Lesson Plan

Name of Faculty: Meenu Rani
Discipline: Agriculture Engg.
Semester: 3rd
Subject: Manufacturing Technology
Lesson Plan Duration: 15 weeks
Work load (lecture/practical) per week (in hours): Lecture: 04, Practical 04

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/ test)	Practical Day	Topic
Ist	1	Fits and limits and its types	Ist Week	Introduction to Fitting Shop and Bench work and fittings.
	2	Tolerances, its types and their applications		
	3	Gauges, its classification & gauge tolerances		
	4	Inspection instruments- Micrometer		
2nd	5	Vernier caliper, height gauges, Depth gauge	2nd Week	Introduction to Fitting Shop and Bench work and fittings.
	6	Revision and Problem solving		
	7	Dial comparator, straight edge, surface plate.		
	8	Metal cutting, metal shear, metal sawing, metal bending.		
3rd	9	Types of pipes, their materials and pipe standards.	3rd Week	Introduction to Fitting Shop and Bench work and fittings.
	10	Types of pipe fittings and applications, pipe threads and thread cuttings		
	11	Revision and Problem solving, Assignment		
	12	Necessity of metallic and non-metallic coatings,		
4th	13	Principles and processes of electroplating, galvanizing, vacuumizing, metal spraying	4th Week	Simple male-female fitting (fitting of pulley, bearings, gears on shafts).
	14	Painting and their applications		
	15	Preparation of base materials. Uses of primers, paints and finish coatings		
	16	Powder coating and its advantages.		
5th	17	Revision and Problem solving	5th Week	Simple male-female fitting (fitting of pulley, bearings, gears on shafts).
	18	Introduction to patterns and types of patterns		
	19	Pattern materials, cores and core boxes and preparation of cores		
	20	Core materials, preservation and storage of patterns		
6th	21	Introduction to moulding, types of moulding tools & sands	6th Week	Simple male-female fitting (fitting of pulley, bearings, gears on shafts).
	22	Types of moulds, defects in moulds and their remedies		
	23	Types of melting furnaces (pit furnace, tilting furnace		
	24	Cupola and oil fired furnaces		
7th	25	Induction furnaces	7th Week	Scraping, pipe fittings with leak proof joints.
	26	Casting defects and their remedies		
	27	Revision and Problem solving, Assignment		
	28	Introduction to Lathe machine & its classification		
8th	29	Types of lathes	8th Week	Scraping, pipe fittings with leak proof joints.
	30	Specifications, description and functions of lathe parts		
	31	Feed mechanism, drives and transmission, work holding devices, turning tools		
	32	Lathe operations – plain turning, facing, centring, parting off, undercutting		
9th	33	Taper turning, eccentric turning, drilling, reaming, thread cutting and knurling	9th Week	Scraping, pipe fittings with leak proof joints.
	34	Speed, feed and depth of cut.		
	35	Revision and Problem solving		
	36	Introduction to capstan and turret lathes		
10th	37	Copying lathe and their attachments	10th Week	Checking alignment and centre distance.
	38	Dfference between capstan and turret lathes		
	39	Tool holders and tool layout,		
	40	Tool geometry and use of throwaway tips, brazed tools and HSS tools.		
11th	41	Brazed tools and HSS tools.	11th Week	Checking alignment and centre distance.
	42	Revision and Problem solving		
	43	Working principle of a shaper, principle parts of a shaper		
	44	Quick return mechanism		
12th	45	Feed mechanism, Specifications of a shaper	12th Week	Checking alignment and centre distance.
	46	Shaper operations		
	47	Revision and Problem solving		
	48	Height gauge, depth gauge, bore gauge, slip gauge		
13th	49	Sine bar, measurement of taper by use of slip gauges, limits, fits and tolerances	13th Week	Checking of Practical
	50	Interchangeability and Go and Not-Go gauges		
	51	Revision and Problem solving, Assignment		
	52	Screw thread micrometer, thread gauge		
14th	53	Radius gauge, dial gauge, and gear tooth vernier	14th Week	Checking of Practical
	54	Hardness checking instruments,		
	55	Coating thickness checking instruments,		
	56	surface finish checking instruments		
15th	57	Tallyrand with computerized display of readings.	15th Week	Checking of Practical
	58	Revision of Ist & 2nd Chapters		
	59	Revision of 3rd & 4th Chapters		
	60	Revision of 5th & 6th Chapters		