

Quarterly Newsletter

**Department of Mechanical Engineering,
F.E.T M.J.P Rohilkhand University, Bareilly**



The Department of Mechanical Engineering was established in 1996, with the aim of providing quality education in the field of Engineering and Technology. The Institute is a constituent part of the M.J.P. Rohilkhand University, Bareilly.

The Institute is running a four year regular B.Tech course in Mechanical Engineering. This program provides a broad-based education with a concentration on fundamentals and basic laws as the major tools required for the professional practice in the field of mechanical engineering. Graduates are expected to have the ability to work professionally, as individuals and in teams, in both the thermal and mechanical systems areas, including the design, manufacture and control of such systems. Moreover, they are expected to understand the ethical, legal, and societal implications of their work, as per the design of syllabus.

VISION- MISSION

Vision of the Department:

To provide Top Quality Education in Mechanical Engineering to prepare graduates to Practice their profession competently to meet the ever-changing needs of the Society.

Mission of the Department:

1. Imparting quality Education to the students and enhancing their skills to make them globally competitive Mechanical Engineer who are second to none as far as their professional skill and academic intellect is concerned
2. Maintaining vital, well maintained laboratories to provide its students and faculty with opportunities to create interpret, apply and disseminate knowledge.
3. Conducting workshops, webinars, and expert lectures to develop ethical values in our graduates towards their profession and understand their responsibilities towards society.

PEO:

1. The graduates shall practice their profession competently in the field of Mechanical Engineering and allied fields.
2. Graduates shall meet the ever-changing needs of society.
3. Graduates shall continue their learning through updating their knowledge.

MESSAGE FROM HEAD OF DEPARTMENT

Welcome to the Department of Mechanical Engineering at FET MJP Rohilkhand University, Bareilly. We started our journey in the year of 1996. Over the last two decades, we have grown our expertise and competence in the core Mechanical Engineering curriculum and research. Mechanical engineering is one of the oldest and broadest engineering discipline, and plays a significant role in enhancing safety, economic vitality, enjoyment and overall quality of life throughout the world. A prerequisite for development is growth and that is directly related to production or output of a country.

Our department has a team of highly qualified and experienced faculty, good infra structure and lab facilities. We are striving hard continuously to improve upon the quality of education and to maintain its position of leadership in engineering and technology. We always work with the motto "Nothing can be achieved without genuine effort." The core values of the department help the students to develop their overall personality and make them worthy to compete and work at global level.



International Conference

Department of Mechanical Engineering organized 5th International Conference on Academic Research in Engineering, Management and Information and Technology (ICAREMIT 2020) on 1 - 3 February 2020.

3rd INTERNATIONAL MULTI - CONFERENCE
on
"ACADEMIC RESEARCH IN ENGINEERING,
MANAGEMENT AND INFORMATION TECHNOLOGY"
(ICAREMIT-2020)
in association with
BMS College of Engineering, Bangalore
February 01 – 03, 2020



Organized By



Department of Mechanical Engineering
M. J. P. Rohilkhand University Bareilly - 243006
Uttar Pradesh, India

About Conference

The third International conference (ICAREMIT-2020) is being organized to bring together the researchers, scientists, academicians and industrialists in major areas of Engineering, Management and Information Technology needed for economic development of the country. The participants can share their experiences and research results about all aspect engineering and also to discuss the practical challenges encountered and the solutions adopted. The Conference covers a wide range of topics. The Departments of Mechanical Engineering invite research papers from all over the India to participate in the "3rd INTERNATIONAL MULTI- CONFERENCE ON ACADEMIC RESEARCH IN ENGINEERING, MANAGEMENT AND INFORMATION TECHNOLOGY (ICAREMIT-2020)" on the following scientific areas for presentations but are not limited to:

Engineering

- Electrical Engineering
- Electronics Engineering
- Instrumentation Engineering
- Industrial Engineering
- Mechanical Engineering
- Environmental Engineering
- Nano-Technology
- Material Science
- Genetic Engineering
- Materials and Metallurgical Engineering
- Chemical Engineering
- Engineering Economics
- Other Engineering Related Topics

