

Newsletter

Department of Mechanical Engineering



Jul-Sep 2020
Volume 4 Issue 3

Madhav Institute of Technology &
Science, Gwalior-474005

INSIDE THIS ISSUE:

1. Faculty Outreach
2. Talks Delivered Outside the
Institute
3. Departmental Activities
4. Students Achievements and
Activities
5. Research Publications

Vision

"To develop innovative and creative Mechanical & Automobile 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, Automobile and allied engineering.
3. To guide students in acquiring career-oriented jobs in the field of Mechanical and Automobile 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, Prof. Vedansh Chaturvedi and Prof. Jyoti Vimal attended an online STC on 'Reliability, Maintainability and Quality Issues in Process Industries' during Aug 04 - 08, 2020 at NIT Jalandhar
2. Dr. M.K. Gaur attended an online STC on 'Accreditation to engineering and professional ethics' organized by government college of engineering Nagpur during July 08-12, 2020.
3. Dr. Dharmendra Jain attended an online Short-Term Training Program (STTP) on 'Introduction to Tribology and Surface Engineering' at the Department of Mechanical Engineering, Saintgits College of Engineering, Kottayam, Kerala sponsored by AICTE, New Delhi during Aug 17-22, 2020.
4. Dr. Dharmendra Jain participated in a One Week AICTE, New Delhi sponsored online Short Term Training Programme (STTP) Series on 'Recent Advances In Tribology And Surface Engineering: Series 1 of 4 – 'Introduction to Tribology and Surface Engineering', organized by the Department of Mechanical Engineering of Saintgits College of Engineering, Kottayam from Aug 17 to 22, 2020.
5. Dr. Dharmendra Jain participated in a One Week AICTE, New Delhi sponsored online Short Term Training Programme (STTP) Series on 'Recent Advances In Tribology And Surface Engineering: Series 2 of 4 – 'Tribology of Machine Components and Applied Tribology', organized by the Department of Mechanical Engineering of Saintgits College of Engineering, Kottayam from Sep 14 to 19, 2020.
6. Dr. Dharmendra Jain attended online '12th Summer School in Tribology' organized by TSI Faridabad during July 21-25, 2020.
7. Prof. Vedansh Chaturvedi and Prof. Jyoti Vimal attended an online STC on 'Industry 4.0 and Smart Manufacturing: Opportunities and Challenges' during July 20 - 24, 2020 at NIT Jalandhar.
8. Prof. Jyoti Vimal participated in AICTE Training And Learning (ATAL) Academy Online FDP on 'Design Thinking' during Sep 21 to 25, 2020 at IIT Jammu MNIT Jaipur.

9. Dr Amit Aherwar attended five days online Faculty Development Program on "Green Technology & Sustainability Engineering" during Sep 21-25, 2020 organized by AICTE Training and Learning (ATAL) Academy at SVNIT, Surat.
10. Prof. Gyanesh Sharan participated in AICTE Training And Learning (ATAL) Academy Online FDP on 'Robotics' from Aug 24 - 28, 2020 at Chennai Institute of Technology.
11. Dr Amit Aherwar attended five days Virtual International Short Term course on "Tribology & Sustainability" during Aug 24-28, 2020 organized by SRM Institute of Science and technology, Kattankulathur, Chengalpattu, Tamilnadu.
12. Mr. Vaibhav Shivhare participated in AICTE Training And Learning (ATAL) Academy Online FDP on 'Biomedical Instrumentation & IoT' during Sep 21 to 25, 2020 at Sri Krishna College of Technology.
13. Mr. Vaibhav Shivhare participated in an Online STC on 'Introduction to Non-linear Finite Element Method' organized by IITD during December 01 - 05, 2020
14. Dr Amit Aherwar attended one week online Short Term course on "Tribology for Sustainable Development" during July 20-24, 2020 organized by Shri Mata Vaishno Devi University, Katra, Jammu and Kashmir.
15. Dr. Ravi Kant Ranjan participated in a one-week Faculty Development Programme on "Green Energy Technologies" held during Sep 3 to 4, 2020 at Sawai Madhopur College of Engineering & Technology, Sawai Madhopur".
16. Prof. Narendra Singh Sikarwar and Prof. Dhruv Maggu participated in a TEQIP-III Sponsored One Week Online Faculty Development Program on "Modeling and Simulation of Structural Mechanics and CFD Analysis using MATLAB and ANSYS" from during August 24-28 2020, Organized by the Department of Mechanical Engineering, SJCE, Mysuru, in Association with Mentee Institution, MLV Textile & Engg. College, Bhilwara (RAJ.)
17. Dr Dharmendra Jain Participated in a one-week STC on 'Recent Trends in Mechanical Engineering' during Sep 07 – 11, 2020, under TEQIP – III, organized by Department of Mechanical Engineering, IET Dr BR Ambedkar University, Khandari campus Agra.

Expert Talks Delivered

1. Dr Pratesh Jaysawal delivered an Expert Lecture on July 9, 2020 in a workshop on 'Effective Use of e-Learning Platforms for Teaching and e-Contents Development Tool' organised by MITS, Gwalior under the ICT Initiative of MHRD for Teaching-Learning.
2. Dr C. S. Malvi delivered an expert lecture in an FDP on 'Green Technologies' organised by RTU on September 05, 2020.
3. Dr M K Gaur delivered a keynote address on 'Heat and Mass Transfer Analysis of Solar Distillation Systems' during the 2nd international conference on 'Recent Advances in Mechanical Infrastructure (ICRAM-2020) organized by department of mechanical engineering, Institute of Infrastructure, Technology, Research and Management, Ahmedabad during August 21-23, 2020.
4. Dr M K Gaur delivered an expert lecture on July 15, 2020 in three days Online STTP on 'FUTURISTIC INNOVATION IN SOLAR ENERGY' organized by RGPV, under TEQIP-III in association with Department of Mechanical Engineering Gyan Sagar College of Engineering, Sagar.

Departmental Activities

Webinar

Department of Mechanical Engineering organized a Webinar on '**Building Science and Energy Conservation**' during September 22-26, 2020. The five-day webinar was coordinated by Dr. Manoj Kumar Gaur.

Workshop

Terrestrial Automobile Development Club organized a workshop on "**Fundamentals of Automotive Systems and Go-kart Designing**" during July 25-26, 2020. The two-day workshop was coordinated by Prof. Vedansh Chaturvedi.

Student Achievement and Activities

Anuj Kumar Singh Organised a General Sports awareness event on September 7, 2020. The five-day event was conducted under the Sport Club. More than 500 students participated in this college level quiz.

Research Publications

1. Amit Kumar Shah, Sourabh Dhepte, Rajesh Palasiya, Anshul Lakhera, Saurabh Kaim, Kaustubh Khot, "Automatic Side Stand Retrieval Mechanism", International journal of Advances in Engineering and Management (IJAEM), pp. 707-709, vol. 02, Aug 2020.
2. Amit Aherwar, Amar Patnaik, Catalin I. Pruncu "Effect of B4C and waste porcelain ceramic particulate reinforcements on mechanical and tribological characteristics of high strength AA7075 based hybrid composite", Journal of Materials Research and Technology, Elsevier, 2020, 9(5), 9882-9894.