



**Last date for registration 26 August 2024**

## INTRODUCTION

**Indian Machine Tool Manufacturers' Association** is organizing an exclusive hands-on training course namely “**Finishing School in Production Engineering**” at IMTMA Technology Centre, Bangalore.

This 4-week course will be very much suitable for fresh recruits. They are trained in the latest manufacturing practices with major topics covering Engineering drawing, Limits, Fits & Tolerances, GD&T, Process planning, selection of cutting tools & machining parameters, CNC Programming, CNC machine operations/ machining in Turning & Machining centers, Measuring instruments, CMM and work holding accessories. **Thus, the trainees are well prepared to serve manufacturing industries right from day ONE.**

Fresh Mechanical Engineering students who had completed this course could also perform exceptionally well in interviews and many of them get recruited in industries including **Ace Micromatic, Bharath Fritz Werner, Cadem Technologies, Insight Technologies, Jyoti CNC, Kennametal India, Kirloskar Toyoda Textile Machinery (KTTM), Marposs India, Maini Precision, Otto Bilz, Sansera Engineering, UCAM India, Taegutec India, Titan, Toyota Kirloskar Auto Parts, Toyota Industries Engine India Pvt. Ltd., Yuken, Zoller, etc.**

## FOCUS AREAS

- Manufacturing Drawings including Interpretation
- Workshop practices on conventional machines
- Limits, Fits, Tolerances, GD&T, Surface Roughness: Importance in Manufacturing
- Various Machining processes and cutting parameters
- Dimensional Metrology and Measuring Instruments
- Types of engineering materials, properties, and Heat treatment processes
- Process Planning for Manufacturing
- Work holding and Fixturing
- Cutting Tools and Tool Holders for various metal-cutting processes
- Hands-on practice in CNC Turning and Machining centers
- CNC Programming: Basics and advanced
- Dimensional and Geometric Tolerances: Measurement & Quality Control
- Hands-on practice in measuring instruments
- Hands-on practice in Tooling, Work Holding, and other accessories
- Introduction to statistical process control (SPC)
- 5S concepts and Autonomous Maintenance (JH) - one of the main pillars of TPM
- Soft skills development
- Presentation Skills, E-mail etiquette
- Project work: complete procedure for converting a DRAWING to PART
- Overview of I4.0 in a production shop
- Assessment through the presentation, test, viva, and practicals

## KEY TAKE AWAYS

After undergoing the program, the participants will gain:

- Comprehensive Hands-on knowledge of production to despatch
- Gain Confidence and competitiveness to be a successful production engineer
- Exponential career growth in manufacturing industries
- In-depth understanding of CNC machines and their aggregates
- Thorough knowledge of CNC programming and its optimization for higher productivity
- Confident to take the right decisions on machines, processes, tools, and fixtures based on process planning
- Collaborative working skills with people, machines, and process
- A complete insight into Computer Integrated modern Manufacturing environment
- Ability to develop process plan for machined parts
- Practical inputs about the selection of tools & cutting parameters for various CNC machining operations
- Practice in Measuring instruments and equipment for quality control of parts

## Training Methodology

- Training in Industry 4.0 enabled modern Digital Factory with CNC machines, CAD/CAM/CAE, CMM, and Robots
- Learning by Doing: Blend of Classroom (40%) and practical sessions (60%)
- Exercises in Manufacturing Drawing, Process Planning, Tooling, and Fixturing
- Hands-on training sessions in CNC Turning & Vertical Machining Centres
- CNC Programming using Simulation of FANUC, SIEMENS, and MITSUBISHI control systems.
- Project work with real-time machining of components in CNC machines
- Hands-on practice in various measuring instruments used in the production shop
- Presentation / Exercises to acquire the necessary Soft skills
- Weekly Assignments and Tests
- Mock interviews with preparation for placement interviews
- Final evaluation and certification

## Facilities

**IMTMA Technology Centre at BIEC is equipped with state of the art training facilities viz.**

- Industry 4.0 enabled Digital Factory with CNC machines, CAD/CAM/CAE and accessories
- CNC Vertical Machining Centre & CNC Turning Centre
- CNC Simulators for FANUC, SIEMENS and MITSUBISHI controllers
- Metrology Lab with common measuring instruments, digital height gauge, profile projector, roundness tester, Vision Measuring Machine and CMM
- Robots for pick & place and welding applications
- Surface roughness tester
- Accessories: Tool pre setter, Touch probes, Tool Holders and Zero point clamping systems
- Latest types of cutting tools and work holding systems
- TPM trak system for OEE and productivity monitoring
- CAM Programming: Cadem and Mastercam CAD/CAM software
- 3D Printer for polymer parts
- Classroom with computer work stations in-network with the CNC machines through LAN for seamless data transfer, productivity monitoring and control
- Automation Lab with Hydraulics & Pneumatic systems, PLC Programming, Sensors, Servo systems, HMI and Networking
- CAD/CAM/CAE: Autodesk, Solidworks, CREO and ANSYS Softwares

## PARTICIPATION FEE

**Rs. 48000/-**

+18% GST

**IMTMA Members/ Micro Companies/  
IMTMA Non Members/ Others**

**Rs. 32000/-**

+18% GST

**Individuals**

**USD 1920/-**

**Overseas Participants**

**Group Concession : 10% for 3 to 5 and 20% for 6 and more delegates being nominated from the same company**

## Participant Profile

- Engineers/supervisors from manufacturing industries, responsible for productivity and quality improvement.
- New recruits/trainees in manufacturing industries.
- Fresh Mechanical Engineers after completion of their Degree / Diploma in Mechanical or allied disciplines.
- Pre-final year engineering students from Mechanical or allied disciplines.
- Design engineers who are willing to have a strong foundation through hands-on training in the latest manufacturing practices

### For Registration Contact

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**REGISTRATION** : Prior registration for participation is necessary. Number of participants is limited and will be accepted on 'First Come First Serve' basis. A Certificate of participation will be issued to participants.

**Important Information** : Participation fee includes, course material, working lunch and tea / coffee. Interested companies are requested to register online by clicking on 'REGISTER' button and by filling up the nomination authority and participant's details in specified form.