

Lesson Plan

Name of the Institute:		C. V. Raman Polytechnic
Department:		Mechanical Engineering
Semester/Division/Branch:		4 th Sem/ME
Subject Name with code:		Manufacturing Technology (Th-2)
Total No. of Class (Required):		60
Faculty Name:		Mr. Chandan Sourav Sahoo
Class No.	<i>Brief description of the Topic/Chapter to be taught</i>	Remarks
1	Composition of various tool materials	
2	Physical properties & uses of such tool materials.	
3	Cutting action of various tools such as Chisel, hacksaw blade, dies and reamer	
4	Turning tool geometry and purpose of tool angle	
5	Turning tool geometry and purpose of tool angle	
6	Machining process parameters (Speed, feed and depth of cut)	
7	Coolants and lubricants in machining and purpose	
8	Lathe Machine, Construction and working of lathe and CNC lathe	
9	Operations carried out in a lathe (Turning, thread cutting)	
10	Operations carried out in a lathe (Internal machining, parting off)	
11	Operations carried out in a lathe (taper turning, facing, knurling)	
12	Safety measures during machining	
13	Capstan lathe, Difference with respect to engine lathe	
14	Major components and their function of capstan lathe	
15	Define multiple tool holders of capstan lathe	
16	Turret Lathe, Difference with respect to capstan lathe	
17	Major components and their function of Turret Lathe	
18	Draw the tooling layout for preparation of a hexagonal bolt & bush	
19	Difference between Capstan and Turret Lathe	
20	Shaper, Potential application areas of a shaper machine	
21	Major components of Shaper and their function	
22	Explain the construction & working of tool head	
23	Explain the quick return mechanism through sketch	
24	State the specification of a shaping machine.	
25	Planing Machine	
26	Application area of a planer and its difference with respect to shaper	
27	Major components of Planer and their functions	
28	The table drive mechanism	
29	Working of tool and tool support	
30	Clamping of work through sketch	
31	Milling Machine	
32	Types of milling machine and operations performed by them	

33	Explain work holding attachment of Milling Machine	
34	CNC milling machine and its working principle	
35	Construction & working of simple dividing head	
36	Universal dividing head construction and working principle	
37	Specification of Milling and CNC Milling	
38	Procedure of simple and compound indexing	
39	Illustration of different indexing methods	
40	Slotter Machine	
41	Major components and their function	
42	Construction and working of slotter machine	
43	Tools used in slotter	
44	Grinding Machine	
45	Significance of grinding operations	
46	Manufacturing of grinding wheels	
47	Criteria for selecting of grinding wheels	
48	Specification of grinding wheels with example Working of	
49	Cylindrical Grinder, Surface Grinder, Centerless Grinder	
50	Internal Machining operations Classification of drilling machines	
51	Working of Bench drilling machine	
52	Pillar drilling machine	
53	Radial drilling machine	
54	Boring, Basic Principle of Boring	
55	Different between Boring and drilling	
56	Broaching, Types of Broaching (pull type, push type)	
57	Advantages of Broaching and applications	
58	Surface finish, lapping	
59	Definition of Surface finish	
60	Description of lapping& explain their specific cutting.	

Chandan Sawani Sahas
Signature of the Faculty

B. S. Sahas
Signature of the H.O.D