

Newsletter

Department of Mechanical Engineering



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Madhav Institute of Technology &
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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

- Dr Manish Kumar Sagar
- Mr. Vaibhav Shivhare
- 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 Outreach

1. Dr. Manish K Sagar participated in a short term course on 'Application of Forecasting Methods in Engineering and Business Problems' during December 7 – 11, 2020 Organised by IIT Kharagpur and sponsored by AICTE.
2. Prof. Vedansh Chaturvedi and Prof. Sharad Agrawal participated in AICTE Training And Learning (ATAL) Academy Online FDP on '3D Printing & Design' during Nov 09 - 13, 2020 at IIT Dharwad.
3. Prof. Vedansh Chaturvedi, Prof. Jyoti Vimal and Prof. Sharad Agrawal participated in AICTE Training And Learning (ATAL) Academy Online FDP on 'Tribology in Design and Manufacturing' during Nov 23 to 27, 2020 at IIT Jammu.
4. Prof. Utkarsh Srivastava attended a workshop from Dec 21 to 23, 2020 on 'Internet of Things- Industry, Academia and start-up' organized by IIT Hyderabad.
5. Dr. Dharmendra Jain participated in a One Week All India Council for Technical Education (AICTE), New Delhi sponsored online Short-Term Training Programme (STTP) Series on 'Recent Advances in Tribology And Surface Engineering: Series 3 of 4 - Introduction to Special Topics like - Nanotribology, Biotribology, Space Tribology, Biomimetics and Tribology in Industry', organized by the Department of Mechanical Engineering of Saintgits College of Engineering, Kottayam from Oct 12 to 17, 2020.
6. Dr Amit Aherwar attended 05 days online Faculty Development Program on "3D Printing & Design" during Dec 07-11, 2020 organized by AICTE Training and Learning (ATAL) Academy at NIT, Patna.
7. Prof. Narendra Singh Sikarwar participated in and International Summit on 'Quality Indices in Higher Education – 2020', held during November 6 to 7, 2020 at Delhi Technological University, Delhi.
8. Mr. Vaibhav Shivhare participated in an online Faculty Development Programme on ANSYS during September 17-21, 2020 organised by Amrapali Institute of Technology and Science.
9. Prof. Dhruv Maggu attended a NASSCOM training on "3D Printing & Design" organized at IIT Hyderabad between November 28 – December 02, 2020.

Expert Talks Delivered

1. Dr Pratesh Jaysawal delivered an Expert Lecture on Dec 08, 2020 in an AICTE sponsored STTP on 'Advanced Manufacturing and Materials' organised by Department of Mechanical Engineering JSS Academy of Technical education, Noida.
2. Dr Pratesh Jaysawal chaired a session in AICTE sponsored second international conference on 'Sustainable and Innovative Solutions for current challenges in engineering and technology' on December 18, 2020.
3. Dr C. S. Malvi delivered an expert lecture in the event 'Swachchh Bharat Mission' organised by RKVM Gwalior on December 24, 2020.
4. Dr C. S. Malvi delivered an expert lecture on 'Patent and IPR' at MITS Gwalior on December 10, 2020.
5. Dr C. S. Malvi delivered an expert lecture in the event 'National Education Policy 2020 in the context of Research' organised by IIITM Gwalior on December 09, 2020.
6. Dr M.K. Gaur delivered an expert lecture in AICTE (ATAL) organised by NIT, Raipur during December 09-10, 2020.

Student Achievement and Activities

1. Anuj Kumar Singh organised an online chess tournament on Nov 28, 2020 at MITS Gwalior. More than 300 students participated in this college level event.
2. Ashutosh Kushwanshi was one of the 180 students who received the certificate from Hero Moto Corp Ltd. in Hero Campus Challenge Season 6 organised on December 21, 2020 in which 35,000 candidates participated for presenting solutions to the problem given by Hero Moto Corp Ltd.

Research Publications

1. Manish Belwanshi, Pratesh Jayaswal, Amit Aherwar, "A study on tribological effect and surface treatment methods of Bio-ceramics composites", Materials Today: Proceedings, Elsevier.
2. Vishesh Kumar Anand, Amit Aherwar, Mozammel Mia, Omer Elfakir, Liliang Wang "Influence of silicon carbide and porcelain on tribological performance of Al6061 based hybrid composites", Tribology International, Elsevier.