CNC Operating

The purpose of this module is to provide the candidates with theoretical and hands on training on CNC machines. This module will help the candidates build upon practical aspects that will enable them to operate a CNC machine independently.

This module includes both classroom and practical training. It’s a foundation course for new and existing operators.

COURSE CONTENT:

Theoretical Inputs:

1. Introduction to CNC machine
2. Knowing the machine
   - Engineering Drawing – meaning of different lines, and how to interpret
   - Tolerances, its types, and how to take them into account
   - Operations that can be performed on a machine
   - Tooling knowledge (Different tools, Left and Right hand tools, Insert designation)
   - Work Offset and Tool Offset
   - Machine modes – MDI, EDIT, SBK, ZRN, HND, JOG, MEM, RAPID
   - Override functions

Practical Inputs:

1. Setting up the machine
   - Perform daily/weekly maintenance – Visual checks
   - Starting and referencing the machine
   - Understanding the job that is to be made through drawings
   - Selecting the work piece, tools and measuring instruments
   - Mounting the work piece and starting the program
   - Verifying the job using appropriate measuring instruments

2. Job Making
   - Setting up the work piece (Dialing)
   - Setting up the tools (Offset, wear and compensation)
   - Defining Work offset
   - Performing the operations and inspection

LEARNING OUTCOMES:

After completion of this module, the candidate will be able to:

Confidently run the machine independently

Setup the work piece and Tools correctly

Perform work piece dialing independently

Perform daily, weekly machine maintenance jobs

Gauge if the machined work piece is within tolerance, and/or if it requires rework