

LESSON PLAN

Subject Name- Tool Design	Branch- Production Engineering
Subject Code- BPE 2604	Semester- 6th

S/N	Module	Topic(s)	Period/ Hours
1	I	Design of single point cutting tools	1
2	I	Tool strength and rigidity calculation	2-3
3	I	Selection of tool angle, chip breakers	4
4	I	Carbide tipped tools, High production cutting tools	5-6
5	I	Form tools: Method of determining the profile of circular and flat form tool, Analytical and graphical method	7-9
6	I	Tutorial	10
7	II	Cutting forces in broaching	11
8	II	Geometric elements of broach teeth	12
9	II	Design of internal & external broach	13
10	II	Calculation of no. of teeth, Rigidity, Cutting force, Power	14-15
11	II	Tutorial	16
12	II	Forging Design: Upset forging, Forging allowances, Forging die design, Drop forging dies and auxiliary tools	17-19
13	II	Tutorial	20
14	III	Design for sheet metal works	21
15	III	Press working shearing action center of pressure	22
16	III	Clearance cutting force, die block design, punch design, punch support, stop, pilot stripper, knockout	23-25

S/N	Module	Topic(s)	Period/ Hours
17	III	Blanking & piercing die design	26
18	III	Progressive & compound die design	27
19	III	Drawing dies, Metal flow, Blank diameter, Drawing force	28-29
20	III	Tutorial	30
21	IV	Jigs & fixture design: location & clamping,	31-32
22	IV	Principle of locating clamping device	33-34
23	IV	Materials for locating & clamping elements, Design principle	35-37
24	IV	Design of drilling jig, Milling fixture	38-39
25	IV	Tutorial	40