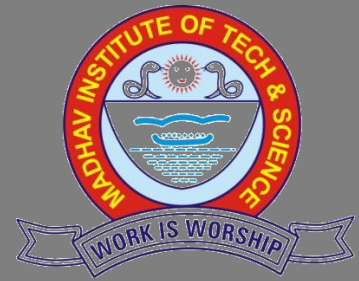


Newsletter

Department of Mechanical Engineering



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Madhav Institute of Technology &
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INSIDE THIS ISSUE

1. Faculty Awards & Honors
2. Departmental activities
3. Students Achievement &
Activities
4. Industrial visit
5. NSS Activities
6. Publications
7. Patent filed

Vision

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

Mission

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

Editorial Team

- Mr. Bhupendra Pandey
- Mr. Sayed Faiz Ahmad

Students

- Ravi Kushwah
- Aniket Gupta
- Kabir Saraswat

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

1. Graduates of the program will be able to have successful professional career.
2. Graduates of the program will be able to develop attitude of learning and become adaptable to dynamic industrial and social environment.
3. 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.
4. Graduates of the program will be able to undertake interdisciplinary research needed to build a sustainable society.

PROGRAM OUTCOMES (POs)

Mechanical and Automobile Engineering Graduates will be able to:

- PO 1** Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO 2** 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.
- PO 3** 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.
- PO 4** 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.

- PO 5** 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.*
- PO 6** 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.*
- PO 7** 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.*
- PO 8** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.*
- PO 9** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.*
- PO 10** 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.*
- PO 11** 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.*
- PO 12** 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.*

Faculty Awards & Honors

Prof Sharad Agrawal received the best mentor award for the SWAYAM/ NPTEL course 'Law of thermodynamics'.

Activity Organized

Orientation Program was organized for first year mechanical and automobile engineering students on Aug 22, 2019.



ANVESHAN was organised on Sep 17, 2019 at the department of Mechanical Engineering. In this event students of the department and experts from industries presented



Activity Organized

Workshop

A one-day workshop on *Building Envelope Design for Energy Optimization* September 7, 2019 was conducted on September 7, 2019 by the Department of Mechanical engineering and coordinated by Dr M.K. Gaur and Prof. Anand Kushwah. The workshop was attended by 89 participants from various departments like Architecture, Mechanical, and Electrical Engineering. These included 45 students and 44 Faculty members. Total three sessions were held by speakers from different institutes and industries. The objective of the workshop was to present the fundamentals of role of building envelope in minimizing the energy demand without compromising thermal comfort and to help the participants understand how to effectively use the tools and techniques used in optimization and design of energy efficient building envelope.

Aerospace Club

Activity was organised on Sep 14 2019

speakers



Dr. Roshni Udyavar Yehuda is an Architect, Academician and Environment Consultant



Dr. Neerja Lugani Sethi is an academician currently working as Dean/Professor-In-Charge, University School of Planning and Architecture, Guru Gobind Singh Indraprastha University, New Delhi.



Er. Rajesh Kumar Singadiya is the Director of Empirical Exergy Private Limited, Indore, M.P.



A Workshop on 'How to write a research paper using Mendeley software' was organised by the department on August 3, 2019. Speaker Dr CS Malvi told that with the help of Mendeley software, research papers can be read free of cost. Using this software one can write review papers, find information on any topic and borrow a research paper for studying. Total 60 participants were present at the workshop.

Expert Lecture on Power Plant Design was organised on Sep 23, 2019 at the department. The lecture was delivered by industrial expert Er Shrinivas Pillai, DGM, Technical from Hexagon, Hyderabad.



मेंडले सॉफ्टवेयर से फ्री में पढ़ सकते हैं रिसर्च

ग्वालियर। एमआईटीएस में शनिवार को मेंडले सॉफ्टवेयर विषय पर कार्यशाला हुई। वक्ता के रूप में डॉ. सीएस मालवी उपस्थित थे। उन्होंने बताया कि इस सॉफ्टवेयर की मदद से किसी भी रिसर्च पेपर को निःशुल्क पढ़ा जा सकता है। जबकि अन्य सॉफ्टवेयर का उपयोग करने पर फीस जमा करनी पड़ती है। इस सॉफ्टवेयर की खासियत है कि इस पर लिटरेचर रिव्यू लिखा जा सकता है। किसी भी टॉपिक या विषय का मटेरियल आसानी प्राप्त हो जाता है। साथ ही पेपर को उधार लेकर पढ़ा जा सकता है। देशभर में विभिन्न विषयों पर रिसर्च होती है। जब कोई व्यक्ति रिसर्च करना शुरू करता है तो उससे पहले देश में ही संबंधित रिसर्च के बारे में जानकारी लेता है, इसके लिए मेंडले सॉफ्टवेयर काफी मददगार साबित हो सकता है। बिना एनालिसिस के रिसर्च नहीं की जा सकती है। इस कार्यशाला में 60 प्रतिभागियों ने भाग लिया। इस मौके पर समन्वयक प्रो. शरद अग्रवाल और प्रो. सईद फैज आजाद उपस्थित थे।

