


## **MACHINE TOOLS LABORATORY**


This laboratory is aimed at providing an introduction to the Know-how of common processes used in industries for manufacturing parts by removal of material in a controlled manner. Auxiliary methods for machining to desired accuracy and quality will also be covered.

The emphasis throughout the laboratory course will be on understanding the basic features of the processes rather than details of constructions of machine, or common practices in manufacturing or acquiring skill in the operation of machines.

The facilities available in the laboratory


- Simple lathe all geared Precision Lathe
- Knee type Milling Machine Along with vertical Attachment
- Shaping Machine
- Slotting Machine
- Planner Machine
- Radial Drilling machine
- Cylindrical grinding machine.
- Universal tool & cutter grinder


S.No	Name of major equipments	Photo/Image
1.	Simple lathes	 A photograph of a workshop containing several simple lathes arranged in a row. The lathes are green and black, and are positioned in a well-lit room with large windows. The floor is light-colored and the walls are a pale yellow.

S.No	Name of major equipments	Photo/Image
2.	Milling Machine & Milling vice	 A photograph of a blue industrial milling machine. The machine is mounted on a heavy blue cast-iron base. It features a horizontal table with a sliding saddle and a vertical column. A large blue handwheel is visible on the right side for manual operation. The machine is equipped with a milling vice on the table. The background shows a workshop environment with a concrete floor and a light-colored wall.

S.No	Name of major equipments	Photo/Image
3.	Shaping Machine	 A photograph of a green industrial shaping machine. The machine is mounted on a heavy, cast-iron base. It features a large flywheel on the left side, a hand crank on top, and a sliding table mechanism. The machine is positioned in a workshop with a window in the background.

S.No	Name of major equipments	Photo/Image
4.	Slotting machine	 A photograph of a slotting machine, a type of metalworking machine used for cutting slots into metal. The machine is dark grey or black, with a large vertical column and a horizontal table. A cutting tool is mounted on the column, and a workpiece is being processed on the table. The machine is situated in a workshop with other equipment visible in the background.

S.No	Name of major equipments	Photo/Image
5.	Planing machine	 A large industrial planing machine, painted green, is shown in a workshop. The machine has a long, flat table for workpieces and a vertical column with a large flywheel on top. The workshop has a corrugated metal roof and several windows in the background.

S.No	Name of major equipments	Photo/Image
6.	Universal tool & cutter grinder	 A photograph of a universal tool and cutter grinder machine. The machine is a large, industrial-grade piece of equipment with a heavy cast-iron base and a long, horizontal table. It features a vertical column with a grinding wheel at the top and two smaller grinding wheels on the front. The machine is situated in a workshop with a concrete floor and a white wall in the background. A power outlet and some papers are visible on the wall.

S.No	Name of major equipments	Photo/Image
7.	Radial Drilling machine	 A radial drilling machine is shown in a workshop. The machine has a blue base and a silver vertical column. A blue motor is mounted at the top of the column. A horizontal arm extends from the column, supporting a drill head with a large silver handwheel. The machine is mounted on a blue base with a table. The background shows a window with a grid pattern.



S.No	Name of major equipments	Photo/Image
8.	Cylindrical grinding machine	 A photograph of a cylindrical grinding machine in a workshop. The machine is primarily blue and white. It features a large grinding wheel on the left side, a work rest on the right, and a motor unit at the bottom right. The machine is situated in a well-lit room with several windows in the background.