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SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING
Machine Tools Laboratory

Key Features: Machine tools laboratory is one of the prime laboratory in the School of Mechanical Engineering. Conventional center lathe to Capstan lathe machines are available in this laboratory. Various machining operations on lathe named as step, taper turning, facing, drilling, boring and thread cutting are carried out, grinding of flat surfaces are performed using grinding machines. Gear cutting and indexing operations are performed using milling machine.

S.No.	Name of the Experiment	Specification and Key Equipment Details	Equipment Photo
1.	Lathe Machine with 3 Jaw Chuck	Flame hardened bed. Length of the Bed : 4 1/2 feet; Lead Screw: 4 TPI; Inch Thread: 4 to 24; Metric thread: 1 to 6 mm; <u>With following accessories/tools:</u> Electric motor and Reverse forward Switch; ~160 mm 3 Jaw Chuck; Chuck Plate; Tool Post Key; Dead Center; Carbide Tipped or HSS Tool Set (Single point, Round Nose, Knurling, Parting, Chamfering, Boring bar, Facing/turning, V Threading, Square Threading, Round Corner forming)	

2.	Universal Milling Machine	<p>Table Size: ~ 250 X 850 mm; Longitudinal feed: ~400 mm Vertical traverse: ~ 275 mm Swivel of table: 45o; Taper of Spindle: ISO 40; Number of Spindle Speeds: 6; Range of Spindle speed: ~ 100 to 700 rpm; Arbor Diameter: 1 inch; With following accessories/tools: Electric motor with Switch; Vertical attachment; Dividing Head 4 1/2 inch; Rotary Table 8 inch; swivel base vice 4 inch; Gear Cutter; Gear Cutter; End Mills (Roughing End Mill, Finishing End Mill, Square End Mill, Ball End Mill, Rounded Edge or Bull Nose End Mill, Tapered End Mill, Drilling End Mill, Chamfer End Mill, Corner Rounding End Mill, Concave Radius End Mill, Convex Radius End Mill);</p>	
3.	Lathe Machine with 4 Jaw Chuck	<p>200 mm 4 Jaw Chuck; Face Plate; Steady Plate; Follow Rest; Taper Turning Attachment; Carbide Tipped or HSS Tool Set (Single point, Round Nose, Knurling, Parting, Chamfering, Boring bar, Facing/turning, V Threading, Square Threading, Round Corner forming)</p>	



Lab Incharge

K.Mohan