LESSON PLAN

Name of the Faculty : G.F-II
Discipline Mechanical engineering
Semester 4th
Subject workshop technology-2
Lesson Plan duration : 15 weeks (from January , 2018 to April , 2018)
Work load (Lecture/ Practical) per week (in hours) : Lecture -03 practical-00

WEEK	THEORY		PRACTICAL	
	Lecture day	Topic (including assignment and test)	Practical Day	Topic
1	1	Cutting Tools - Various types of single point cutting tools and their uses		
	2	Single point cutting tool geometry, tool signature and its effect,		
	3	Heat produced during cutting and its effect		
2	4	Cutting speed, feed and depth of cut and their effect		
	5	Cutting Tool Materials - Properties of cutting tool material, Study of various cutting tool materials viz. High-speed steel, tungsten carbide, cobalt steel cemented carbides, stellite, ceramics and diamond		
	6	Principle of turning		
3	7	Function of various parts of a lathe		
	8	Fuel injectors Classification and specification of		
	9	Lathe tools and operations :- Plain and step turning, facing, parting off, taper turning, eccentric turning, drilling, reaming, boring, threading and knurling,		
4	10	Cutting parameters – Speed, feed and depth of cut for various materials and for various operations, machining time		
	11	Speed ratio, preferred numbers of speed selection		
	12	Lathe accessories:- Centers, dogs, different types of chucks, collets, face		
5	13	plate, angle plate, mandrel, steady rest, follower rest, taper turning attachment, tool post grinder, milling attachment, Quick change device for tools		
	14	steady rest, follower rest, taper turning attachment, tool post grinder, milling attachment,		
	15	Quick change device for tools		
6	16	Introduction to capstan and turret lathe		
	17	Principle of drilling.		
	18	Classification of drilling machines and their description		
7	19	Various operation performed on drilling machine – drilling, s		
	20	pot facing,		
	21	reaming, boring,		
	22	counter boring,		

	23	counter sinking,		
8	24	hole milling, tapping		
	25	Speeds and feeds during drilling, Impact of these		
	26	Types of drills and their features, nomenclature of a drill Drill holding devices		
9	27	Principle of boring		
	28	Classification of boring machines and their brief description		
	29	Boring tools, boring bars and boring heads		
10	30	types of steering gear boxes – Worm and nut		
	31	Working principle of shaper, planer and slotter.		
	32	Type of shapers		
11	33	Type of planers		
	34	Types of tools used and their geometry		
	35	Speeds and feeds in above processes		
12	36	Broaching Introduction		
	37	Types of broaching machines – Single ram and duplex ram horizontal type		
	38	vertical type pull up, pull down, push down.		
13	39	Elements of broach tool, broach tooth details – nomenclature, types, and tool material		
	40	Importance and use of jigs and fixture		
	41	Principle of location		
14	42	Locating devices		
	43	Clamping devices		
	44	Advantages of jigs and fixtures		
15	45	Revision		