



MECHATROMA

A Quarterly Publication of
Department of Mechanical Engineering
Volume IV Issue 3 January – March 2021



From Editor's Desk

Dear Readers,

It is my pleasure and great privilege to present you the Newsletter of the Department of Mechanical Engineering. This is an attempt to update the faculty and students with the current happenings in the department. I am glad to see that the faculty-student community of the department is striving for greater heights and achievements.

The Department of Mechanical Engineering, established in 2005 having an intake of 120 seats, offers B. Tech course. The department emphasizes a deep understanding of fundamental principles and knowledge of Manufacturing Technology, Design, Thermal and Industrial Engineering.

Finally, I wish all the best to all students, staff and faculty members of the department, and hope that this issue of the departmental newsletter will encourage them to keep doing the good work.

Sincerely,

Prof. (Dr) Peeyush Vats

Chief Editor & HOD

Dept. of Mechanical Engineering



"QUOTE FOR THE QUARTERLY"

"The ideas of control and improvement are often confused with one another. That is because quality control and quality improvement are inseparable."

(Ishihara)

Department of Mechanical Engineering

In the modern world, Mechanical Engineering is centre of many activities leading to industrial and business growth. Mechanical Engineering is concerned with all types of machinery in industries and all aspects of their mechanism and functioning - the design, development, construction, production, installation, operation and maintenance. Mechanical engineering course provides the core knowledge of careers in these areas. They are the driving force behind many of our technologies and industrial processes. Mechanical engineers are involved in creating the future. It is also the basis on which other branches of engineering are dependent. Mechanical Engineers are expected to apply basic concepts from physics, chemistry, chemical engineering, electrical engineering, electronics and civil engineering. The benefit of this fundamental role is that the wide coverage of the subjects in Mechanical Engineering provides a wide choice of career options in industries as diverse as heavy engineering, power plants, steel plants, oil and petroleum, chemical, food, pharmaceutical, environmental protection and energy conservation.

Covid-19 did not only affect the academic of our institution but also caused major lapse in our placement this year, but still we, at IIMT campus, conducted virtual drives and managed to get remarkable placements altogether. The college conducted many virtual placements drives for the IIMT students for different branches and some of our students also got placed in reputed multi-national's companies. The placement activities run in the campus throughout the year.

IIC Activities

Institution's Innovation Council (IIC) of India has established 'MoE's Innovation Cell (MIC)' to systematically foster the culture of Innovation amongst all Higher Education Institutions (HEIs). It is a great initiative to empower students as well as faculty members. It provides exclusive opportunities to participate in various Innovation related initiatives and competitions organized by MHRD. It gives prospects to student entrepreneurs and innovators to go for start-up, innovation and entrepreneurship. The Mechanical Engineering Department is also responsible to organize various activities in collaboration with IIC-IIMT for the awareness about the skill development, innovation and start-up activities from time to time.

Major focus of IIC:

To create a vibrant local innovation ecosystem.

Start-up supporting Mechanism.

Prepare institute for Atal Ranking of Institutions on Innovation Achievements Framework.

Establish Function Ecosystem for Scouting Ideas and Pre-incubation of Ideas.

Develop better Cognitive Ability for Technology Students.

Functions of IICs:

To conduct various innovation and entrepreneurship-related activities prescribed by Central MIC in time bound fashion.

Identify and reward innovations and share success stories.

Organize periodic workshops/ seminars/ interactions with entrepreneurs, investors, professionals and create a mentor pool for student innovators.

Network with peers and national entrepreneurship development organizations.

Mechanical Engineering

It is the oldest and evergreen branch of engineering. Even we can see the examples of Mechanical Engineering in the old age era. Mechanical Engineering has contributed to several innovations. It has a wide range of different areas. Generally, the Mechanical Engineering can be divided into four main categories like production, design, thermal and industrial engineering. But the scope of Mechanical Engineering is not limited to the above areas. It has the basic concepts of thermal engineering, energy system, refrigeration and air conditioning, fluid mechanics and machinery, internal combustion engines, powerplant engineering, heat and mass transfer, basic concepts of theory of machines, strength of materials, engineering mechanics, machine design, production technology, manufacturing science, industrial engineering and operations management etc. The most attracting area of mechanical engineering students is automobile engineering. They can also go for higher studies. All IITs are offering Masters where students will also get handsome stipend. So far private sector is concerned, there is wide variety of offers from MSME to MNCs. Taking the employment opportunities in account, Indian Government is offering or promoting this sector extensively. Now realizing the potential as well as youth employment problem, government is focusing extensively on MSME. Indian government is also planning two defense corridors, one in Chennai