International Education

- Accreditation and Quality Assurance
- Aligning Institutional Strategies with Emerging Trends
- Curriculum, Research and Development
- Framework for Developing Cultural and Global Competencies
- Pedagogy
- Inclusive Education and Practice
- Building and Retaining a More Diverse Community of Students
- Global Issues in Education and Research
- Effective, Sustainable, and Pervasive Global Agreements
- Business Education
- International Higher Education's: Bridging Research and Practice
- Learning/Teaching Methodologies and Assessment
- Strategies for Enhancing Campus Inclusion

Management

- Organizations Management
- Technology Management
- Production and Operations Management
- Project and Quality Management
- Supply Chain Management
- Decision Sciences
- Risk Analysis
- Contract Management
- Knowledge Management
- R&D Strategies
- Social Issues in Management
- Sustainable Development
- Ethics in Business, Government and NGOs
- Conceptual and Theoretical Aspects of Management
- Management in Emerging Economies
- Small Scale Business Management
- Emerging Sectors
- Competitiveness
- Leadership
- Any other related areas pertaining to any issue which is related to management aspects.

Information Technology

- Business Intelligence
- Cloud Computing
- Artificial Intelligence
- Machine Learning
- Signal Processing
- Communication Technologies
- Communications and Networking
- Computational Science and Technology
- Cyber Security
- Data Base Management
- E-commerce
- E-governance
- Information Technology Management
- Innovation Management
- Information Systems
- Media Regulation and Policy
- Information Security
- Social Media
- Software Engineering
- Wireless Communication and Mobile Computing
- Smart cities
- Other related topics

Research Project

Department of Mechanical Engineering has received grant of Rs. 3469000/- for four research project fund from National Project Implementation Unit/MHRD and Uttar Pradesh Department of Higher Education.

Year	Name of Project	Funding Agency	Amount	Duration	
				From	Till
2019 PI – Mr. Anurag Maheswari	Development of Solar Powered Thermoelectric Cooler Using Desiccant Dehumidification	NPIU/MHRD	971000/-	18-06-2019	31-03-2021
2019 PI – Dr. Niraj Kumar	Hybrid Solar air Heater for Space Heating and Crop Drying	NPIU/MHRD	1261000/-	18-06-2019	31-03-2021
2019 PI – Mr. Vineet Singh	Solar Pump Irrigation Based on PV Cell Technology	NPIU/MHRD	967000/-	18-06-2019	31-03-2021
2021 PI – Dr. T.U. Siddiqui	Environmental friendly machining of Ti6A 14 V aerospace grade alloy using vegetable oil based Nano lubrication	UPHED	270000/-	30-03-2021	-----

NEW INFRASTRUCTURE

Department of Mechanical Engineering has developed new infrastructure for the faculty and students. (1. SOLAR LAB, SMART CLASS, COMPUTER LAB & IE LAB)



Induction Program

FET MJPRU made a noble attempt by organizing a mandatory three week Induction Program (25th July to 15th August 2019) to help its first year students cope better with the University Education. In this program, Experts from BMS College of Engineering, Bangalore have visited our institute and provided valuable insights on the syllabus the students would be studying for the next two semester.

- Experts from various Industries shared their experiential knowledge with students to motivate them and ignite the desire to fare well. This program provided opportunities for students to participate in various competitions like Singing, Dancing, Painting, Speech Competition, sports activities and many more.

The Mechanical Engineering students out performed in various activities organized in the Induction Program.



Workshop on Virtual labs

- On 6 June 2020, MJP Rohilkhand University **organized** a webinar on Virtual labs.
- During 8 to 15 June 2020, MJP Rohilkhand University in association with IIT Roorkee **organized** Eight day Workshop on “Performing and Designing Experiment on Virtual Platforms”.



An MHRD Govt of India Initiative

VISHWAKARMA PUJA

Vishwakarma Puja was celebrated in Department of **Mechanical Engineering** on 16th September, 2020 to pay obeisance to Lord Vishwakarma who is regarded as God of Architecture and Engineering. Vishwakarma is known as the Divine Engineer since the Puranic Age. As a mark of reverence Lord Vishwakarma is not only worshiped by the engineering community but also by all other professionals.



Fresher's Party

In line with past tradition, the department celebrated their fresher's party every year.

