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**Kurigram Polytechnics Institute, Kurigram**  
**Semester plan**

Course name : Basic work shop practice (7011)

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No. of week	No. of Class	• General Objective	• Specific Object	Remarks
1	1	<b>Understand the safely productions in Fitting &amp; welding shop</b>	1.1. State general safety precaution in Fitting shop. 1.2. State general safety precaution in welding shop. 1.3. State the importance of good house keeping.	
	2			
2	1	<b>Demonstrate the application of basic metal working hand tools.</b>	2.1 Identify common hand tools used for metal and fitting works. 2.2 Check hand tools for sharpness. 2.2 Carryout minor maintenance and sharpening of tools used for fitting works. 2.4 Follow safety procedure during working in the fitting shop.	
	2			
3	1	<b>Demonstrate the application of measuring instruments and gages for bench work.</b>	3.1 Identify the measuring and layout tools. 3.2 Take measurement with vernier caliper and micrometer. 3.3 Measure and layout a fitting job. 3.4 Check/measure with gages (sheet and wire gage, drill gage, etc).	
	2			
4	1	<b>Demonstrate the application of machines and equipment</b>	4.1 Identify machines and equipment for specific use. 4.2 Take care and maintenance of machines and equipment used in the fitting shop	

		<b>for fitting works</b>		
5	1	<b>Show skill in sawing, chipping, filing, drilling and reaming</b>	5.1 Identify the operations of sawing, chipping, filing, drilling and reaming. 5.2 Perform sawing, chipping, filing, drilling and reaming operations. 5.3 Make a job involving sawing, chipping, filing, drilling and reaming operations (Hinge, Angle gage, etc). Follow safety procedures during sawing, chipping, filing, drilling and ream	
	2			
6	1	<b>Show skill in cutting threads</b>	6.1 Identify the taps and dies. 6.2 Cut internal and external threads with tap and die. 6.3 Follow safety procedures during working with taps and dies.	
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7	1	<b>Show skill in making sheet metal jobs</b>	7.1 Select appropriate sheet metal. 7.2 Select tools and equipment for sheet metal works. 7.3 Layout the sheet for jobs.(Development Drawing) 7.4 Make wire edge. 7.5 Make seam joint. 7.6 Make mug/measuring can/sugar scoup, etc.	
	2			
8	1	<b>Show skill in making pipe and duct</b>	8.1 Estimate the sheets required for pipe and duct. 8.2 Layout a sheet for pipe and duct. 8.3 Make pipe and duct. 8.4 Take care during making pipe and duct	
	2			
<b>9 &amp; 10</b>			<b>Class test ,quiz test and Mid semester Examination</b>	
11	1	<b>Show skill in soldering and brazing</b>	9.1 Select tools and equipment for soldering and brazing. 9.2 Make soldering and brazing joint. 9.3 Take care during soldering and brazing	
	2			
	1	<b>Show skill in arc welding</b>	10.1 Select welding tools and equipment. 10.2 Prepare work piece for welding joint. 10.3 Select proper current and voltage for arc welding. 10.4 Select appropriate electrodes.	

12	2		10.5 Make arc welding joints ( Lap, Butt, Tee, Corner, etc.) 10.6 Follow safe working procedures during arc welding	
13	1	<b>Show skill in welding by gas and in resistance welding</b>	11.1 Select tools and equipment for gas welding and gas cutting. 11.2 Select appropriate filler rod and flux. 11.3 Select appropriate flame for welding and cutting. 11.4 Make gas welding joints ( Lap, Butt, Tee, Corner, etc.) 11.5 Follow safe working procedures during arc welding. 11.6 Identify the resistance welding machines. 11.7 Identify accessories and tools for resistance welding. 11.8 Make spot welding joints. 11.9 Follow safe working procedures during working with spot welding machine.	
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<b>14, 15, 16</b>			<b>Class test ,Quize test, Extra class and Semester Final Examination.</b>	