


## “PVCNSSK” G.P BILASPUR AT KALOL(H.P)

<b>PLANNED SYLLABUS COVERAGE</b>						
		<b>Department: Mechanical Engg. Subject – Manufacturing Technology-I</b>				
		<b>Course - Diploma</b>			<b>Duration – 3 Years</b>	
<b>SYLLABUS COVERAGE</b>		<b>Total Periods -56</b>			<b>Theory –56 hours</b>	
Sr No	Period Nos	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
1	1-8	<b>Gas Welding</b>	1.1. Principle of operation 1.2. Oxyacetylene flame 1.2.1. Types of flame 1.3. Welding Techniques 1.4. Filler rods and fluxes for gas welding 1.5. Gas welding equipment and accessories	Welding Technology		
2	9-14	<b>Electric arc Welding</b>	1.6. Acetylene gas generator 2.1 Introduction to arc welding with procedures, equipment and applications. 2.2 Types of arc 2.3 Types of electrode used 2.4 Specifications of electrodes	Workshop Technology by R.S Khurmi		
3	15-18	<b>Resistance Welding</b>	3.1 Spot welding 3.2 Seam welding 3.3 Projection welding 3.4 Percussion welding			
4	19-24	<b>Jigs and Fixtures</b>	4.1 Importance and use of Jigs and fixtures. 4.2 Principles of Location 4.3 Locating Devices 4.4 Purpose of Clamping elements 4.5 Types of clamps 4.6 Types of drilling jigs 4.7 Types of milling and welding fixtures			
5	25-30	<b>Metal Forming Processes</b>	5.1 General Idea of following processes: <input type="checkbox"/> Die stamping <input type="checkbox"/> Drawing <input type="checkbox"/> Spinning <input type="checkbox"/> Rolling <input type="checkbox"/> Extruding <input type="checkbox"/> Forging <input type="checkbox"/> Tube drawing <input type="checkbox"/> Powder Metallurgy	-----do----- -		

SYLLABUS COVERAGE		Total Periods:56				Theory:56	
Sr No	Period Nos	Topic	Details	Instruction Reference	Additional Study Recommended	Remark	
6	31-38	<b>Grinding</b>	6.1. Purpose of grinding 6.2. Types of grinding machines and their working- Cylindrical, surface, centre less, tool and cutter grinder, Jig Grinder. 6.4. Various elements of grinding wheel - abrasive, grade, structure, bond. 6.5. Codification of grinding wheel 6.6. Selection of grinding wheel 6.7. Dressing, truing, balancing and mounting of wheel. 6.8. Wheel and work speeds and feeds. <b>6.9. Defects and remedies in grinding.</b>	Workshop Technology by BS Raghuvanshi,			
7	39-46	<b>Metal Finishing Processes</b>	7.1 Purpose of finishing surfaces 7.2 Surface roughness- Definition and units. 7.3 Honing Process: its applications 7.4 Description of hones 7.5 Brief idea of honing machines 7.6 Lapping Process; its application 7.7 Description of lapping compounds and tools. 7.8 Brief idea of lapping machines. 7.9 Super finishing process; its applications. 7.10 Use of super finishing attachment on Centre lathe 7.11 Polishing 7.12 Buffing	Elements of Workshop Technology by SK Chaudhary &Hajra,			
8	47-56	<b>Modern Machining Methods</b>	<b>Principle, process details, advantages limitations and applications of the following processes</b> 8.1. Electro discharge machining 8.2. Wire Cut EDM 8.3. Electric chemical machining 8.4. Chemical machining 8.5. Ultrasonic machining 8.7. Laser Beam machining. 8.8. Plasma arc machining <b>8.6 Additive Manufacturing</b>	----do----			

APPROVED	SIGN HOD
DATE :- 11/3/2022	