

**One week
Workshop on
“Advancement in Renewable Energy, Design
and Manufacturing”**

30th October – 03rd November, 2023
Under NEP-2020
(Hybrid Mode)



Organized by
**Department of Mechanical Engineering,
National Institute of Technology
Manipur, Imphal, India 795004**
Website: www.nitmanipur.ac.in.

Chief Patron:

Prof. (Dr.) Kh. Manglen Singh,
(Director i/c, NIT Manipur)

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Registrar, NIT Manipur

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COORDINATOR:

Dr. Anil Kumar Birru
Dr. Sabindra Kachhap
Dr. H. Neeranjan Singh

CONVENOR:

Dr. Prabhat Kumar
Dr. Th. Subhaschandra Singh
Dr. Kh. Nimo Singh
Dr. Ashutosh Kumar Singh

INSTITUTE DETAILS

National Institute of Technology Manipur, a centrally funded institution is set up to impart quality technical education at various levels of higher learning. It is only 06 km away from Imphal International Airport which is well connected with rest of the country. It is one of the ten new NITs established and developed as Institute of National Importance. The functioning of the institute was started at its temporary Campus at Takyelpat, Imphal under the mentorship of NIT, Agartala. The Institute has acquired 341 hectares of land in the lush green areas of Langol, Imphal. It was declared as Institute of National Importance in 2012. The institute is governed by the NIT Act 2007 and its Statutes under the overall guidance of the Board of Governors. The institute is offering five core Engineering departments viz. Computer Science & Engineering, Electrical Engineering, Electronics and Communication Engineering, Civil Engineering and Mechanical Engineering. In addition the institute offers M.Sc. Programmes in Physics, Chemistry and Mathematics. Opened courses on B. Tech., M. Tech., M. Sc. and Ph.D. Admission to this Institute are through Joint Entrance Examination (JEE) Mains, All India Central Counselling CCMT and CCMN respectively.

About the Department

With the aim of catering to the need of the nation in the field of technological advancement, the Department of Mechanical Engineering was established in the year 2013. Our department is committed to the development of humankind through scientific and intellectual knowledge. Through reformist mixing of various culture, race and ethnicity, we seek to develop a state of

art learning environment for our Undergraduate, Postgraduate and PhD scholars. We enjoy the company of highly qualified faculties and state of the art laboratories to foster the need of 150 B.Tech. Students, 20 M.Tech. Scholars and PhD researchers. Several government agencies have sponsored various projects at our department enhancing the academic and research capabilities of our associates. Over the years we have developed a world-class infrastructure for the study of Thermal Fluid Science, Manufacturing Science, and Design Engineering. We warmly invite any query and thank you for visiting us.

Vision:

Committed to the cause of Value Based Education in Mechanical Engineering, envisions itself as a fountain head of innovative human enterprise, with inspiration initiatives for Academic Excellence

Mission:

To impart quality education in the field of Mechanical Engineering by inculcating values in students which will sensitize them to serve the needs of the industry and society by aiding in its overall progress and development by keeping dynamic equilibrium with its social, ecological and economic environment

Advisory Committee

All Faculty Members, Department of Mechanical Engineering, NIT, Manipur

Resource Persons:

Lectures will be delivered in Hybrid mode by the faculty members from IITs, NITs and other reputed institutes. The faculty development program (FDP) has added provisions for distinguished speakers from various Industries and also from research laboratory.

About the workshop

The basic and advanced concepts related to the advancement of renewable energy, machining and machine design will be addressed in this one week workshop “Renewable Energy, Design and Manufacturing”. Traditional technology may be unable to solve emerging environmental concerns such as outdated energy policies, resource overuse, climate change, global warming, and deforestation. Advances in science and technology.

The course will also provide an advanced intuition about the complex methods and processes for extraction of energy from wastes and various approaches towards achieving sustainable energy production.

Numerical simulation is a powerful tool to solve scientific and engineering problems. It plays an important role in many aspects of fundamental research and engineering applications, for example, vibration analysis of beams, optimization of processes, and online control of manufacturing.

One week workshop is an honest endeavor to cover various facets of modern manufacturing. It starts with deeper discussion on engineering materials with special emphasis on metal matrix and smart material. Machining processes starting with basic conventional machining practices to the more nascent hybrid machining are included. The course is also replete with various micro-fabrication technologies which are to be discussed by eminent resource persons. Special emphasis has also been laid on assembling and packaging technologies, storage technologies and material handling equipment. Modern and smart manufacturing practices are also to be discussed by eminent experts. This section discusses

emerging green technologies which will propel our economy within the near future.

Contents to be covered:

- Advancement in Casting
- Advancement in Machining
- Non-Traditional Machining
- Advancement in Vibration and Rotor-Dynamics
- Processing of Green Composites
- Processing of Nano Composites
- Renewable Sources of Energy
- Bio Materials
- Green Technology
- Alternate Fuels
- Biodiesel Production and Characterization
- Wind Turbine
- Electric Vehicle

Contact Details:

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Who Should Attend?

- Faculty members/ Research Scholars/PG/UG Students from all the disciplines.
- Participants from Industry and research institutions.

➤ Registration:

Research Scholar/ PG/ UG	Rs 100/-
Academician/ Faculty members	Rs 200/-
Industry and research institutions	Rs. 300/-

Programme will be delivered through **Hybrid mode**.

Bank Details:-

Name of Account: **Director NIT Manipur IRG**
Account No: **60330100000143**
IFSC Code: **BARB0NITMAN**
Bank Name: **Bank of Borada**
Branch: **NIT Manipur Campus**

Google form:-

<https://forms.gle/Xj6BLbYxn8UwSqAV7>

