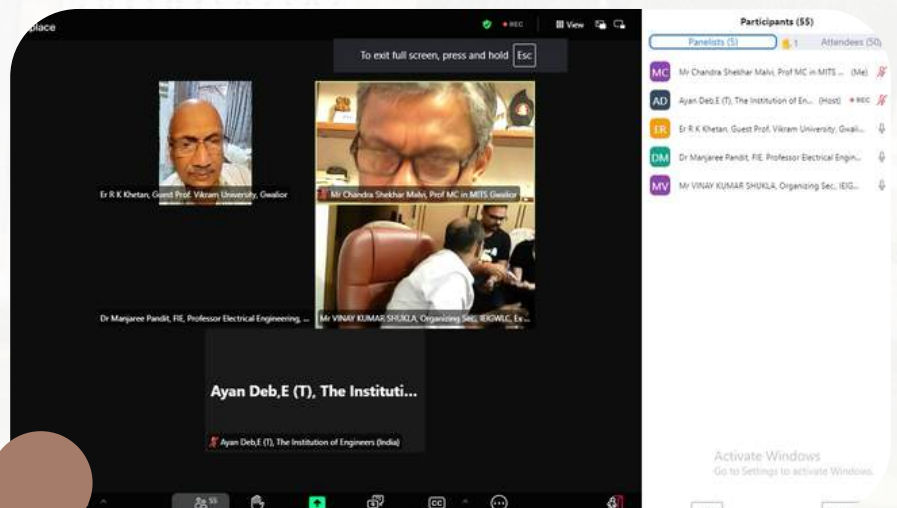
IEI Gwalior Local Centre

webinar on

Electronics involved in Solar System

28 October 2024
5:00 PM - Online
MITS-DU Gwalior

The Institution of Engineers (India) Gwalior Local Centre and Madhav Institute of Technology and Science deemed University (MITS-DU) Gwalior organised a



webinar on Electronics involved in Solar System. Dr. Manjaree Pandit, Professor, Electrical Engineering and Dr. C.S. Malvi Professor, Mechanical Engineering, participated in the event. Dr. Surendra Kumar Chourasiya, Assistant Professor, Mechanical Engineering was the event coordinator.

EVENTS AND ACTIVITIES

The Bhagavad Verse

14 November 2024

Seminar Hall 4

MITS-DU Gwalior

An event called **The Bhagavad Verse** - A journey through timeless teachings was organised by **The Bhagwat Club** in **Madhav Institute of Technology and Science** deemed **University (MITS-DU) Gwalior** under the **National Education Policy 2020**.



Dr. Chandra Shekhar Malvi was the Co-ordinator of the event. Students of the Novel Engaging Course **Bhagavad Gita - An Introduction** presented on the diverse topics regarding to the philosophy, spirituality and Scientific values of **Bhagavad geeta** for **Spiritual Growth and Insight, moral and ethical Guidance, Self-Realisation and Purpose**. This three hour long program made students aware of the virtues and wisdom of **Bhagwad Gita**.

MADHAV INSTITUTE OF TECHNOLOGY AND SCIENCE, GWALIOR (M.P.)
Deemed University
NAAC Accredited with A++ Grade

 **The Bhagwat Club**
Cordially invites you to

THE BHAGAVAD VERSE
"A Journey Through Timeless Teachings"

राष्ट्रीय शिक्षा नीति - २०२० के अंतर्गत
Novel Engaging Course on
"Bhagavad Gita- An Introduction"

14 Nov. 2024
03:00 - 06:00 PM
Seminar Hall 4

Faculty Coordinator:
Dr. Chandra Shekhar Malvi
HMED

Presentation by N&C students
On diverse topics regarding to the philosophy, spirituality, & scientific values of Bhagavad Geeta, for:

- Spiritual Growth & Insight
- Moral & Ethical Guidance
- Self-Realization & Purpose

For more details contact: Shivam Rajput: +91 97702 84630 Gungun Sikarwar: +91 96912 91606

‘जातस्य हि ध्रुवो मृत्युर्ध्रुवं जन्म मृतस्य च ।
तस्मादपरिहार्येऽर्थे न त्वं शोचितुमर्हसि ॥’
द्वितीय अध्याय, श्लोक 27

EVENTS AND ACTIVITIES

Media coverage

PUC Certificate

30 November 2024

Dainik Bhaskar

Gwalior

Dr. Pratesh Jaiswal, Mechanical Engineering department, MITS-DU, Gwalior, told that vehicles get PUC certificates after testing that smoke emissions are according to the standard. Vehicles emit smoke which is harmful for the environment. Some standards have been set to keep pollution in control. Vehicles are emitting smoke according to the standard, this is tested by using a machine. Vehicles emit carbon di-oxide and carbon mono-oxide which is checked regularly. After checking that PUC (pollution under control) certificate is issued to vehicles by the test transport department. Sound level of vehicles are also checked.



