

# ME-NEWSLETTER

*Session: 2019-20*

## **Vision of the institute:**

To be a leading educational institution recognized for excellence in engineering education & research producing globally competent and socially responsible technocrats.

## **Mission of the institute:**

- To provide state of the art infrastructural facilities that support achieving academic excellence.
- To provide a work environment that is conducive for professional growth of faculty & staff.
- To collaborate with industry for achieving excellence in research, consultancy and entrepreneurship development.

## **Vision of the Department:**

To be recognized as a centre of excellence for mechanical engineering education

## **Mission of the Department:**

- To impart quality education aimed at producing competent professionals capable of applying their knowledge of science & engineering fundamentals creatively in areas related to mechanical engineering.
- To provide necessary support to the aspirants in their goal oriented academic pursuits through mentoring and value added curricular and co-curricular activities.
- To make students conscious of ethical values in pursuing their professions and to inculcate a desire among them to contribute positively to the development of a sustainable environment.

## **Program Educational Objectives (PEOs)**

The educational objectives of undergraduate Mechanical Engineering Program are :

- To transform and develop students into competent professionals capable of solving technical and societal problems.
- To make the students fully aware of the way the mechanical engineering discipline is currently practiced and to inculcate in them a thirst for further knowledge.
- To produce professionals with strong work ethics and high sensitivity to environmental and sustainability issues.

## **PO's (Department of Mechanical Engineering)**

### **Engineering Graduates will be able to:**

1. **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
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.
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, social, and environmental considerations.
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.
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.
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.
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.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
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.
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.
12. **Lifelong learning:** Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

## **Program Specific Outcomes (PSOs)**

1. Conceptualize, design, make / improve physical products, processes and systems using principles of design, manufacturing and Industrial engineering.
2. Design, develop and maintain various thermal engineering systems.

## Department Activities:

- The Department of Mechanical Engineering organized a technical fest “MECHAPHELLIA-2K19” in association with GMECH on 18th October 2019.
- The department organized a technical session on CAD tools by LE-LOGIX for the students in order to enhance their designing ability.
- The Department of Mechanical Engineering successfully organized a two days International Conference on Mechanical and Energy Technologies ICMET-2019, on 8-9 November 2019. The motive of the conference is to bring together the scientists, professors, graduates and engineers to discuss and deliver ideas in concern to the recent advancement in Mechanical Engineering and Energy Technologies. The conference attracted many participants working in various fields of engineering: design, mechanics, materials, energy, etc. More than 270 manuscripts were submitted to the conference which was published in Springer, IOP and Materials Today scopus indexed proceedings.
- An expert lecture on “Applications of FEA Tools” is organized for Mechanical Third Year Students in association with APTRON solutions Pvt. Ltd on 12 December 2019.
- The Department of Mechanical Engineering organized an expert lecture on “Sustainability and self-sustainability” by Prof. G.N. Tiwari on 15 October 2019.
- An Expert lecture is organized on “Environment Sustainability” presented by Prof. M.N Desmukh, Principal, Satyug Darshan Institute of Engineering and Technology, Bhupani, Faridabad on 24 September 2019.
- The Department successfully organized a one week Faculty Development Programme on “Recent Development in Additive manufacturing” from 16-22 January 2020. Various experts were invited from reputed universities to deliver the talks on the advancements in additive manufacturing highlighting the scope of research in this area. Around 50 delegates from different colleges participated in the programme. The programme started with the expert lecture by the chief guest Prof. Abid Haleem, from Jamia Millia Islamia. Thereafter three technical sessions were conducted for five days by different experts.





## Industrial visits of students:





## Student Activities:

- The Galgotias SAE collegiate club team Zyklus, designed and fabricated a three wheel configuration vehicle powered by human-electric hybrid power which is capable of seating two passengers serving the purpose of day to day mobility needs.
- The students participated in Efficycle-2019 and won an award of Rs 10,000/-, as runner up in build quality.



