

Name of the Teacher with Designation: Sh. Kuldeep Kumar (W/I)

Discipline : Mech. & Civil Engg.

Sem.: 1st Year

Subject: GWP-1 (Welding Shop )

Lesson plan Duration: 15 week (From Sep. 2022 - 2023)

Work Load (Lecture/Practical) Per Week (in hours) : Lecture : nil, Practical's :06

Week	Theory		Practical's	
	Lecture Day	Topic( Including Assignment/ Test)	Practical Day	Topic
1st			1	Safety Precautions of concerned shop and use of personal protective equipment (PPE), demonstration of tools, equipment, sample jobs, Best practices in the concerned shop. <b>Job I</b> Practice of striking arc and depositing uniform and straight beads on flat at different current levels. (Minimum 4 beads on M.S. flat at four setting of current level using shielded metal arc welding and differentiating their characteristics).
			2	Continued
2nd			1	Continued
			2	Continued
3rd			1	Continued
			2	Continued
4th			1	Introduction and importance of welding process as compared to other material joining processes. Specifications and type of ARC welding machines, parts identification, classification, selection and coding of electrodes. <b>Job II</b> Edge Preparation and welding lap joint using shielded metal arc welding (SMAW) process.
			2	Continued
5th			1	Continued
			2	Continued
6th			1	Continued
			2	Continued
7th			1	welding parameters, welding joints and welding positions. Common weldable materials, safety precautions in welding shop, use of Personal Protective Equipment, Use of welding screens. <b>Job III</b> Edge Preparation and welding butt joint using shielded metal arc welding process.
			2	Continued
8th			1	Continued
			2	Continued
9th			1	Continued
			2	Continued

10th				Hazards and remedies during welding, Elementary symbolic representations, demo of tools, equipment, sample jobs prepared. <b>Job IV</b> Edge Preparation and welding T Joint using shielded metal arcwelding (100mm x 6 mm M.S. Flat).
			1	Continued
11th			2	Continued
			1	Continued
			2	Continued
12th			1	Continued
			2	Continued
13th				Set up of Gas welding apparatus, and welding defects. <b>Job V</b> To make a simple job using oxy acetylene gas welding.
			1	Continued
			2	Continued
14th			1	Continued
			2	Continued
15th			1	Continued
			2	Continued

Name of the Teacher with Designation: Sh. Suresh Kumar (W/I)

Discipline : Mech. & Civil Engg.

Sem.: 1st Year

Subject: GWP-1 (Fitting Shop )

Lesson plan Duration: 15 week (From Sep. 2022 - 2023)

Work Load (Lecture/Practical) Per Week (in hours) : Lecture : nil, Practical's :06

Week	Theory		Practical's	
	Lecture Day	Topic( Including Assignment/ Test)	Practical Day	Topic
1st			1	Safety Precautions of concerned shop and use of personal protective equipment (PPE), demonstration of tools, equipment, sample jobs, Best practices in the concerned shop. Introduction and Function of holding/ clamping devices, hand tools and cutting tools. <b>Job I</b> To fit hacksaw blade in its frame and perform hacksawing operation by using marking media and marking tool and straight sawing practice.
			2	Continued
2nd			1	Continued
			2	Continued
3rd			1	Continued
			2	Continued
4th			1	Practical applications of fitting and plumbing Introduction, function and types of marking and measuring tools and instruments (surface plate, try square, caliper, steel rule, scriber and Vernier caliper) <b>Job II</b> To perform filing on MS workpiece (75 * 50 * 6 mm) for giving it a perfect rectangular shape and drilling, tapping operation.
			2	Continued
5th			1	Continued
			2	Continued
6th			1	Continued
			2	Continued
7th			1	Identification of materials. (Iron, Copper, Stainless Steel, Aluminum etc.) and identification of various steel sections (flat, angle, channel, bar etc.). Introduction to various types of pipes (eg water, steam, gas etc) and functions of various pipe fitting items (GI pipe fittings, CPVC pipe fittings), Methods of pipe joints. <b>Job III</b> To perform step filing operation at right angle on MS workpiece.
			2	Continued
8th			1	Continued
			2	Continued
9th			1	Continued
			2	Continued
10th			1	Introduction to various types of threads (internal and external) <b>Job IV</b> Making external threads on a pipe by using die and to make a PVC/GI pipe connection using nipple and socket.
			2	Continued
11th			1	Continued

			2	Continued
12th			1	Continued
			2	Continued
13th			1	Description and demonstration of various types of drills, taps and dies. <b>Job</b> V Fitting of all components of wash basin and ball valve in a tank.
			2	Continued
14th			1	Continued
			2	Continued
15th			1	Continued
			2	Continued

Name of the Teacher with Designation: Sh. Vijay (W/I)

Discipline : Mech. & Civil Engg.

