Certificate Course in CNC Machine Tools and NC Part Programming

Objective of the Course:

This course covers Fundamentals and concepts of CNC machining centres, NC part programming, Programming through CAD/CAM (MasterCAM), and Maintenance and Trouble shooting the CNC machine tools. This course offers more hands on experience through which the participants will be developing CNC programs and machining complicated shapes by using the CNC machine tools.

Learning Outcomes:

The participants will be able to:
- Understand fundamentals of NC/CNC
- Learn and Write NC Part Programming
- Learn NC Programming through CAD/CAM
- Hands –on experience on MasterCAM
- Learn Tooling for NC/CNC
- Understand machines like Chucking and Turning Centres,Machining Centres
- Learn Maintenance and Trouble Shooting of CNC Machine Tools

Expected Job Roles:

  AutocAD Programmer

Duration of the Course (in hours)   120 hrs

Appr. Fees (INR):   Rs.14,000/- (Service Tax Extra)

Minimum eligibility criteria and prerequisites if any

    a. BE /B.Tech   or Diploma in Mechanical/Production Engineering or equivalent
    b. Candidates who have appeared in the qualifying examination and awaiting results may also apply

Outline of the Course

S. No	Topic	Minimum No. of Hours
1.	• Fundamentals of NC/CNC, NC Part Programming, Conventional versus CNC Machines, NC Programming through CAD/CAM, Chucking and Turning Centres, Machining Centres, Maintenance and Trouble Shooting of CNC Machine Tools • 2D and 3D Machining sequences like Volume mill, boundary mill, Pocketing, Lathe operations and all relevant machining sequences for Lathe and Milling. CNC Machines.	120
	Theory/ Lecture Hours:	30
	Practical/ Tutorial Lecture Hours:	90
	Total Hours:	120

Books recommended for reference and reading:

REFERENCES

1. Automation, Production Systems, and Computer –Integrated Manufacturing by Mikell P. Groover
2. CADCAM Principles, Practice and Manufacturing Management by Chris McMahon and Jimmie Browne.
3. Computer Control of Manufacturing Systems - *Yoram Koren*.
4. Manuals of CNC Machines (Denford), , Manuals of MasterCAM

In addition manufacturer's device data sheets and application notes are to be referred to get practical application oriented information.

Group Code:	CADD	Group Name:	AutoCad / Instrumentation
Course Code:	CP02	Course Name:	Certificate Course in CNC Machine Tools and NC Part Programming