COURSE : CNC TURN-MILL CENTRE - PROGRAMMING & OPERATION (FANUC Oi-TB)

DURATION   :   TWO WEEKS

COURSE CONTENTS : **THEORY**

- ➢ CNC Machines working principles.

- ➢ Features of CNC System & Elements of CNC Machines

- ➢ Concept of CNC Programming

- ➢ Programming with basic 'G' Codes & 'M' Codes

- ➢ Different co-ordinate systems

- ➢ Measurement of Zero offsets

- ➢ Part program of Turning- External features and Internal features using built in Cycles

- ➢ Part programming of Milling profile with 'C' Axis

- ➢ Selection of Tools, Speed, Feed & Depth of cut

PRACTICALS : Hands on experience on

- ➢ Windows based CNC Simulator.

- ➢ Basic Machine Operations

- ➢ Measurement of Zero offsets.

- ➢ Editing of part programs

- ➢ Proving selected programs & Machining of Components

EQUIPMENT PROFILE :

- ➢ Turn Mill Centre, HMT make, Model : TMC-20 with control Fanuc Oi-TB

- ➢ Keller - Symplus Soft ware for Simulation

COURSE : CNC TURN-MILL CENTRE - PROGRAMMING & OPERATION

(Sinumerik 802D sl)

DURATION   :   TWO WEEKS

COURSE CONTENTS : **THEORY**

- ➢ CNC Machines working principles.

- ➢ Features of CNC System & Elements of CNC Machines

- ➢ Concept of CNC Programming

- ➢ Programming with basic 'G' Codes & 'M' Codes

- ➢ Different co-ordinate systems

- ➢ Measurement of Zero offsets

- ➢ Part program of Turning- External features and Internal features using built in Cycles

- ➢ Part programming of Milling profile with 'C' Axis

- ➢ Selection of Tools, Speed, Feed & Depth of cut

PRACTICALS :

- ➢ Hands on experience on Windows based CNC Simulator.

- ➢ Basic Machine Operations

- ➢ Measurement of Zero offsets.

- ➢ Editing of part programs

- ➢ Proving selected programs & Machining of Components

EQUIPMENT PROFILE :

- ➢ Turn Mill Centre, ACE Designers make, Model : LT-2LM500MC with control Siemens Sinumerik 802D sl

- ➢ Keller - Symplus Soft ware for Simulation

COURSES : CNC TURNING - PROGRAMMING & OPERATION

(Sinumerik 810T)

DURATION   :   TWO WEEKS EACH

COURSE CONTENTS : **THEORY**

- ➢ CNC Machines working principles.
- ➢ Features of CNC System & Elements of CNC Machines
- ➢ Concept of CNC Programming
- ➢ Programming with basic 'G' Codes & 'M' Codes
- ➢ Different co-ordinate systems
- ➢ Measurement of Zero offsets
- ➢ Part program of Turning with canned cycles
- ➢ Subroutine programming
- ➢ Selection of Tools, Speed, Feed & Depth of cut

PRACTICALS : Hands on experience on

- ➢ Windows based CNC Simulator.
- ➢ Basic Machine Operations
- ➢ Measurement of Zero offsets.
- ➢ Editing of part programs
- ➢ Proving selected programs & Machining of Components

EQUIPMENT PROFILE :

- ➢ Turning Centre, Emco make, Model : emcoturn 340 with control Siemens Sinumerik 810 T
- ➢ Keller - Symplus Soft ware for Simulation

COURSES : CNC MILLING - PROGRAMMING & OPERATION

(Sinumerik 810M)

DURATION   :   TWO WEEKS

COURSE CONTENTS : **THEORY**

- ➤ CNC Machines working principles.

- ➤ Features of CNC System & Elements of CNC Machines

- ➤ Concept of CNC Programming

- ➤ Programming with basic 'G' Codes & 'M' Codes

- ➤ Different co-ordinate systems

- ➤ Measurement of Zero offsets

- ➤ Part program of Milling with cutter radius compensation

- ➤ Selection of Tools, Speed, Feed & Depth of cut

- ➤ Subroutine programming & Canned cycles

- ➤ Editing of part programs

- ➤ Proving selected programs & Machining of Components

PRACTICALS : Hands on experience on

- ➤ Windows based CNC Simulator.

- ➤ Basic Machine Operations

- ➤ Measurement of Zero offsets.

- ➤ Editing of part programs

- ➤ Proving selected programs & Machining of Components

EQUIPMENT PROFILE :

- ➤ Vertical Machining Centre, Emco make, Model : emco VMC-300 with control Siemens Sinumerik 810 M

- ➤ Keller - Symplus Soft ware for Simulation

COURSES : ADVANCED CNC MILLING - PROGRAMMING & OPERATION

(Fanuc OM)

DURATION   :   TWO WEEKS

COURSE CONTENTS : **THEORY**

➢ CNC Machines working principles.

➢ Features of CNC System & Elements of CNC Machines

➢ Concept of CNC Programming

➢ Preparatory and Miscellaneous Functions / Codes

➢ Different co-ordinate systems

➢ Measurement of Zero offsets

➢ Part program of Milling for linear & Circular interpolation with cutter radius compensation

➢ Selection of Tools, Speed, Feed & Depth of cut

➢ Subroutine programming, Fixed cycles

➢ Programming – Scaling, Rotation, Mirroring, Helical interpolation, Thread milling & Cylindrical interpolation

➢ Macro programming

➢ Editing & Proving the part program

PRACTICALS : Hands on experience on

➢ Windows based CNC Simulator.

➢ Basic Machine Operations

➢ Measurement of Zero offsets.

➢ Editing of part programs

➢ Proving selected programs & Machining of Components

EQUIPMENT PROFILE :

➢ Vertical Machining Centre, HMT make, Model : VMC-500 with control

   Fanuc OM

➢ Keller - Symplus Soft ware for Simulation