

2. EMPLOYMENT OPPORTUNITIES FOR DIPLOMA HOLDERS IN PRODUCTION ENGINEERING.

After detailed discussions, the workshop group visualized the following major employment opportunities for diploma holders in production Engineering.

- Manufacturing/process industries in private and public sector.
- As self-employed in Manufacturing and Service Sector.

Though the diploma holders find placement in all functional areas like R&D; planning; Shop Floor Production; Quality Control; Inventory Management; but majority of them find employment in Shop floor management.

3. COMPETENCY PROFILE OF DIPLOMA HOLDERS IN PRODUCTION ENGINEERING

1. Development of knowledge and skill regarding various production processes, tools, jigs and fixtures including the use of high-tech machines (CIM and automatic machines), CNC Machines for increased productivity and quality.
2. Development of competencies to prepare material schedules, equipment schedules, manpower schedules and process schedules.
3. Development of knowledge and skills regarding various inspecting and measuring instruments to inspect and control the quality of products as per standards.
4. Development of competencies in work-study, plant location and layout, value engineering and material handling.
5. Development of understanding about the composition, characteristics, testing, and usage of various types of engineering materials used in the industry.
6. Development of knowledge and skills in material management.
7. Development of knowledge about press tools and gauges and their tryout.
8. Development of knowledge and skills to maintain suitable records of production and services, analyze the causes of wastage and ensure remedial action.
9. Development of competencies in problem solving related to shop floor.
10. Development of knowledge and skills in communication, and inter personal relations.
11. Development of understanding regarding labour management and awareness regarding laws and Acts for their welfare, safety and training.
12. Development of awareness regarding statutory laws concerning pollution control techniques and related equipment.
13. Development of awareness regarding facilities and support system to promote entrepreneurship amongst engineers and technicians.
14. Development of basic knowledge and skills in applied sciences and computers so as to develop scientific temper, continued learning skills and their applications in technology subjects.

15. Development of basic knowledge and skills in Engineering Sciences like Material Hydraulics, thermodynamics, electrical and electronics, Engineering Graphics, Applied Mechanics, Strength of Materials which are pre-requisite to understand technology subjects.
16. Development of competencies in preparing in Mechanical engineering drawings and skills in reading and interpreting Mechanical engineering drawings and electrical, hydraulic, pneumatic circuit diagrams.
17. Competency in the design of simple jigs, fixtures & gauges.
18. Competency in preparing cost estimates.

4. DERIVING CURRICULUM AREA FROM COMPETENCY PROFILE

Sr. No.	Competency	Curriculum Area
i)	Development of knowledge and skill regarding various production processes, tools, jigs and fixtures including the use of high-tech machines (CIM and automatic machines), CNC Machines for increased productivity and quality.	<ul style="list-style-type: none"> ▪ Workshop Technology ▪ Workshop Practice ▪ Tool Engineering ▪ CNC Machines and Automation
ii)	Development of competencies to prepare material schedules, equipment schedules, manpower schedules and process schedules.	▪ Industrial Engineering
iii)	Development of knowledge and skills regarding various inspecting and measuring instruments to inspect and control the quality of products as per standards.	▪ Inspection and Quality Control
iv)	Development of competencies in work-study, plant location and layout, value engineering and material handling.	▪ Industrial Engineering
v)	Development of understanding about the composition, characteristics, testing, and usage of various types of engineering materials used in the industry.	▪ Materials and Metallurgy
vi)	Development of knowledge and skills in material management.	▪ Material Management
vii)	Development of knowledge about press tools and gauges and their tryout.	▪ Tool Engineering
viii)	Development of knowledge and skills to maintain suitable records of production and services, analyze the causes of wastage and ensure remedial action.	▪ Industrial Engineering
ix)	Development of competencies in problem solving related to shop floor.	▪ Project Work

x)	Development of knowledge and skills in communication, and inter personal relations.	<ul style="list-style-type: none"> ▪ Communication Skills
xi)	Development of understanding regarding labour management and awareness regarding laws and Acts for their welfare, safety and training.	<ul style="list-style-type: none"> ▪ Industrial Management
xii)	Development of awareness regarding statutory laws concerning pollution control techniques and related equipment.	<ul style="list-style-type: none"> ▪ Industrial Management
xiii)	Development of awareness regarding facilities and support system to promote entrepreneurship amongst engineers and technicians.	<ul style="list-style-type: none"> ▪ Entrepreneurship development and Management
xiv)	Development of basic knowledge and skills in applied sciences and computers so as to develop scientific temper, continued learning skills and their applications in technology subjects.	<ul style="list-style-type: none"> ▪ Basics of IT ▪ Computer Applications in Mechanical Engineering ▪ Applied Physics ▪ Applied Chemistry ▪ Applied Mathematics
xv)	Development of basic knowledge and skills in Engineering Sciences like Material Hydraulics, thermodynamics, electrical and electronics, Engineering Graphics, Applied Mechanics, Strength of Materials which are pre-requisite to understand technology subjects.	<ul style="list-style-type: none"> ▪ Materials and Metallurgy ▪ Hydraulic and Pneumatic Systems ▪ Applied Mechanics ▪ Strength of Materials ▪ Basic Mechanical Engineering
xvi)	Development of competencies in preparing in Mechanical engineering drawings and skills in reading and interpreting Mechanical engineering drawings and electrical, hydraulic, pneumatic circuit diagrams.	<ul style="list-style-type: none"> ▪ Engineering Drawing ▪ CAD ▪ Machine Drawing
xvii)	Competency in the design of simple jigs, fixtures & gauges.	<ul style="list-style-type: none"> ▪ Machine Design and Drawing
xviii)	Competency in preparing cost estimates.	<ul style="list-style-type: none"> ▪ Industrial Engineering