

IMPORTANT DATES:

For External Participants:

Last date of Registration: December 16, 2023

Notification about Selection: December 16, 2023

Participants' Confirmation: December 17, 2023

ELIGIBILITY AND REGISTRATION

The faculty members of the AICTE approved institutions, Research scholars, PG Scholars, participants from Government, Industry (Bureaucrats/ Technicians/Participants from Industry etc.) **Min/Max Limit-** 30/50 participants from the Higher Education Institutions/ Industries.

GUIDELINES

- No participation/ registration fees.
- Each participants has to register online on AICTE-ATAL portal for joining the course.
- Session time will be from 09:30 AM to 5:30 PM.
- Eligible participants will be selected and approved.
- The certificates shall be issued to those participants who are registered on ATAL portal www.aicte-india.org/atal and attend the program with **minimum 80% attendance**.
- The evaluation of each participants may be done based on One assessment, 3-4 Page Article Summary/per Team' Project/ Live industry problem solving' Report/outcome of Industrial visit and Reflective journal - (Individual).
- It is compulsory for each participant to **fill the Feed-back form for getting certificate**.

ORGANIZING COMMITTEE

PATRON

Prof. Pulak M. Pandey
Director, BIET, Jhansi (UP)

CHAIRMAN:

Prof. N. P. Yadav
Professor & Head
Mechanical Engineering, BIET Jhansi (UP)

Coordinator

Dr. Arun Kumar Pandey
Associate Professor.
Mechanical Engineering, BIET Jhansi (UP)

Co-Coordinator

Dr. Vijay Verma
Associate Professor
Mechanical Engineering, BIET Jhansi (UP)

ADVISORY COMMITTEE

Prof. GK Singh, ASTU Adama, Ethiopia
Prof. K. Gupta, University of Johannesburg
Prof. M. Ghoreishi, KNT U, Iran
Prof. C. Z. Syn, Universiti Sains Malaysia
Prof. V. K. Jain, MANIT Bhopal
Prof. Anil Kumar Agrawal, IIT, BHU
Prof. J. Ram Kumar, IIT Kanpur
Prof. P. M. Pandey, IIT Delhi
Prof. Anand Parey, IIT, Indore
Prof. K.N. Pandey, MNNIT, Allahabad
Prof. A. K. Dubey, MNNIT, Allahabad
Dr. N. K. Jain, IIT Indore
Dr. Meghanshu Vashisth, IIT, BHU
Dr Pawan Sharma, IIT, BHU
Dr. B. N. Upadhyay, RRCAT Indore
Er. H. K. Singh, ISRO, Trivendrum
Dr. Ankur Gupta, Sc. E. ISRO, Bangalore



**One week Faculty Development
(FDP) Program (Off Line Mode)**

Under

**AICTE Training and Learning (ATAL)
Academy Scheme**

On

**"Recent Advances and
Applications of Micro Machining in
Modern Industries"**

From

December 18-23, 2023



Organized by

**Mechanical engineering Department
Bundelkhand institute of Engineering
and Technology Jhansi (UP)**

ABOUT THE INSTITUTION

Bundelkhand Institute of Engineering & Technology (B.I.E.T), Jhansi is located in the historical city of Maharani Lakshmi Bai. B.I.E.T., Jhansi was established in 1989. The institute consistently attracts the finest faculty and the best of students for its Bachelor's and Master's programs. At present, the institute offers seven B.Tech, seven M.Tech, and MBA programmes.

ABOUT THE DEPARTMENT

The Department of Mechanical Engineering is one of the pioneer and leading department in terms of well-educated faculty members, research activities as well as facilities. The department is NBA accredited upto June 2025. The department offers B.Tech., and M.Tech. (Manufacturing Science & Tech. and Thermal Engg.). The department has well equipped labs with modern facilities such as equipment, measuring tools, advanced machines and latest software. The lab View for virtual instrumentation along with Temperature and Pressure sensors with DAQ card, Wire EDM, ZNC EDM, ECM, Computerized Hardness tester, Pin-on-disc Wear test apparatus, Microscope etc purchased under TEQIP II grant are available in department. The department has well modern Virtual Class Room equipped with lecture recording and video conferencing systems.

INTRODUCTION

Trend of miniaturization of products and consequently its components nowadays can be evident in almost every production field. To accomplish requirements imposed by

miniaturization micromachining proved to be a satisfied manufacturing technique. Rapid technological advancement after Second World War has led to the development of ultrahard, high-strength, high-temperature-resistant, difficult-to-machine materials for their increasing demand in technological advanced industries like aerospace, automotive, marine, power plants, missile, and turbine industries. Micro machining is the basis of machining for nearly all modern miniaturized systems that are subsequently used in our daily life. In order to get these ultra precise parts, micro machining becomes a very important machining process.

COURSE OBJECTIVE

The objective of this faculty development program (FDP) is to enrich the knowledge of participants in the emerging areas of advances in micro machining and their recent industrial applications, and to make participant aware of advancements occurring in this field. Furthermore, participants will be able to apply these theories and concepts in their research work and they may apply the knowledge for the betterment of societal needs. . This course also covers different advances and challenges, and applications in the field of micro machining.

COURSE CONTENTS

- Conventional Micro machining

- Unconventional Micro machining
- Advanced Machining of micro systems
- Micro Electrical Discharge machining
- Electro Chemical machining macro and micro
- Micro Laser beam machining
- Micro-Hybrid Machining
- Modeling of Machining Processes
- Measuring techniques of micro machining
- Thermal aspects of micro machining

Tentative List of Resource Persons

- 1 Prof. J. Ram Kumar, IIT Kanpur
2. Prof. P. M. Pandey, IIT Delhi
3. Prof. V. K. Jain, Retd. IIT Kanpur
3. Prof. A. K. Dubey, MNNIT Allahabad
5. Dr. Meghanshu Vashisth, IIT BHU
6. Dr. Varun Sharma, IIT Roorkee
7. Dr. R. S. Rana, MANIT Bhopal
8. Dr. B. N. Upadhyay, RRCAT Indore
9. Prof. Sanjay Mishra, MMMUT Gorakhpur
10. Mrs Sugandh Parekh, Art of living, Benglore

CONTACT PERSONS

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Tentative FDP Schedule

18/12/2023	19/12/2023	20/12/2023	21/12/2023	22/12/2023	23/12/2023
9:00 – 9:30 Inauguration					
9:30 – 12:00 Session 1	9:30 – 12:00 Session 3	9:30 – 12:00 Session 5	9:30 – 12:00 Session 7	9:30 – 1:00 Industrial visit	9:30 – 12:00 Session 10
12:00 – 1:00 Article Discussion	12:00 – 1:00 Article Discussion	12:00 – 1:00 Article Discussion	12:00 – 1:00 Article Discussion		12:00 – 1:00 Article Discussion
1:00 – 2:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch
2:00 – 4:30 Session 2	2:00 – 4:30 Session 4	2:00 – 4:30 Session 6	2:00 – 4:30 Session 8	2:00 – 4:30 Session 9	2:00 – 4:00 MCQ, Feedback & Interactions
4:30 – 5:30 Practical sessions/Labs	4:30 – 5:30 Practical sessions/Labs	4:30 – 5:30 Practical sessions/Labs	4:30 – 5:30 Practical sessions/Labs	4:30 – 5:30 Practical sessions/Labs	4:00 – 5:00 Valedictory Session