धुआं मानक के अनुरूप है या नहीं इसकी जांच के बाद ही जारी होता है वाहन का पीयूसी सर्टिफिकेट

एक्सपर्ट



-प्रो. प्रतेश जायसवाल,
मैकेनिकल डिपार्टमेंट,
एमआईटीएस डीम्ड
यूनिवर्सिटी

वाहनों से धुआं निकलता है। यह पर्यावरण के लिए नुकसानदेह माना जाता है। इस तरह के प्रदूषण को नियंत्रण में रखने के लिए कुछ मानक तय किए गए हैं। तय मानक के अनुसार ही वाहनों से धुआं निकल रहा है या नहीं इसके लिए वाहन का टेस्ट मशीन से के माध्यम से किया जाता है। वाहनों से कार्बन डाईऑक्साइड और कार्बन मोनोऑक्साइड निकलता है जिसकी नियमित जांच की जाती है। जिसके बाद पीयूसी जारी किया जाता है। वाहनों से निकलने वाल धुआं यदि अंडर कंट्रोल होने पर ही परिवहन विभाग फिटनेस जारी करता है। साउंड का लेवल भी चेक किया जाता है।

EVENTS AND ACTIVITIES



MITS Opens Doors to Young Minds

School Visit



The visit also included workshops showcasing carpentry, smithing, moulding, machinery and welding shops. Through hands-on demonstrations, the students gained a deeper understanding of how these fundamental skills are applied in mechanical engineering. This exposure in MITS-DU Mechanical Department sparked the students' curiosity and ignited a passion for engineering in many. Bhupendra Kumar Pandey, Assistant Professor, Mechanical Engineering department and Vaibhav Shivhare, Assistant Professor, Mechanical Engineering department organised the visit.

Madhav Institute of Technology and Science (MITS-DU) recently hosted a visit for school students, introducing them to the exciting world of mechanical engineering. The students explored the department's various labs, including the IC engine lab, where they learned about the working and applications of engines. In the fluid mechanics lab, they saw wind turbines and gained insights into renewable energy sources.



STUDENTS NEWS



Young Minds learn about Go Kart

CM Rise School Visit



Curious minds got so many questions to ask and our faculty answered their questions and cleared all of their doubts regarding Go Karts and Mechanical Engineering, students were also keen to learn about the specifications of the Go Karts in detail as well as the real world application of it. They saw live demonstration of how Go Karts are made and how it works after getting manufactured. It was an amazing experience for all the students and they had a lot of fun.

Madhav Institute of Technology and Science (MITS-DU) recently organised a visit for students and teachers of CM rise school, During the visit they learnt about Go Karts, which is a part of Mechanical Engineering, many students got inspired by seeing the vast possibilities of this domain. They learnt about the production of Go Karts. It was an educational visit which boosted students interest in engineering.



