

Serial No 9011481

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महान लघु एवं मध्यम उद्यम
MICRO, SMALL & MEDIUM ENTERPRISES
MSME-TOOL ROOM, BHUBANESWAR



ISO-9001, ISO-14001
OHSAS-18001
ISO-29990



A Govt. of India Society

(An Indo-Danish Project)

Under

MINISTRY OF MSME

B - 36, Chandaka Industrial Area
Bhubaneswar -751024

CENTRAL TOOL ROOM & TRAINING CENTRE

Mr. / Miss. CHINMAYA KUMAR ROUT

is awarded this **CERTIFICATE**
for having fulfilled the
requirements of the
institute for **THE ONE YEAR**

POST DIPLOMA IN TOOL DESIGN & MANUFACTURING (CAD/CAM)

The course comprises the following subjects

1. COMPUTER FUNDAMENTALS & MS OFFICE
2. AUTO CAD
 - Auto CAD Basic Modelling
 - Auto CAD - Advanced Modeling
3. PART PROGRAMMING
 - FANUC, HEIDENHAIN Control System
 - Mill, Lathe
4. MASTER CAM
 - 2D Drawings
 - 2D Tool Path
 - Surface Modeling
 - 3D Tool path
5. SIMULATION
 - Sinumerik
 - Fanuc
 - Lathe, Mill
6. CNC MACHINE PRACTICES & CUTTING TOOLS
 - CNC Milling, CNC Lathe
 - Study of Different types of cutting Tools.
 - Tool Clamping Devices
 - Cutting Tool Signature
7. UNIGRAPHICS
 - Sketcher
 - Part Modelling
 - Assembly
 - Surface Modeling
 - Drafting
 - Manufacturing
 - Motion Simulation
8. CREO
 - Part Modeling
 - Detailing & Drawing
 - Part Assembly
 - Sheet Metal
 - Mold Design Using CREO
 - Manufacturing
9. Solid works
 - Part Modeling
 - Assembly
 - Drafting
 - Sheet Metal
 - Core & Cavity Extraction
10. CATIA
 - Part Modeling
 - Surface Modeling
 - Drafting & Detailing
 - Assembly
 - Sheet Metal
 - Press Tool Design using CATIA
11. MOULD DESIGN
 - Types of Mould
 - Plastic Material & their applications
 - Mould Material
 - Injection Molding Machines
 - Injection Mould Design
12. PRESS TOOL DESIGN
 - Types of Operation / Shear theory
 - Type of Tool (Progressive, Compound, Combination)
 - Press Machines
 - Punches & their mounting
 - Die Block
 - Pilots / Strippers
 - Bending Dies
13. PROJECT WORK
 - Design and Manufacturing of Progressive Press Tool
 - Design and Manufacturing of Single Cavity Injection Mould

Period of Course : From : 09. 07. 2014 To : 30. 05. 2015

Date of Award : 30. 05. 2015

Sr. Manager (Training)



Dy. General Manager

X chinmaya K. Rout