



DEPARTMENT OF MECHANICAL ENGINEERING

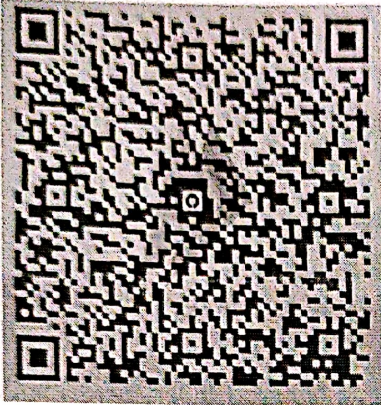
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Vide Ref. Lr.No:1319/Admn/UCE/OU/2024

Dated:13/08.2024

Training during Evening Hours 6:30pm-9:30pm (UPSKILL)

FEE details



The Head, Dept of Mech. Engg

RTGS/NEFT-- A/c.No. 62102171639 , , IFSC code: SBIN0020071

Course (A)— → Rs: 1000=00

CNC Lathe Siemens 802 controller

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Course (B)— → Rs: 2000=00

CMM-machine operation of Mitutoyo MCOSMOS

(GEOPAK)

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Fee will not be refunded: Register form:

<https://forms.gle/878ieLY576LXDnYc6>

(A)-CNC Lathe Siemens 802 controller-syllabus:

Overview of CNC Machines Technology → Hands on machining of sample components in CNC Machines.

Elements of VMC and different modes in the machine.

Work and tool set up; Measuring tool offsets in X, Y and Z axes.

Programming using canned cycles, ISO system of tool designation., 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.

(B). CMM-machine operation of Mitutoyo MCOSMOS (GEOPAK) -syllabus

course introduction and objectives, training registration and background, introduction to HMI , health and safety brief, agenda, course objectives, training manufacturing and workbook principles.

Introduciton to the Coordinate Measurieng machine: History of the CMM, basic structure overview, touch trigger probing systems, algorithms, accuracy, environment control ,**CMM Initialisation**→ machine start up Procedure, Home Position, Machine Axis conventions, The cartesian Coordinate systems, Defining defaults directions, search paths and file management

Probe configuration & qualification, probing options, understanding articulating probe heads, the probe interface, probe and accuracy considerations, building a probe, probe qualifications and interpretations of results, adding probe angles **Alignment**

(A) → why alignment are required, what is an alignment, leveling , rotation, origin, 321 alignment, graphic display window, edit window,**Measured features**- point, line, circle, plane, cylindre, cone, shpere, measuring manual features, 2D and 3D . features explain , workplances, measurement of 2D features in an(2)other workplance,**Alignment(B)**, alignment plane/circle/circle, alignment plane/line/circle, alignment plane /line/line, auto alignment , rotations, offsets, saving an alignment

Part Programme creating and Execution without CAD→ basic manual Programme creation and execution, direct computer control (DCC) features, move points, clearance planes, DCC programme creating and execution , operation and report comments,**Constructed features**,→ the concept of constructed features explained, pitch diameter circle, intersection circle between a cone and plane, 3D Pierce point between a cylinder and plane, constructing an offset line

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PROFESSOR

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29/8/24

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HEAD

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