FACULTY NEWS



Accomplishments.
Certificates



Springer nature portfolio BMC Discover palgrave macmillan Birkhäuser Adis

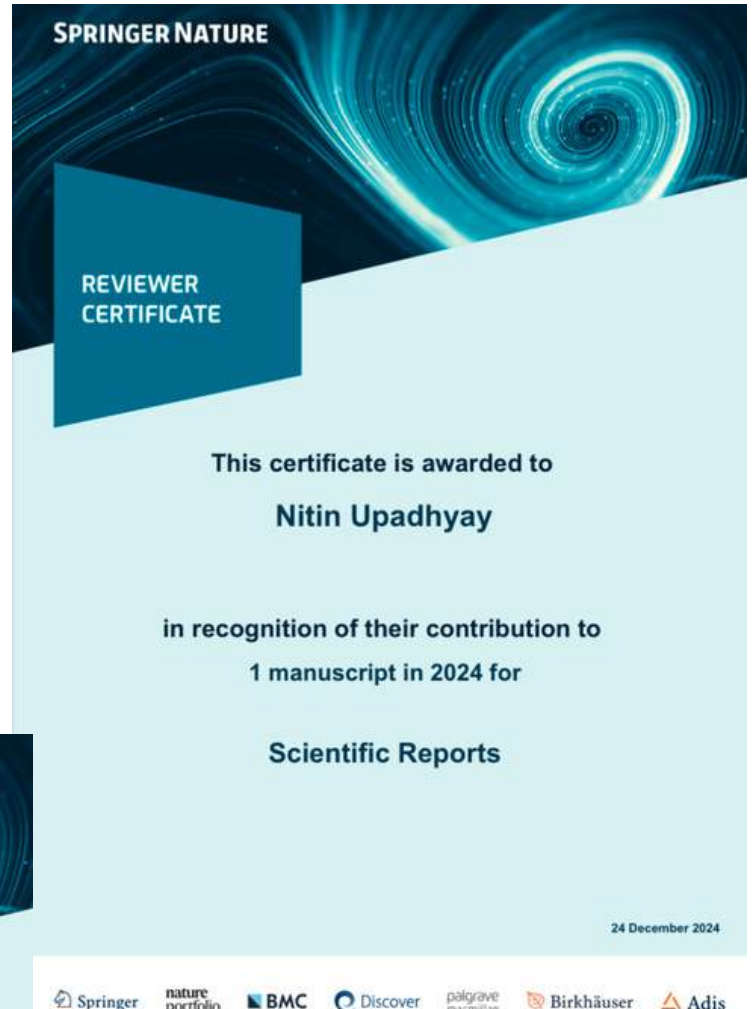


Springer nature portfolio BMC Discover palgrave macmillan Birkhäuser Adis

FACULTY NEWS

Certificates

Dr. Nitin Upadhyay, Assistant Professor, Mechanical Engineering department, Madhav Institute of Technology and Science - Deemed University (MITS-DU) got awarded numerous certificates for his amazing work by Springer Nature which is a global publisher dedicated to providing the best possible service to the whole research community. This is a huge achievement and we on behalf of the university would like to congratulate sir and wish him all the very best for the future.



*Congratulations
and best wishes!*

FACULTY NEWS

Certificates

Dr. Nitin Upadhyay, Assistant Professor, Mechanical Engineering department, Madhav Institute of Technology and Science - Deemed University (MITS-DU) got awarded a certificate from Motilal Nehru National Institute of Technology, Allahbad for participating in a 5 day online short



term course on “Advances in Vibration Engineering (AVE-2024)” organised during December 2-6, 2024. He also got awarded a certificate from Malaviya National Institute of Technology, Jaipur for presenting a paper entitled Bearing Defects Classification using Wavelet Time Scattering Features and ensemble techniques at the Unified International Conference on Emerging Technologies in



Cyber-Physical Systems and Industrial AI (UNified-2024) organized by MNIT Jaipur, India in collaboration with Western Norway University of Applied Science, Norway during November 26-28, 2024. He also got awarded a certificate from MITS-DU for chairing a session titled Keynote Talk 2 in the 6th ICSISCET held during October 26-27, 2024.

