



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
KAKINADA – 533 003, Andhra Pradesh, India

DEPARTMENT OF MECHANICAL ENGINEERING

II Year - II Semester		L	T	P	C
		0	0	3	1.5
MACHINE TOOLS LAB					

Course objectives:

The students are required to understand the parts of various machine tools and operate them. They are required to understand the different shapes of products that can be produced on these machine tools.

1. Introduction of general purpose machines -Lathe, Drilling machine, Milling machine, Shaper, Planing machine, Slotting machine, Cylindrical grinder, Surface grinder and Tool and cutter grinder.
2. Operations on Lathe machines
 - (i) Step turning and Knurling
 - (ii) Taper turning and Knurling
 - (iii) Thread cutting and knurling
 - (iv) Drilling and tapping
3. Operations on Drilling machine
 - (i) Drilling, reaming and tapping
 - (ii) Rectangular drilling
 - (iii) Circumferential drilling
4. Operations on Shaping machine
 - (i) Round to square
 - (ii) Round to Hexagonal
5. Operations on Slotter
 - (i) Keyway (T –slot)
 - (ii) Keyway cutting
6. Operations on milling machines
 - (i) Indexing
 - (ii) Gear manufacturing