Sem.: 1st Year

Subject: GWP-1 (Sheet Metal Shop )

Lesson plan Duration: 15 week (From Sep. 2022 - 2023)

Work Load (Lecture/Practical) Per Week (in hours) : Lecture : nil, Practical's :06

Week	Theory		Practical's	
	Lecture Day	Topic( Including Assignment/ Test)	Practical Day	Topic
1st			1	Safety Precautions of concerned shop and use of personal protective equipment (PPE), demonstration of tools, equipment, sample jobs, best practices in the concerned shop. <b>Job I</b> Prepare a seam joint by using hand tools on GI sheet.
			2	Continued
2nd			1	Continued
			2	Continued
3rd			1	Continued
			2	Continued
4th			1	Demonstration of various power tools, apparatus, equipment, hand tools used in sheet metal shop. <b>Job II</b> To prepare riveted lap joint (single/double) on GI sheet.
			2	Continued
5th			1	Continued
			2	Continued
6th			1	Continued
			2	Continued
7th			1	<b>Job III</b> To fabricate a funnel of GI sheet using operations of shearing, flattening and bending.
			2	Continued
8th			1	Continued
			2	Continued
9th			1	Continued
			2	Continued
10th			1	<b>Job IV</b> To fabricate a conduit joint using various sheet metal operations.
			2	Continued
11th			1	Continued
			2	Continued
12th			1	Continued
			2	Continued
13th			1	Job V To fabricate a utility job (eg soap case/file tray/canister box) of thin GI sheet.
			2	Continued
14th			1	Continued
			2	Continued
15th			1	Continued
			2	Continued

Name of the Teacher with Designation: Sh. Charan Singh (W/I)

Discipline : Mech. & Civil Engg.

Sem.: 1st Year

Subject: GWP-1 (Carpentry Shop )

Lesson plan Duration: 15 week (From Sep. 2022 - 2023)

Work Load (Lecture/Practical) Per Week (in hours) : Lecture : nil, Practical's :06

Week	Theory		Practical's	
	Lecture Day	Topic( Including Assignment/ Test)	Practical Day	Topic
1st			1	Safety Precautions of concerned shop and use of personal protective equipment (PPE), demonstration of tools, equipment, sample jobs, Best practices in the concerned shop. <b>Job 1</b> Prepare a rectangular wooden block involving operations like Marking, sawing, planning to size, chiseling.
			2	Continued
2nd			1	Continued
			2	Continued
3rd			1	Continued
			2	Continued
4th			1	Introduction and industrial applications of carpentry jobs. Name and use of raw materials used in carpentry shop : wood & alternative materials(board, plywood) Introduction to wood, timber and their identification, shapes and specifications, their properties, applications & defects. Study of the joints in roofs, doors, windows and furniture, seasoning of wood. <b>Job II</b> Prepare a Half Lap Joint (cross, L or T - any one).
			2	Continued
5th			1	Continued
			2	Continued
6th			1	Continued
			2	Continued
7th			1	Names, uses, and types of hand tools such as Saws, C-Clamp, Chisels, Mallets, Carpenter's vices, Marking gauges, Try-squares, Rulers and other commonly used tools and materials used in carpentry shop by segregating as cutting tools, supporting tools, holding tools, measuring tools etc. Specification of iron jack plane used in carpentry shop. <b>Job III</b> Prepare a Mortise and Tenon joint (T-Joint).
			2	Continued
8th			1	Continued
			2	Continued
9th			1	Continued
			2	Continued
10th			1	Practices for Basic Carpentry Work Sawing practice using different types of saws Assembling jack plane — planning practice including sharpening and blade adjustment of jack plane cutter. <b>Job IV</b> Prepare a Dove tail Joint (Half lap dovetail joint).
			2	Continued
11th			1	Continued
			2	Continued
12th			1	Continued
			2	Continued

13th			1	Chiseling practice using different types of chisels including sharpening of chisel Making of different types of wooden pin and fixing methods. Marking measuring and inspection of jobs. Housekeeping practices and instructions. Job V Prepare a Bridle Joint.
			2	Continued
14th			1	Continued
			2	Continued
15th			1	Continued
			2	Continued

Name of the Teacher with Designation: Sh. Tilak Raj (W/I)

Discipline : Mech. & Civil Engg.

