

**ACG Cares Foundation, Mumbai**  
**CNC/ VMC Operator Training program**

**Objective of Training Program:**

To enhance and provide necessary skill inputs for making employable, life skills and forward and backward linkages for the trained youth for sustainability of the efforts and better quality of life.

**Target Group:**

Target group was selected as per the villages selected by the ACG Cares Foundation:

- Full-time or part time job holder
- Unemployed youth
- Housewives
- Literate and illiterates
- Community mobilizers and leaders in the villages

**Beneficiary identification process:**

Beneficiaries was selected on the basis of following parameters:

- Youth groups from the villages
- Age group
- SHGs operational in the villages, if any and their activities
- Educational background
- Drop outs from the schools/colleges
- Existing status (working, on working, undergoing education, self-employed,etc.)
- Existing skills, if any
- Family income
- Farmers club

**Technical Trainers:**

- Mr. Satish Sagdeo,MBA(HR)
- Mr.Rahul Suryavanshi
- Mr. Ujwal Tawade,M.Sc(Nuclear science)
- Mr. Ganesh Khamgal,MSW

## **Syllabus of the Training Programme:**

- Introduction of Machines
- NC & CNC machine
- Advantage & Disadvantage of CNC Machine
- Classification of CNC Machine
- Types of CNC Machine
- Advance Machine System
- Special Features on CNC Machine
- Fundamentals of CNC programming
- CNC feedback control system
- Co-ordinate system
- CNC Language-Programme Configuration
- Preparatory Functions
- Miscellaneous Functions
- Programming on Fanuc & Siemens CNC Milling Machine
- Sub Programming on Fanuc & Siemens CNC Milling Machine
- Programming with CRC Fanuc & Siemens
- Canned Cycles on Fanuc CNC Milling Machine
- To on the CNC Milling Machine
- Key board details of computer unit
- Key board details of operating panel
- Offset setting of Fanuc CNC Milling
- Machine Zero & Work Zero
- CNC Cutting Tool Material
- CNC milling tools & tool holders
- CNC tool selection
- CNC Process Planning
- CNC Milling Inserts & Geometry
- Surface Texture & machining symbols
- Lubricants & Lubrications
- Milling time calculation
- Broach & Broaching Method
- Linear Indexing
- Surface texture measurement
- Coolant or cutting fluids
- Helix & Spiral
- Spiral Milling Calculations
- Vernier Gear tooth caliper
- Rack-Elements & Types
- Rack Calculations
- Types of Gear
- Worm & worm wheel
- CAM-introduction & types
- Drum CAM Calculation
- Plate CAM calculation
- Chordal Generating Methods

- Clutches
- Important Technical Turns used in Industry
- Quality Control
- Methods of CNC Programming
- Siemens Control Programming
- Measurement
- Outside Micrometer
- Vernier Caliper
- Turning Cycle on CNC Lathe
- Drilling Cycles on CNC Milling Machines
- Milling Cycles on CNC Milling Machine
- Programme Configuration
- Gauges
- Tooling & Speed, Feed Calculation

**Expected outcome:**

Outcome of training is expected as follows:

- Wage employment
- Self-employment
- Skill up gradation
- Multiskill development
- To provide skill manpower to local industries.

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