

2. EMPLOYMENT OPPORTUNITIES FOR DIPLOMA HOLDERS IN MECHANICAL ENGINEERING (TOOL AND DIE)

The diploma holders can be employed in Tool Room organizations and have scope for self-employment.

The designation specifying various job requirements of diploma holders in Mechanical Engineering (Tool & Die) in various industries are given below:

Tool Room Organization

Tool Designer/Tool Design Supervisor.

(Press Tools, Plastic Moulds, Forging & Casting, Dies, Cutting Tools and Jigs & Fixtures etc.)

Tool Room Supervisor/Foreman

(For production of Press Tools, Plastic Moulds, Forging and Casting, Dies, Cutting tools and Jigs and Fixtures)

Quality Control and Inspection supervisor in Tool Room.

Manufacturing and Assembly Industries

Supervisor Design and Development.

Production Supervisor/Foreman

Production Planning and control supervisor.

Process planner

Quality control and inspection supervisor in manufacturing and assembly industry.

Marketing and Service Organization (Machine Tool Manufactures)

Marketing Assistant.

Sales and Service Engineer in Marketing Organization.

Self employed in tool making workshop, repair workshop or small manufacturing units and consultancy services.

3. Competency Profile of Diploma holder in Mechanical Engineering (Tool & Die)

At the end of the course, the diploma holders should be able to:

- i Read, interpret and prepare engineering components drawings.
- ii Design various types of press tools, plastic moulds, forging dies, casting dies, jigs and fixtures etc.
- iii Understand the principles, and operation of handling various types of machine tools including CNC machines required for the manufacture of tool, moulds, and dies etc. and acquire professional skill.
- iv Understand the filing, fitting and marking off and acquire professional skills.
- v Make various press tools, moulds, gauges, jigs and fixtures in the workshop independently.
- vi Understand various heat treatments, surface protection processes and acquire necessary skills.
- vii Prepare estimates of time and material required and cost for various jobs.
- viii Inspect various precision jobs and control the quality of the product.
- ix Communicate effectively with workers, colleagues, clients and supervisors.
- x Maintain service and repair various machine tools and equipments, press tools and other dies etc.
- xi Guide the workers as regards correct use of tools, machines, working method and proper cutting speeds and feeds in order to improve the efficiency.

- xii Set up and manage a small-scale enterprise of his own for self-employment.
- xiii Demonstrate proper attitude for adaptation/self learning to changes.
- xiv Competency to use various measuring instruments used in the tool room.
- xv Plan and organize resources economically at the shop floor.

4. DERIVING CURRICULUM AREA FROM COMPETENCY PROFILE

Sr. No.	Competency	Curriculum Area
i)	Read, interpret and prepare engineering components drawings.	<ul style="list-style-type: none"> Engineering Drawing Machine Drawing CAD
ii)	Design various types of press tools, plastic moulds, forging dies, casting dies, jigs and fixtures etc.	<ul style="list-style-type: none"> Press tool design and drawing Mould design and drawing Forging and die casting die design Jigs, fixtures, and gauges-design and drawing.
iii)	Understand the principles, and operation of handling various types of machine tools required for the manufacture of tool, moulds and dies etc. and acquire professional skill.	<ul style="list-style-type: none"> Workshop Technology Workshop Practice Hydraulic and Pneumatic Systems.
iv)	Understand the filing, fitting and marking off and acquire professional skills.	<ul style="list-style-type: none"> Workshop Practice
v)	Make various press tools, moulds, gauges, jigs and fixtures in the workshop independently.	<ul style="list-style-type: none"> Workshop Practice CNC Machines and automation CIM
vi)	Understand various heat treatment, surface protection processes and acquire necessary skills.	<ul style="list-style-type: none"> Material and metallurgy Heat treatment
vii)	Prepare estimates to time and material required and cost for various jobs.	<ul style="list-style-type: none"> Estimating and costing
viii)	Inspect various precision jobs and control the quality of the product.	<ul style="list-style-type: none"> IQC
ix)	Communicate effectively with workers, colleagues, clients and supervisors.	<ul style="list-style-type: none"> Communication skills

x)	Maintain service and repair various machine tools and equipments, press tools and other dies etc.	<ul style="list-style-type: none"> Workshop Practice
xi)	Guide the workers as regards correct use of tools, machines, working method and proper cutting speeds and feeds in order to improve the efficiency.	<ul style="list-style-type: none"> Workshop Technology Communication skills
xii)	Set up and manage a small scale enterprise of his own for self employment.	<ul style="list-style-type: none"> Entrepreneurship Awareness
xiii)	Demonstrate proper attitude for adaptation/self learning to changes.	<ul style="list-style-type: none"> Industrial Management
xiv)	Competency to use various measuring instruments used in the tool room.	<ul style="list-style-type: none"> Inspection & Quality Control
xv)	Plan and organize resources economically at the shop floor.	<ul style="list-style-type: none"> Industrial Engineering