



## INTRODUCTION

CNC machines have become the order of the day in every manufacturing industry. These applications are wide spread in mass production units, batch production as well as in tool room industries. Thorough understanding of Programming and Operation of the CNC machines is a must in order to realize the maximum output.

This programme will address the programming and operation of CNC Machining centres in detail including finer aspects like control of dimensions, surface finish and optimization of machining parameters. The procedure for safe running of the machine would be dealt along with autonomous maintenance practices. The participants will be trained hands-on in production CNC machines with real time machining exercises.

## FOCUS AREAS

- Elements of VMC and different modes in the machine.
- G codes and M codes applicable to VMC
- Structure of a VMC Programme for VMC
- Work and tool set up; Measuring tool offsets in X ,Y and Z axes
- Programming using canned cycles
- ISO system of tool designation
- Dimensional control in VMC , Correction of wear offset for achieving tolerances
- Selection of tools and machining parameters
- CAM programming - Usage and advantages
- Autonomous maintenance principles - Procedure and Check points
- Hands-on training in the machine for :
  - Understanding modes and screen navigation
  - Work and tools set up in the machine
  - Measuring work and tool offsets
  - MDI commands and JOG movements
  - Programme entry and simulation
  - Machining exercises involving different cycles
  - Measuring dimensions on the machine and control
  - Autonomous maintenance check points

## KEY TAKE AWAYS

- Learn Programming and Operation of VMC
- Do work set up and tools set up in VMC
- Carry out inspection and dimensional control of parts on the machine
- Select tools and optimise machining parameters for improving productivity

## PARTICIPATION FEE

**Rs. 10000/-**

+18% GST

**IMTMA Members/ Micro Companies/ Individuals/  
Educational Institutions / Students**

**Rs. 11000/-**

+18% GST

**IMTMA Non Members/ Others**

## PARTICIPANT PROFILE

This programme will benefit Machine shop engineers, technicians as well as fresh engineers aspiring to learn VMC programming and operation.

A Basic knowledge on machining operations is essential.

## FACULTY

This programme will be conducted by industry experts from IMTMA Technology Centre.

### 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.