

**III B.TECH I SEMESTER
MACHINE TOOLS LAB**

Course Code: ME5L2

Credits: 2

Lecture: -

Internal assessment: 25 marks

Tutorial: 3 periods/week

Semester end examination: 50 marks

COURSE OBJECTIVES:

- Familiarize different machine tools used in production floor.
- Impart hands on experience on lathe, drilling, shaping, milling, slotting, Grinding, Planning and tool and cutter grinding machines.

At the end of course the students will be able to:

1. Perform step, taper turning, threading, knurling and Form turning.
2. Perform Drilling & Tapping operations on given work piece.
3. Produce plain or stepped surface using shaper, planner and surface grinder.
4. Fabricate keyway slot using milling machine and slotter.
5. Prepare different cutting tool angles using Tool and cutter grinder.

Pre-Requisites: Metal cutting and Machine Tools

Any 12 Experiments of the following

Lathes

1. Plain Turning
2. Step turning
3. Taper turning by swiveling compound rest
4. Taper turning by taper turning attachment
5. Threading
6. Knurling
7. Form Turning

Non-Lathes

1. Drilling and tapping on Square block
2. Shaping a stepped surface
3. Slotting a Rectangular slot
4. Milling a Keyway
5. Surface grinding of Rectangular block
6. Grinding of single point cutting tool angles.
7. Planing a stepped surface