## Faculty Research Publications:

### Journals:

- Shrivastava Y, Singh B. Online monitoring of tool chatter in turning based on ensemble empirical mode decomposition and Teager Filter. Transactions of the Institute of Measurement and Control. 2019 Nov 27:0142331219885511.
- Shrivastava PK, Singh B, Shrivastava Y, Pandey AK, Nandan D. Investigation of optimal process parameters for laser cutting of Inconel-718 sheet. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science. 2019 Dec 25:0954406219895533.
- Raj Kumar, Yogesh Shrivastava, Dalvir Singh, Thermal Effect Over Fibre Laminated Composite Plate. JUET Research Journal of Science & Technology, Article in press, 2019
- P. K. Shrivastava, B. Singh and Y. Shrivastava, Experimental Investigation of Dimensional Accuracy During Micro-Machining of Inconel-718 Sheet. JUET Research Journal of Science & Technology, Article in press, 2019.

### Conference:

- Prashant Kaduba Kedare, SA Khan and Harish Kumar, 3D Printer Nozzle Design and Its Parameters: A systematic review. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Akhileshwar Nirala, S. Soren, Navneet Kumar, D.R. Kaushal, A comprehensive review on mechanical properties of Al-B4C stir casting fabricated composite, International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Akhileshwar Nirala, S. Soren, N. Kumar, V.K. Dwivedi, D.R. Kaushal, A comprehensive review on stir cast Al-SiC composite. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Qummare Azam, Nurul Musfirah Mazlan, Md Ozair Arshad, Ayub Ahmed Janvekar, Ahmed M. Alhaj, A study on aviation fuels measuring spray quality. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- N. Kumar, K. P. Singh, V.K. Dwivedi, J.K Yadav, Sudhir Kumar and Navin Kumar, A Study on Coal Ash Slurry Flow at Higher Solid Concentrations in Pipeline. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Ummed Singh, M.K Lohumi and Harish Kumar, Additive Manufacturing in Wind Energy Systems: A Review. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Shailendra Pratap Singh, Dr. Subrata Kumar Ghosh and Prof. Vijay Kumar Dwivedi, An AHP (Analytic Hierarchy Process)-based multi-criteria evaluation and priority analysis for best FWH substitution of solar-thermal power plant. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Etkaf Hasan Khan, Eram Neha, Mohd Atif Wahid, Islam Nawaz, G. N. Tiwari, Analysis of performance parameters of Active Solar Still. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Sudhanshu Sharma, V. K. Dwivedi and A. K. Sethi, Design Optimization of Double-stage Thermoelectric Refrigerator. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- A.K. Sethi, Studies on hard surfacing of structural steel by gas thermal spraying process, International Conference on Mechanical and Energy Technologies, ICMET 2019.
- P K Arora, Abid Haleem, Harish Kumar, S A Khan, Recent development in virtual cellular manufacturing system. Lecture Notes in mechanical Engg, 2019.

