

## Faculty of Mechanical Engineering

### M.E. Manufacturing Engineering

(R 2017) Semester – I

### MF5111 CAD / CAM Laboratory

(Requirements for a batch of 25 students)

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Computer Server	1		
2.	Computer nodes or systems (High end CPU with atleast 1 GB main memory) networked to the server	25		
3.	A3 size plotter	1		
4.	Laser Printer	1		
5.	CNC Lathe	1		
6.	CNC milling machine	1		
7.	Any High end integrated modeling and manufacturing CAD / CAM software	15		
8.	CAM Software for machining centre and turning centre (CNC Programming and tool path simulation for FANUC / Sinumeric and Heidenhain controller)	15		
9.	Licensed operating system	15		
10.	Support for CAPP	15		

**Faculty of Mechanical Engineering**  
**M.E. Manufacturing Engineering**  
**(R 2017) Semester – II**  
**MF5211 Automation and Metal Forming Laboratory**  
**(Requirements for a batch of 25 students)**

<b>Sl. No.</b>	<b>Description of Equipment</b>	<b>Quantity required (R)</b>	<b>Quantity available (A)</b>	<b>Deficiency (R - A)</b>
1.	Experimental two high cold rolling mill, to determine roll separate force, spread, torque for non-ferrous materials	1		
2.	Variable speed tensile testing machine - 5T capacity (min), to determine strain rate sensitivity	1		
3.	Water hammer metal forming equipment	1		
4.	Equipment to determine interface friction	1		
5.	Extrusion equipment to determine extrusion force	1		
6.	Equipment to determine formability	1		
7.	Hydraulic Press (60T) for Deep drawing Experiment	1		
8.	Compressor	1		
9.	FRL unit	1		
10.	Single and Double acting cylinders	1		
11.	5/2 Pneumatic Direction Control Valve (DCV)	2		
12.	3/2 Pneumatic limit Switches	4		
13.	Hydraulic Pump	1		

14.	Hydraulic cylinder	1		
15.	4/2 or 4/3 Hydraulic DCV	1		
16.	Pressure Relief Valve	1		
17.	5/2 Solenoid operated DCV	2		
18.	24V Dc Power Supply	1		
19.	Electrical limit switches or magnetic reed switches	4		
20.	4/2 Solenoid limit switches or magnetic reed switches	1		
21.	24V DC Power Supply	1		
22.	Electrical limit switches or magnetic reed switches	2		
23.	PLC with Input and Output devices. (Control of output Devices with Input Devices and PLC program should be done)	1		
24.	Automation Studio Simulation Software	1		