

# STP: Certificate Course in Metal Finishing

## 1. Introduction

The aim of this course is:

- To provide hands on training sessions on finishing operations like cylindrical grinding, surface grinding and buffing etc.
- Selection and optimisation of parameters for productivity improvement.
- To do proper selection of cutting tools and cutting parameters.
- To understand manufacturing drawing and develop process plan.
- To provide Hands –on sessions in CAD/CAM programming software’s.
- To handle measuring instruments and equipments for quality control of machined parts.

## 2. Learning Outcomes

After completion of this course students will be able to:

- Operate cylindrical grinders, Surface Grinders & Buffing machines independently.
- Optimize cutting parameters like speed, feed and doc.
- Understand and read manufacturing drawings.
- Design the model and generate programs for the same model.
- Handle and use measuring equipments.

## 3. Who should attend:

PUC/ITI/Diploma candidates any higher qualification (Non Completed candidates are also eligible).

## 4. Structure of the course

Sl. No.	Module Code	Module Title	Theory (hrs)	Practical's (hrs)	Duration (Wks)		
1	STP 121	Introduction to Grinding Tools & Equipments	3	12	1		
2	STP 122	Turning Practice using Conventional Lathe	3	12	1		
3	STP 123	Milling Practice using Conventional Milling	3	12	1		
4	STP 124	Designing & Programming using CAD/CAM Software's	5	100	7		
5	STP 125	CNC Turning Programming & Operations on Job Training	3	12	1		
6	STP 126	Machine Diagnostics & Maintenance	3	12	1		
<b>Total Number of Theory hrs.</b>		<b>20</b>	<b>Total Number of (Practical's) hrs.</b>		<b>160</b>	<b>Total course duration hrs.</b>	<b>180</b>

## 5. Module Resource

Machineries	Equipments	Software's
<ul style="list-style-type: none"> <li>➤ Surface Grinding</li> <li>➤ Cylindrical Grinding</li> <li>➤ Conventional Lathe</li> <li>➤ Conventional Milling Machine</li> </ul>	<ul style="list-style-type: none"> <li>➤ Vernier Calliper</li> <li>➤ Micrometer</li> <li>➤ Height Gauge</li> <li>➤ Slip Blocks</li> <li>➤ Bore Gauge</li> <li>➤ Vernier Depth Gauge</li> <li>➤ Pitch Gauge</li> </ul>	<ul style="list-style-type: none"> <li>➤ Auto CAD</li> <li>➤ UG (Uni-Graphics)                             <ul style="list-style-type: none"> <li>• Designing</li> <li>• Programming</li> </ul> </li> </ul>