- P. Joshi, A. Sharma, V. Singh, Empirical Modelling of Kerf Characteristics in Laser Profile Cutting of Ni-Superalloy. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Gopal Nandan, Nafees A. Wani, Ravi Kant, P. K. Rohatgi, Naveen Kumar, Eutectics Usage to Enhance the Efficiency of the Solar Photovoltaic Modules. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Desh Bandhu Singh, Gagan Bansal, Jeetendra Kumar Yadav, Navneet Kumar & Manohar Singh, Exergoeconomic and Enviroeconomic Analyses of Double Slope Solar Desalination Unit Loaded With/Without Nanofluid: A Comparative Study. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Rohit Tripathi, Deepak Sharma, Nitin K. Gupta, G. N. Tiwari, T. S. Bhatti, V. K. Dwivedi, Experimental validation for electrical, thermal and overall energy generation from open low concentration ratio based photovoltaic hybrid collector. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Devendra Yadav, Simbal Pal, Saddam Quraishi, and Mohammad Farhan, Heat pipe fabrication and performance evaluation for different coolants. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Ankit Jain, Ashwani Kumar Yadav, Yogesh Shrivastava, Modelling and optimization of different quality characteristics in electric discharge drilling of titanium alloy sheet. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Akshay Jain, Bhagat Singh, Yogesh Shrivastava, Identification of safe machining range for laser drilling of basalt-glass hybrid composite using Artificial Neural Network, International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Ranjan Arora, Abid Haleem, P.K. Arora, Impact of IoT enabled Supply Chain- A systematic literature review. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Manish Sanserwal, Ashok Kumar Singh, Puspendra Singh, Impact of materials and economic analysis of single slope single basin passive solar still: A review. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Nidhi Gupta, Anil Kumar Shrivastava, and Prashant Rawat, Important parameters influencing Total Quality Management: A comparative study. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Akhileshwar Nirala, A. K. Richhariya, N. Kumar, V. K. Dwivedi and Manohar Singh, Modeling and Analysis of Composite Helical Com-pression Spring. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Sudhanshu Sharma, Amit Kumar Yadav, Akash Verma, Aditya Shankar, Manvendra singh, Performance Analysis of Vapour Compression Refrigeration System Using R-600a and R-134a. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Brijesh Singh, Manoj Kumar Lohumi and Manohar Singh, State of the art of Working of Indian Small Manufacturing Sectors: A Case Study. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- A. K. Sethi, V. K. Dwivedi, S. Sharma and A. K. Sharma, Thermal Modeling and Analysis of Double Slope Solar Still, International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Prabhat Dev M, Siddharth Jain, Harish Kumar, B.N. Tripathi and S A Khan, Various tuning and optimization techniques employed in PID controller: A review. International Conference on Mechanical and Energy Technologies, ICMET 2019.
- Ashok Kumar Singh, D.B. Singh, V.K. Dwivedi, G.N. Tiwari, A. Gupta, Water purification using solar still with/without nano-fluid: A review. International Conference on Mechanical and Energy Technologies, ICMET 2019.



## **Published Book/ Book Chapter:**

- Singh A.K., Singh D.B., Kumar N., Dwivedi V.K., Singh G., Kumar R., Basin-Type Solar Distiller Associated with PVT Collectors—A Comprehensive Review. Lecture Notes in Civil Engineering 36, pp. 253-260, 2020.
- Kumar N., Singh D.B., Kaushal D.R., Sharma S.K., Singh G., Singh A.K., Solid-Liquid Flow at Higher Concentration Through Bend. Lecture Notes in Civil Engineering 36, pp. 241-252, 2020.
- Singh D.B., Singh A.K., Navneet K., Dwivedi V.K., Yadav J.K., Singh G., Performance analysis of special design single basin passive solar distillation systems: A comprehensive review. Lecture Notes in Mechanical Engineering, pp. 301-310, 2019.
- Dharamveer, Samsher, Singh D.B., Singh A.K., Kumar N., Solar distiller unit loaded with nanofluid—A short review. Lecture Notes in Mechanical Engineering, pp. 241-247, 2019.

## **Faculty Achievements:**

### **FDPs Attended**

1. Mr. Devendra Yadav, attended five days Faculty Development Programme (FDP) on “Product Realization using 3D Printing” during 28/09/2019 to 02/10/2019 organized by Centre for Continuing Education (CCE), IIT Kanpur.
2. Mr. Najeeb Ullah Khan, attended five days Faculty Development Programme (FDP) on “Additive Manufacturing Applications” during 04/11/2019 to 08/11/2019 organized by Department of Mechanical Engineering, JMI, New Delhi.
3. Mr. Md. Ozair Arshad, attended five days Faculty Development Programme (FDP) on “Additive Manufacturing Applications” during 04/11/2019 to 08/11/2019 organized by Department of Mechanical Engineering, JMI, New Delhi.
4. Mr. Rajkumar, attended five days Faculty Development Programme (FDP) on “Advancements on I. C. Engines” during 03/12/2019 to 14/12/2019 organized by Department of Mechanical Engineering, IEC Group of Institutions Greater Noida.
5. Mr. Brijesh Verma, attended five days Faculty Development Programme (FDP) on “Manufacturing Perocess” during 21/10/2019 to 25/10/2019 organized by Centre for Continuing Education (CCE), IIT Kanpur.

