About the Faculty Development Program

Manufacturing excellence is critical to our nation's economy. The Indian Government's National Manufacturing Policy, drafted in 2011, is being revamped to include the aspects of Industry 4.0. The small and medium enterprises comprises more than 90 percent industries in India and therefore serving as backbone of Indian industries. Eventually, the implementation of Industry 4.0 technologies in SMEs has great potential to catalyze and transform India's manufacturing competencies. Leveraging the benefits of this technology, the SMEs shall be able to improve productivity, quality and profitability.

The FDP is aimed to explore and bring awareness about the essentials of Industry 4.0 and its ecosystem relevant to industry systems. It also aims to evolve promising outcomes towards the innovative teaching and learning, research, and teaching practices. It is expected to provide platform for the collaboration, coordination and research in the related domain.

OBJECTIVES

- To create awareness about Industry 4.0 among the academia and to build the next generation academic institutions teaching and learning practices.
- To empower the academic diaspora for developing academic curriculum in accordance with Industry 4.0.
- To understand challenges in adopting digital technologies for the identified functional areas in India's Small and Medium Enterprises (SMEs).
- To disseminate the scientific, theoretical and applied research in the field of Industry 4.0.

CHIEF PATRON

Dr. Y. A. Kawade President, GSM Aurangabad

PATRONS

Prof. Munish Sharma Director General, MIT Aurangabad

Prof. Mrs. B. M. Deshmukh Director GSM, Aurangabad

CHAIRMAN

Prof. Dr. N. G. Patil Director, MIT Aurangabad

CONVENER

Dr. A. J. Keche Head, Mechanical Engineering Department

COORDINATOR

Dr. P. U. Zine

CO-COORDINATOR

Dr. V. B. Pansare

ORGANIZING COMMITTEE

Dr. D.V. Nehete Dr. Swamini A. Chopra Mr. S. R. Kulkarni Mr. P. T. Borlepwar Mr. S. B. Charthankar Mr. T. P. Kulkarni

Mr. M. V. Kulkarni Mr. A. V. Gadekar Mr. P. A. Lad Mr. G. M. Kotiye Mr. Y. G. Jadhav



AICTE Training and Learning (ATAL) Academy Faculty Development Programme (FDP) on

INDUSTRY 4.0

Technology, Challenges and **Opportunities for Indian SMEs**

11th to 16th December 2023

MIT





Department of Mechanical Engineering (NBA Accredited UG Program)

Venue

G.S. Mandal's Maharashtra Institute of Technology Chh. Sambhajingar, Maharashtra, India

About Maharashtra Institute of Technology

Gramaudyogik Shikshan Mandal (GSM), Chh. Sambhajingar, Maharashtra, India is the parent trust (Organization) established in 1975. Maharashtra Institute Technology (MIT), Chh. Sambhajingar offers wide range of courses forunder-graduation and postgraduation level infaculty of Engineering, Technology and Management. The institute is permanently affiliated to Dr. Babasaheb Ambedkar Marathwada University (BAMU), Aurangabad and is approved by AICTE, Delhi and DTE Maharashtra. NAAC has accredited the institute with Grade 'A'. MIT has received recognition under Section 2(f) and 12(B) of the UGC Act, 1956. The UGC has granted an autonomous status to the institute in the year 2021-22. NBA has accredited the two programmes, namely B. Tech. in Mechanical Engineering and B. Tech. in Computer Science and Engineering for 3 years.

About the Department

The Department of Mechanical Engineering came into existence with inception of the institute in the year 2001 offering UG program in Mechanical Engineering. The UG program has been accredited by NBA for three academic years from 2022-23. At present it offers both undergraduate and postgraduate courses in various facets of Mechanical Engineering. Department has been recognized as Research Center in Mechanical Engineering in the year 2012 under Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. The department has varied laboratories, workshop facilities and equipped with modern sophisticated equipment / facilities to carry out research in all areas related to Mechanical and Production Engineering. The faculty is actively involved in sponsored research and consultancy work and maintains an appreciable rapport with industries.

Contents of FDP

The following topics shall be covered

- Industry 4.0: Technology and Applications
- Cyber physical systems for industrial machine tools
- Application of AI and machine learning in industrial problems
- Adoption Barriers for Industry 4.0 in the Agriculture Supply Chain
- A generic tool condition monitoring system
- Industry 4.0 Implementation challenges: Industry perspective
- Application of AI in Industry 4.0
- Digital twins for industries
- Supply chain resilience: Handling of wide data in industry
- Industry 4.0 Readiness assessment of MSEs & relevant challenges
- Research article discussion session
- Practical / Lab Sessions

Expected Outcomes

- Understand the Industry 4.0 architecture and eco-system.
- Understand the challenges of implementation of Industry 4.0 in Indian SMEs.
- Develop strategies / roadmap for Industry 4.0 implementation for SMEs.
- Handling of data effectively for improved decision making.
- Identify and apply relevant pillars of industry 4.0 for SMEs.

Resource persons / Experts

The resource persons for the program shall include faculty members from IITs, NITIE, and host institute. Also it includes Experts from reputed industries dealing with the lean and Industry 4.0 technologies.

Targeted Participants

The faculty members of the AICTE approved institutions, research scholars, PG scholars, participants from Government, Industry (Bureaucrats/ Technicians/ Participants from industry, etc.) and staff of host institutions are eligible to attend the program.

How to Apply?

• The eligible participant has to register through ATAL portal https://atalacademy.aicte-india.org/signup

• Registration is free.

Selection & Certificate Criterion

Selection shall be made on a first-come, first serve basis. A maximum of 50 participants may be allowed to attend FDP. The confirmed candidate will be notified on or before 25th November 2023. Certificates shall be issued upon achieving at least 60% in continuous comprehensive assessment.

Travel Expenses Reimbursement

External Participants (traveling more than 20 KM one side to attend the FDPs) who attend at least 90% of the sessions shall be reimbursed with the cost of traveling (by rail/road with shortest route), with an amount of Rs.2000/- (max.) at the end of the FDP. Refreshment & working lunch shall be provided at no charge. Out station participants may be provided with accommodation on request on nominal chargeable basis in MIT Boys / Girls hostel.

Contact Details of Institute / Coordinator

Dr. Pankaj Uttamrao Zine

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