Various courses after B Tech ME

A list of various popular job-oriented courses has been presented here:

- M.Tech. in various field of Mechanical engineering from Various, IITs, NITs and other institutes.
- MBA from various reputed business schools like IIMs and others
- Masters in tool design
- Robotic courses
- Various CAD/CAM/CAE courses
- Courses related to mechatronics
- Various courses on measurement and metrology
- Various courses related to metal casting, metallurgy
- Piping Design and Engineering Course
- Courses related to nano-technology

There are unlimited opportunities of different career-oriented courses after B Tech Mechanical. The scope is not only limited to the above courses, there are so many options which a student can opt after completing his graduation from mechanical engineering.

NAAC Accreditation

NAAC accreditation is compulsory for all university and college which are affiliated to UGC and AICTE of central and state university. If any university or college is not accredited to the NAAC then that university or institute is not eligible for any government funding for project, workshop, seminar, student's scholarship of various scheme. NAAC accreditation process determines the best education policies which is followed by respected institute and university. All the UGC affiliated and AICTE approved institute are eligible to apply NAAC accreditation. NAAC grade is given based on some certain parameters which are must be followed by institute/college.

Student's Corner

On Demand Webinar "Data Science and A.I. Application"

A webinar was conducted by the Department of Mechanical Engineering of IIMT college of Engineering for the students of Mechanical engineering on 04-01-2021 from 11:00 AM to 12 PM on the topic "Data Science and AI Applications" in co-ordination with ISIE, India. This webinar was focused on the applications of AI and data science in the area of Mechanical Engineering. The main speaker of this event was Mr. Aditya Kaki who is AI and Data Science expert in ISIE India. Students showed keen interest in this event. In this Data Science vs Artificial Intelligence, we got to know the two terms used interchangeably. Artificial Intelligence is a broad domain that is still largely unexplored. Data Science is a field that makes use of AI to generate predictions but also focuses on transforming data for analysis and visualizations. Data Science performs analysis of data. Artificial Intelligence is a tool for creating better products and imparting them with autonomy. Various roles and requirements were also highlighted along with the key differences between Artificial Intelligence and Data Science. For example, several companies require pure AI positions like Deep Learning Scientist, Machine Learning Engineer, NLP Scientist etc. A Data Scientist is responsible for extracting data using SQL and NoSQL queries, cleaning various anomalies in the data, analyzing the patterns in data and applying predictive models to generate future insights.



Student's Achievements

One of our student Ajay Pratap Singh got selected in Topper Technologies at a package of 12.0 LPA. Also, one of our students Rishabh Saxena bagged a package of 9.60 LPA at Chegg India and numbers are still counting.

Student's Participation in various activities



Recent trends in Mechanical Engineering

A substantial digital revolution is taking place all over the world. Innovation, agility, and market development are all accelerated by technological advancements. The Covid-19 pandemic accelerated digitization and automation, allowing companies to remain resilient even in adversity. Many businesses adopted disruptive technologies and modified their business models. The pandemic's effect will be felt for a long time, and the digital transition will continue. If businesses do not keep up with technological trends, it will be challenging to overcome the error. Advanced technology will continue to change our lives and the way we operate, opening up enormous opportunities for businesses worldwide.

Let's look at some technology developments so that everyone knows what to look for, adopt, and take with them.

1. Artificial Intelligence (AI)
2. Robotics
3. Automation
4. Industry 4.0
5. Additive Manufacturing
6. CAD/CAM/CAE
7. Non-Traditional manufacturing methods
8. Application of IoT in manufacturing
9. Computational fluid dynamics
10. Nano Materials and Nano Technology
11. Non-Conventional Energy Resources

In the year 2021, these would be the top technology developments we should all be aware of. We have already figured out that all of these tech trends connect in some way. As a result, we won't have to think about which tech trend is right for you because learning about these advancements would broaden our awareness and give us an advantage over the competition. Understanding these technological developments would undoubtedly provide us with more excellent career and business prospects.

Important numbers for student support

Sr. No.	Designation	Contact Details
Dr Gaurav Sinha	Director	9999071321
Dr S N Mishra	DSW	9971606088
Dr Peeyush Vats	HOD	9829745834
Dr Deepak Sharma	Chief proctor	8218440994

Editorial Board

Chief Editor: Prof. (Dr) Peeyush Vats,

(HOD Dept. of Mechanical Engineering)

Student Editors: Pankaj Rathore, Amir Ali Khan, Rohit Verma

(ME-3A)