### **NPTEL Courses**

1. Mr. Haridwar Prasad Successfully completed the course on “Accreditation and Outcome Based Learning”.
2. Mr. Vivek Singh Successfully completed the course on “Accreditation and Outcome Based Learning”.
3. Mr. Ashish Dewangan Successfully completed the course on “Accreditation and Outcome Based Learning”.
4. Ashish Kumar Successfully completed the course on “Accreditation and Outcome Based Learning”.

# Campus Placement: (Session: 2019-20)

S.No.	Student Name	Roll No.	Company Name	Package
1	Abhishek Sharma	1609740004	Byjus	1000000
2	Aman Tiwari	1609740014	Byjus	1000000
3	Abhishek Sharma	1609740004	Cognizant	400000
4	Anurag Singh	1609740024	Cognizant	400000
5	Christopher James	1609740033	Cognizant	400000
6	Jitendra Kushwaha	1609740047	Cognizant	400000
7	Nomesh Kumar Dixit	1609740072	Cognizant	400000
8	Saurabh Kuntal	1609740096	Cognizant	400000
9	Syed Twaha Irfan Ahmad	1609740117	Cognizant	400000
10	Vikas Chaurasia	1609740120	Cognizant	400000
11	Aditya Kumar	1609740008	Dorset	326003
12	Fahad	1609740508	Dorset	326003
13	Vishal Singh Bisht	1609740123	Dorset	326003
14	Navneet Kumar	1609740067	DTDC	240000
15	Nitesh Maddheshiya	1609740071	DTDC	240000
16	Piyush Chaurasia	1609740077	DTDC	240000
17	Sandeep Yadav	1609740095	DTDC	240000
18	Shubham Jaiswal	1609740109	DTDC	240000
19	Ashutosh Dwivedi	1609740027	Hike Education	438000
20	Abhishek Tiwari	1609740005	Infosys	400000
21	Adarsh Srivastav	1609740007	Infosys	400000
22	Aditya Singh Tomar	1609740010	Infosys	400000
23	Ankit Singh	1609740022	Infosys	400000
24	Christopher James	1609740033	Infosys	400000
25	Nomesh Kumar Dixit	1609740072	Infosys	400000
26	Vikas Chaurasia	1609740120	Infosys	400000
27	Syed Twaha	1609740117	Oppo Mobile	441600
28	Abhishek Sharma	1609740004	TCS	336000
29	Anurag Singh	1609740024	TCS	336000
30	Nomesh Kumar Dixit	1609740072	TCS	336000
31	Pushpendra Pal	1609740083	TCS	336000
32	Syed Twaha Irfan Ahmad	1609740117	TCS	336000
33	Vikas Chaurasia	1609740120	TCS	336000
34	Aditya Kumar	1609740008	Vivo	360000
35	Akash Kashyap	1609740012	Vivo	360000
36	Navneet Kumar	1609740067	Vivo	360000
37	Rohan Prakash Yadav	1609740089	Vivo	360000
38	Shubham Patel	1609740110	Vivo	360000
39	Tushar Varshney	1709740921	Vivo	360000
40	Vivek Dixit	1609740124	Vivo	360000
41	Ankit Singh	1609740022	Wipro	350000
42	Nishant Yadav	1609740070	Wipro	350000
43	Mangal Kant Singh	1609740056	Zep Infratech Ltd.	180000
44	Somnath Adhikari	1709740919	Zep Infratech Ltd.	180000
45	Abhishek Pandey	1609740003	Accenture	-
46	Nomesh Kumar Dixit	1609740072	Accenture	-
47	Rohan Prakash Yadav	1609740089	Accenture	-
48	Rupak Tyagi	1609740092	Accenture	-
49	Vikas Chaurasia	1609740120	Accenture	-
50	Vivek Dixit	1609740124	Accenture	-











**GALGOTIAS**  
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