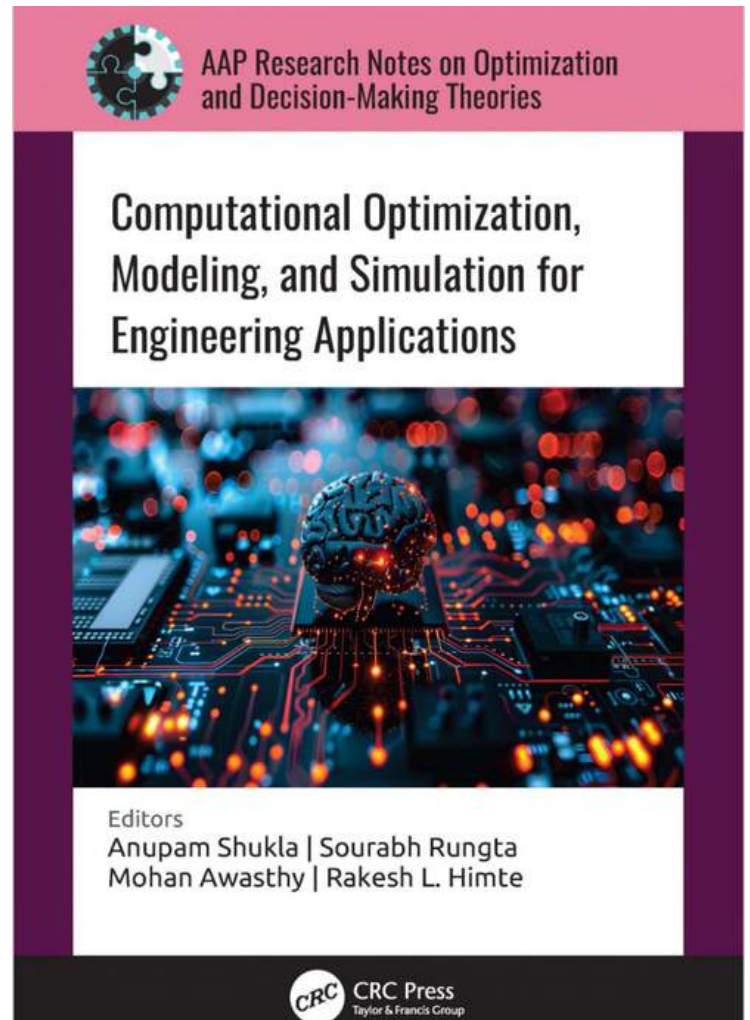
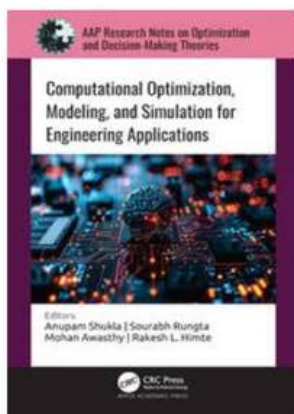


FACULTY NEWS

Certificates

Dr. Nitin Upadhyay, Assistant Professor, Mechanical Engineering department, Madhav Institute of Technology and Science - Deemed University (MITS-DU) co-authored a chapter named “Solid State Processes for Fabrication of Aluminium Metal Matrix Composites for Automotive and Aircraft Applications”.

Chapter



Solid State Processes for Fabrication of Aluminum Metal Matrix Composites for Automotive and Aircraft Applications

By *Agnivesh Kumar Sinha, Kasi Raja Rao, Vinay Kumar Soni, Nitin Upadhyay, Rityuj Singh Parihar, Mohit Kumar Sahu*

Book [Computational Optimization, Modeling, and Simulation for Engineering Applications](#)

Edition	1st Edition
First Published	2024
Imprint	Apple Academic Press

in a book called **Computational Optimization, Modeling, and Simulation for Engineering Applications** which got published by **CRC Press, Taylor and Francis Group** which is an international company originating in England that publishes books and academic journals. This chapter deals with the various solid-state processing techniques of Al-MMCs for Automotive and Aircraft applications.

STUDENTS NEWS

Outreach Activities

CNG Biogas Plant Visit

The Mechanical Engineering Department of Madhav Institute of Technology and Science (MITS) recently organized an educational industrial visit to the Lal Tipara CNG Biogas Plant. The visit provided an opportunity for students to witness the real-world application of renewable energy technologies.

The plant, known for its advanced biogas conversion techniques, offered insights into the production of CNG from organic waste. Students observed the intricate processes involved, including anaerobic digestion,

gas purification, and compression. Experts at the plant explained the role of sustainable practices in energy generation and their impact on reducing carbon footprints.

Sharing their experience, students expressed excitement about understanding practical aspects of energy systems and their alignment with theoretical knowledge. The visit inspired them to innovate in sustainable energy solutions. Such initiatives by MITS underline its commitment to bridging the gap between academia and industry, preparing students for future challenges in the mechanical domain.



STUDENTS NEWS

Teva Pharmaceutical

Industrial Visit

20 December 2024

Industrial Area

Malanpur, Gwalior

Madhav Institute of Technology and Science (MITS-DU), Gwalior organised an industrial visit for the 1st, 2nd and 3rd year students of Mechanical Engineering department. Students visited Teva Pharmaceuticals which is located in the industrial area of Malanpur.



