

## MANUFACTURING SCIENCE & TECHNOLOGY-I LAB

Name of Lab In-charge: Mr. Vishal Shankar Srivastava

Name of technical assistant: Mr. B.D. Sharma

Course Outcomes:

CO Code	COURSE Outcome(CO)
1	Recognize various metal forming operations.
2	Prepare pattern with given allowances for casting.
3	Calculate the Grain Fine Number (GFN) of given sand sample.
4	Understand the plastic component processing.
5	Understand basic of powder metallurgy processing.

### List of Equipment:

1. Hand Press Machine
2. Injection moulding machine
3. Mounting press machine
4. Pipe Bending Machine
5. Sand testing Machine
6. Open Furnace
7. Lathe Machine
8. Anvil, Hammers, Tongs etc.
9. Rolling Machine

### List of Experiments:

Sr. No.	As per AKTU	Performed/ Not performed
1	Design of pattern for a desired casting (containing hole).	
2	Pattern making with proper allowance.	YES
3	Making a mould (with core) and casting.	
4	Sand testing methods (at least one, such as grain fineness number determination)	YES
5	Injection moulding with plastics	YES
6	Forging - hand forging processes	YES
7	Forging - power hammer study & operation	
8	Tube bending with the use of sand and on tube bending m/c.	YES
9	Press work experiment such as blanking/piercing, washer, making etc.	YES

10	Wire drawing/extrusion on soft material.	
11	Rolling-experiment.	YES
12	Bending & spring back.	
13	Powder metallurgy experiment.	YES
14	Jigs & Fixture experiment.	
15	Any other suitable experiment on manufacturing science / process / technique.	

**Pictures of Labs:**