AICTE TRAINING AND LEARNING (ATAL) ACADEMY

FDP

Processing of Novel Materials

September 20-24, 2021

Sponsored By

Organized By

MECHANICAL ENGINEERING DEPARTMENT

IIT (BHU), VARANASI

Scope of the Program

Rapid technological advancement after Second World War has led to the development of ultra-hard, high-strength, high-temperature-resistant, difficult-to-machine materials (*in short, novel materials*) for their increasing demand in technological advanced industries like aerospace, automotive, marine, power plants, missile, and turbine industries. Producing complicated geometries, least metallurgical transformations, and maintaining high dimensional accuracy in products made of such materials become extremely difficult with the conventional processing techniques. Understanding the behaviour of these novel materials and development of newer concepts in processing techniques are the need of the hour.

The prime objective of this Faculty Development Program is to enrich the knowledge of participants in the emerging areas of novel materials and its processing techniques. Moreover, a platform will be provided to the participants to make the participant aware of cutting edge research going on in this field. Furthermore, participants will be able to apply these concepts in their research work and they can add it into their course curriculum.

Course Content

- Materials & Manufacturing: An Overview
- Aerospace, Marine, Armour and Bio-materials
- Composites: PMC, MMC & CMC
- Green Composites
- Primary and Secondary Processing of Composites
- Processing of Superalloys
- Processing of Metal Foam
- Nanomaterials: Properties & Applications
- Material Characterization
- 3D Printing

About Institute

Established in 1919, The Indian Institute of Technology (Banaras Hindu University) owes its existence to the farsighted vision of its founder Mahamana Pandit Madan Mohan Malaviya. Initially, three engineering and technological institutions were established namely, BENCO in 1919, MINMET in 1923 and TECHNO in 1932. In 1968, BENCO, TECHNO and MINMET were merged to form Institute of Technology (IT-BHU). In 2012, it was designated as Indian Institute of Technology. Presently, IIT (BHU), Varanasi has 11 Engineering Departments, 03 Science Departments, 03 Inter-disciplinary Schools and 01 Department for Humanistic Studies. The Institute has maintained high academic standard since its inception. IIT (BHU), Varanasi has produced alumni who made a mark for themselves not only in the field of technology, but also in the field of business, politics, and arts.

About Department

The Mechanical Engineering Department came into existence in 1919 under the leadership of Professor Charles A King the first Head of the Department and Principal of the erstwhile Banaras Engineering College (BENCO).

In the last 100 years of its existence, the department has grown four folds to become the largest department of IIT (BHU) offering regular undergraduate, postgraduate and doctoral degree programs in all major specializations.

REGISTRATION

- **Registration Fee: Nil**
- **Mode: Online**
- **Participants are advised to apply online at AICTE ATAL registration portal on or before 10th September, 2021.**
- **Number of participants is limited to 200 (first come first serve basis)**

TARGETED PARTICIPANTS

The faculty members of the AICTE approved institutions, Research scholars, PG Scholars, participants from Government, Industry (Bureaucrats/Technicians/Participants from Industry etc.)/School Teachers and staff of host institutions.

RESOURCE PERSONS

Distinguished faculty members from IITs, scientists from research institutes and professional from industries.

PATRON

Prof. P. K. Jain
Director, IIT (BHU)

CHAIRMAN

Prof. A. P. Harsha
Head, Mech. Engg. Dept., IIT (BHU)

COORDINATOR

Dr. J. P. Misra
Assistant Professor, Mech. Engg. Dept., IIT (BHU)

Address for Correspondence

Dr. J. P. Misra
Assistant Professor
Mechanical Engineering Department
IIT (BHU), Varanasi
Email: jpmisra.mec@iitbhu.ac.in
Phone No. 0542-7165563/ 07206169697