This was an educational visit and students learnt about how things actually work in a factory, how pharmaceutical products are manufactured. This was a fun and exciting trip for the students. All the faculty members of mechanical engineering department were present with the students. This kind of practical experience help students in their study and life as well.

STUDENTS NEWS

Summer Internship Program

Welding

December 2024

Workshop

MITS-DU Gwalior

Students of Mechanical Engineering department, Madhav Institute of Technology and Science (MITS-DU), Gwalior participated in Summer Internship Program held during the month of december. In the internship, students got the



opportunity to learn about various things related to different domains of engineering according to their interests. Some students learnt about Welding which is a manufacturing process used in industries. Rajendra Prasad Kori, Assistant Professor, Mechanical Engineering department, was the in charge of this course. Students got hands on experience about various types of welding processes.

STUDENTS NEWS

Shyrana - Open Mic

16 November 2024
Student Activity Centre
MITS-DU Gwalior

Lafz-e-Bayan Club of Madhav Institute of Technology and Science deemed University organised Shyrana - an open mic competition. Atul Kumar Ray sir, Assistant Professor, Mathematics and Computing department were invited as the guest of honour.



President of the club and other dignitaries were present during the event. Shyrana gave the students a chance to present their talent like comedy, poetry, singing etc. Harsh Bhardwaj, student of Mechanical Engineering department, MITS Gwalior, managed to win the competition by the grace of God.



Click on the photo to see
a glimpse of the event

‘किसी ने पूछा डर किस बात का है तो कहता है
डरते वो हैं जिनके पास कुछ होता खोने को है’
- Harsh Bhardwaj



STUDENT WRITINGS

American computer programmer, businessman, and philanthropist

A lifetime of achievement: Bill Gates

Bill Gates (born on October 28, 1955, in Seattle, Washington, U.S.) is an American computer programmer and entrepreneur who cofounded Microsoft Corporation, the world's largest personal-computer software company.

Gates wrote his first **software** program at the age of 13. In **high school** he helped form a group of programmers who computerized their school's payroll system and founded Traf-O-Data, a company that sold **traffic-counting** systems to local governments. In 1975 Gates, then a sophomore at Harvard University, joined his hometown friend Paul G. Allen to develop software for the first microcomputers.

They began by adapting **BASIC**, a popular programming language used on large computers, for use on microcomputers. With the success of this project, Gates left Harvard during his junior year and, with Allen, formed Microsoft. Largely on the strength of Microsoft's success, Gates amassed a huge paper fortune as the company's largest individual shareholder.



He became a paper billionaire in 1986, and within a decade his net worth had reached into the tens of billions of dollars—making him by some estimates the world's richest private individual.

Gates himself displayed an acute awareness of the perils of prosperity in his 1995 **best seller**, *The Road Ahead*, where he observed, "Success is a lousy teacher. It seduces smart people into thinking they can't lose."

PROGRAM OUTCOMES

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- Graduates of the program will be able to have successful professional career.
 - Graduates of the program will be able to develop attitude of learning and become adaptable to dynamic industrial and social environment.
 - Graduates of the program will be able to design and develop mechanical system by using skills and knowledge of core competency along with allied engineering skill.
 - Graduates of the program will be able to undertake interdisciplinary research needed to build a sustainable society.
-
- 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.
 - 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.
 - 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.
 - 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.
 - Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PROGRAM OUTCOMES (POs)

Mechanical and Automobile Engineering Graduates will be able to:

- Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 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.
- 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.
- Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 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.
- 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.
- 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.

NEWSLETTER COMMITTEE

Faculty Incharge



*Dr. Surendra Kumar Chourasiya
Assistant Professor
Mechanical Engineering dept.*

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Marketing Specialist
ME 2nd Year*



*Mansi Verma
Graphic Designer
ME 2nd Year*



*Shreya Sharma
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ME 2nd Year*



*Harsh Bhardwaj
Student Editor
ME 2nd Year*

‘मैं अकेला ही चला था जानिब-ए-मंज़िल मगर,
लोग साथ आते गए और कारवाँ बनता गया”

- मजरुह सुल्तानपुरी



Darpanam

दर्पणम्



**We welcome your recent news for
inclusion in our next newsletter.
Please email your updates to
rescuebird18@gmail.com**

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