Students Achievement & Activities

BAJA-2020(Virtual round)

The event was held at Chitkara University, Chandigarh (11-13th July 2019). Team **DYNAMICS** from Department of Mechanical Engineering was selected for dynamic round which is to be held in Indore in January 2020.

TEAM DYNAMICS

- Gunendra Mahore
- Ritik Barua
- Sonam Solanki
- Aditya Mudgal
- Jatin Wadhvani



Indian Supercarting Series

Indian Supercarting Series was held at MIT, Ujjain (25-28 July 2019)

SCAVENGERS from MITS Gwalior got best Team Award in the Event
Activities Conducted

- Technical Inspection
- Brake Test
- Skitpad
- Traction
- Acceleration Test
- Business Plan
- Endurance
(Final Race)



Industrial Visit

Automobile Engineering 2nd and 3rd year students visited CSMT Tekanpur on September 28, 2019.



National Service Scheme

Plantation and Yoga Program

The N.S.S. unit MITS Organized the Plantation programme after Yoga Session during the Orientation Programme of First Year Students on 25/08/2019. More than 100 students participated and fifty saplings were planted.



NSS Day

National Service unit MITS and Mechanical Engineering Department organized a cultural programme (Dance, Poetry, Music and Nukad Natak with social Messages) on NSS Day i.e. 24/09/2019 at Bahadurpur Gaon under National Service Scheme Unit. 68 volunteers participated in this programme.



Swachchhata Abhiyan

National Service Scheme, MITS unit and Mechanical Engineering Department organised "Swachchhata Abhiyan" to protest the use of polythene and cleaning of campus on 02/10/2019. 87 students/volunteers of NSS unit MITS with programme officer participated in this event.



Research Publications

- **A Aherwar**, T Singh, A Singh, A Patnaik, G Fekete (2019) 'Optimum selection of novel developed implant material using hybrid entropy-PROMETHEE approach', Journal of Materialwissenschaft und Werkstofftechnik, vol. 50, Issue 3, page no. 1232-124.
- Sanni Dev, **Amit Aherwar**, Amar Patnaik, (2019) Preliminary evaluations on development of recycled porcelain reinforced LM-26/Al-Si10Cu3Mg1 alloy for piston materials', Silicon, vol. 11, Issue 3, page no. 1557-1573.
- **Amit Aherwar**, Amar Patnaik, Marjan Bahraminasab, Amit Singh, (2019) Preliminary evaluations on development of recycled porcelain reinforced LM-26/Al-Si10Cu3Mg1 alloy for piston materials', Journal of Materials: Design and Applications, vol. 233, Issue 5, page no. 885-899.
- **M K Gaur**, G N tiwari, A kushwaha, P singh, (2019) 'Development of emperical relation to compute the heat transfer coefficient for distiller operating in different operating modes', Journal of Distillation of water treatment, vol. 158, page no. 11.
- **A Ahirwar**, M Bahraminasab, A Patnaik, (2019), 'Effect of Molybdnum content on structure and properties of a Co-Cr Bio-medical alloy', Jornal of materials engineering and performance, vol. 5, page no. 33-38.
- **M K Gaur**, **C S Malvi**, Sonal Rajoria, Swati Gupta, (2019), 'A Computational Study of NOx Emissions for Methane-Air Combustion Using Eddy-Dissipation Model', Journal of Thermal Energy Systems Vol. 4, Issue 2, page no. 23-30.
- **C S Malvi**, B S Tomar, (2019), 'Effect of Surface Texture on Pressure Distribution in Hydrodynamic Journal Bearing', Journal of Thin Films, Coating Science Technology and Application, vol. 3, page no. 18.

Patent

Sunil Dohare, Ajay vardhan, Brajendra Kumar Gond, Prashant Sharma, Dr. S K Dhakad, Dr. R S Rajput, Arvind Kaushal, **Dr. C S Malvi** filed a patent for "Low cost waste Paper Material Pulping machine for recycling purpose" Application Number 201921029356.