Sem.: 1st Year

Subject: GWP-1 (Elect. & Eletronics Shop )

Lesson plan Duration: 15 week (From Sep. 2022 - 2023)

Work Load (Lecture/Practical) Per Week (in hours) : Lecture : nil, Practical's :06

Week	Theory		Practical's	
	Lecture Day	Topic( Including Assignment/ Test)	Practical Day	Topic
1st			1	Safety Precautions of concerned shop and use of personal protective equipment (PPE), demonstration of tools, equipment, sample jobs, best practices in the concerned shop. <b>Job I</b> Carrying out house wiring circuits using fuse, switches, sockets, ceiling rose etc. in batten or P.V.C. casing-caping. Demo of conduit wiring through junctions.
			2	Continued
2nd			1	Continued
			2	Continued
3rd			1	Continued
			2	Continued
4th			1	Demonstration and identification of common electrical materials with standard ratings and specifications such as wires, cables, switches, MCB & ELCB, fuses, cleats, clamps and allied items, tools and accessories. <b>Job II</b> To prepare a three level Godown wiring circuit with PVC conduitwiring system.
			2	Continued
5th			1	Continued
			2	Continued
6th			1	Continued
			2	Continued
7th			1	Identification of phase, Neutral and Earth wires for connection to domestic electrical appliances and their connections to three pin plugs. Difference between series and parallel wiring. <b>Job III</b> Installation of Solar Panel, inverter and
			2	Continued
8th			1	Continued
			2	Continued
9th			1	Continued
			2	Continued
10th			1	Identification and familiarization with the following tools used in electronic shop such as Tweezers, Screw drivers (different sizes), Insulated Pliers, Cutter, Sniper, Philips Screw Driver (Star Screw Driver), L- Keys, Soldering Iron, soldering wire, flux and their demonstration and uses. Identification and familiarization with multimeter (analog and digital). Various types of protective devices such as wire fuse, cartridge fuse etc. Identification and familiarization with ear phone speaker connector, telephone jacks and similar male and female connectors (audio, video). <b>Job IV</b> Practice in the use of tools and instruments used in electronics shop. For this a small experimental set up may be done.
			2	Continued
11th			1	Continued
			2	Continued
12th			1	Continued
			2	Continued



13th			1	<b>Job V</b> Cut, strip, join an insulated wire with the help of soldering iron (repeat with different types of wires).
			2	Continued
14th			1	Continued
			2	Continued
15th			1	Continued
			2	Continued

Name of the Teacher with Designation: Sh. Ranbir Singh (W/I)

Discipline : Mech. & Civil Engg.

Sem.: 1st Year

Subject: GWP-1 (Painting Shop )

Lesson plan Duration: 15 week (From Sep. 2022 - 2023)

Work Load (Lecture/Practical) Per Week (in hours) : Lecture : nil, Practical's :06

Week	Theory		Practical's	
	Lecture Day	Topic( Including Assignment/ Test)	Practical Day	Topic
1st			1	Safety Precautions of concerned shop and use of personal protective equipment (PPE), demonstration of tools, equipment, sample jobs, Best practices in the concerned shop. <b>Job I</b> Prepare wooden surface for painting such as cleaning, sanding, applying putty, filling procedure and application of primer coat and brush paint the same.
			2	Continued
2nd			1	Continued
			2	Continued
3rd			1	Continued
			2	Continued
4th			1	Introduction to paints, varnishes, primers and their types, General properties of paints, Constituents of paints, polishes, their advantages and applications. <b>Job II</b> Painting on wooden and metallic surfaces by spray gun.
			2	Continued
5th			1	Continued
			2	Continued
6th			1	Continued
			2	Continued
7th			1	Introduction of powder coating and spray painting with their uses. Different types of tools and equipment used in polishing and painting. <b>Job III</b> Practice of lettering: name plates / sign board.
			2	Continued
8th			1	Continued
			2	Continued
9th			1	Continued
			2	Continued
10th			1	Preparation of different colours of the paints by using prime colours, Practical demonstration of powder coating and spray painting on a utility object. <b>Job IV</b> Practice of dip painting/powder coating.
			2	Continued
11th			1	Continued
			2	Continued
12th			1	Continued
			2	Continued
13th			1	<b>Job V</b> Prepare wooden surface for polishing, Apply French polish on wooden surface.
			2	Continued
14th			1	Continued
			2	Continued
15th			1	Continued
			2	Continued