Fresher's party is a gracious and a cordial welcome by the second year students to the first year students. It is an event where fresher's are not only given a chance to exhibit their talents but also feel comfortable and adapt to the new surroundings.



Teacher's Day

We celebrate Teachers' day every year throughout the country on 5th September. Students express their gratitude and appreciation for their teachers on this day. This day is dedicated to Dr. Sarvepalli Radhakrishnan – second President of India. The great academic philosopher, and one of the most well-known diplomats, scholar, President of India and above all a teacher.



Industrial Visit

The Department of Mechanical Engineering organized an industrial visit to IFFCO, Aonla for B. Tech second year students. The students had an interactive session with the HR Head who explained them about the products and their production processes. After the interaction with the HR head, the students visited the plant.. Further, they visited testing and quality control department. They got the information about the testing and quality standard of the company. The coordinators of the industrial visit Dr. T.U. Siddiqui and Mr. Munendra Pal Singh were present along with the students.



Publications

Department of Mechanical Engineering has published various research papers in quality journals on different streams of mechanical engineering.

Papers Published				
Year of Publication	Title	Application No.	ISSN No	Impact Factor
2018	Comparative assessment of performance and emission characteristics of a C.I. engine using biodiesel and Gtl (gas to liquid) fuel	International journal of Engineering and Technology	2227-524X	0.21
2019	Experimental investigation of solar room heater for commercial purpose	International journal of Engineering and Technology	2227-524X	0.21
2019	Influence of supply chain management on production cost and productivity-A case study	International journal of Engineering and Technology	2227-524X	0.21
2019	Numerical simulation of flow past a flat plate with anti-singing trailing edge	IOP Conference Series: Material Science and Engineering	17578981, 1757899X	0.2
2019	Experimental investigation for rheological characteristics of TiO ₂ nanoparticles doped diesel, biodiesel fuel blends for use in compression ignition engine	IOP Conference Series: Material Science and Engineering	17578981, 1757899X	0.2

Publication	Title of book/chapter	Name of publisher	Year	ISBN
National	Optimisation of Process Parameters for Abrasive Water Jet Machining of Kevlar-Epoxy Composites Using Taguchi Method and Response Surface Methodology	Universities press, Hyderabad	2012	978-81-7371-755-0
National	State-of-the art review of research and development in Abrasive water jet machining of Advanced fiber-reinforced composites	Allied publisher, New Delhi	2011	978-81-8424-706-0
International	Modeling and Optimization of Abrasive Water Jet Cutting of Kevlar Fiber-Reinforced Polymer Composites	IGI Global, USA	2012	978-14-6660-128-4
National	Abrasive Waterjet Machining of Fibre-Reinforced Polymer Composites: Experimental Studies, Modeling and Multi-Objective Optimization	Mahi Publication, Gujarat	2020	978-93-8933-984-0

Year of Publication	Title	Name of Journal	DOI	Citations	Impact Factor
2017	Combustion and stability aspects of metal nanoparticles and its additive effect on diesel and biodiesel fuelled C.I. engine.	Renewable and sustainable energy/(RSER) (Elsevier)	Doi.org/10.1016/j.rser.2016.11.067	128	12.11
2018	Biodiesel synthesis from Acacia-Concinna seed oil. A comprehensive study.	Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, (Taylor and Francis)	Doi.org/10.1080/015567036.2018.1486912	01	1.34
2019	Multi-objective optimization of modified nanofluid fuel blends at different TiO ₂ nanoparticle concentration in diesel engine: Experimental assessment and Modeling.	Applied Energy (Elsevier)	Doi.org/10.1016/j.apenergy.2019.04.091	14	8.848
2020	RSM/DFA computation approach for optimization and modeling of CI engine performance and emission characteristics fuelled with preheated fuel blend modified with TiO ₂ nanomaterial	Materials Today: Proceedings (Elsevier)	Doi.org/10.1016/j.matpr.2020.07.421	---	0.97

TECHNOLOGY AIDED TEACHING

- Implemented the concept of flipped Classroom to improve the efficiency of student learning.
- Managed teaching & learning process through Google Classroom
- Organised online live interactive sessions (Google meet, Webex etc.)
- Created video lecture using open source software like OBS & Shared them on free video hosting platforms like Youtube.

