

**TEXTILES COMMITTEE**

Infrastructure Requirements – Machine to Trainee ratio

**RESOURCE SUPPORT AGENCY
under Samarth**

Sr. No	Name of the Module	Course Code	Machine Requirement	Machine to Trainee Ratio
1.	Embroidery Machine Operator	TC GMT 01	Embroidery Machines	Machine to trainee ratio 1:2
2.	Fuser & Ironer	TC GMT 02	<ol style="list-style-type: none">1. Ironing table2. Steam iron with steam attachment3. Fusing machine	<ol style="list-style-type: none">1. Ironing table – Machine to trainee ratio 1:32. Steam iron with steam attachment - Machine to trainee ratio 1:33. Fusing machine- Machine to trainee ratio 1:10
3.	Computer Embroidery Machine Operator	TC GMT 03	Minimum six head computer embroidery machine along with computer and required supporting software	Machine to trainee ratio 1:15
4.	Garment Checker	TC GMT 04	Inspection table (minimum size 60X40 inches)	Machine to trainee ratio 1:5
5.	CAD Operator	TC GMT 05	<ol style="list-style-type: none">1. Computer set with CAD software2. Digitizing board3. Printers / plotters	<ol style="list-style-type: none">1. Computer set with CAD software – Machine to trainee ratio 1:152. Digitizing board – Machine to trainee
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				ratio 1:30 3. Printers / plotters – Machine to trainee ratio 1:30
6.	Sewing Machine Operator	TC GMT 06	<ol style="list-style-type: none"> 1. Industrial Sewing Machine 2. Buttonhole and buttoning machines for demo purpose: 	<ol style="list-style-type: none"> 1. Sewing Machines: Machine to trainee ratio 1:2 2. Buttonhole and buttoning machines for demo purpose: Machine to trainee ratio 1:15
7.	Pattern Maker	TC GMT 07	Table for Pattern Making (minimum size 60X40 inches)	Machine to Trainee ratio 1:5
8.	Fabric Checker	TC GMT 08	<ol style="list-style-type: none"> 1. Checking table (minimum size 64X40 inches) 2. Fabric inspection machine 	<ol style="list-style-type: none"> 1. Checking table – Machine to Trainee ratio 1:5 2. Fabric inspection machine – Machine to Trainee ratio 1:10
9.	Fabric Cutter	TC GMT 09	Cutting machines – straight/bend/circular	Machine to Trainee ratio 1:10

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10.	Overlock & Flatlock Machine Operator	TC GMT 10	<ol style="list-style-type: none">1. Overlock Stitching machines with accessories2. Flatlock Stitching machines with accessories	Machine to Trainee ratio 1:4
11.	Sewing Machine Mechanic	TC GMT 11	Sewing machine, Over lock machine, Flat lock machine, Feed of the arm machine, Bartack machine, Button stitch machine, Button hole machine	Machine to Trainee ratio 1:10 (for respective machines)
12.	Circular Knitting Machine Operator	TC KNT 01	Circular Knitting Machine	Machine to trainee ratio 1:10
13.	Warp Knitting Machine Operator	TC KNT 02	Warp Knitting Machine	Machine to trainee ratio 1:15
14.	Knitting Machine Operator – Flat Bed Knitting	TSC/Q4102	Flat Bed Knitting Machine	Machine to trainee ratio 1:15
15.	HHP Cheese Dyeing Machine Operator	TC PRC 01	<ol style="list-style-type: none">1. HT-HP Cheese Dyeing machine2. One crane for shifting bobbin carrier3. Hydro extractor (Desirable)	<ol style="list-style-type: none">1. HT-HP Cheese Dyeing machine:- Machine to Trainee ratio 1:152. Hydro extractor (Desirable):- Machine to Trainee ratio 1:30

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16.	Singeing Machine Operator	TC PRC 02	Fabric Singeing Machine	Machine to trainee ratio 1:30
17.	Desizing Machine Operator	TC PRC 03	Fabric Desizing Machine	Machine to trainee ratio 1:30
18.	Continuous Bleaching Range Machine Operator	TC PRC 04	Continuous Bleaching Range	Machine to trainee ratio 1:30
19.	Mercerizing Machine Operator	TC PRC 05	Fabric Mercerizing Machine	Machine to trainee ratio 1:30
20.	Jigger Machine Operator	TC PRC 06	Jigger Machine of any type like Jumbo or hooded etc	Machine to trainee ratio 1:30
21.	Stenter Machine Operator	TC PRC 07	Stenter Machine	Machine to trainee ratio 1:30
22.	Calendering Machine Operator	TC PRC 08	Calendering Machine	Machine to trainee ratio 1:30
23.	Zero Zero Finishing Machine Operator	TC PRC 09	Zero Zero Finishing Machine	Machine to trainee ratio 1:30
24.	Winch Dyeing Machine Operator	TC PRC 10	Winch Dyeing Machine	Machine to trainee ratio 1:30
25.	Soft Flow Dyeing Machine Operator	TC PRC 11	Soft Flow Dyeing Machine	Machine to trainee ratio 1:30
26.	Compacting Machine Operator	TC PRC 12	Compacting Machine	Machine to trainee ratio 1:30

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27.	Washing Operator (DENIM)	TC PRC 13	Washing Machine, Hydroextractor, Drier, Work station fitted with pant leg shaped strong wooden flat, Design pattern made up of rubber material, Compressed air with pressure, Work station Mounted Horizontal to the surface level - Fitted with Two M.S.pipe, each pipe per leg of the Jeans pant and both end of each pipe covered by the Rubber tube / sheet & tighten by suitable clamping. complete set is attached to the semi-rotary mechanism, Grinding Machine, Grinding wheel, Tacking Machine/Hand Tacking gun, Pressure tank for spraying, fitted with pressure indicator & Regulator.	Machine to trainee ratio 1:30
28.	Handloom Weaver (Frame Loom)	TC HLM 01	Handloom Machine	Machine to Trainee ratio 1:5



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29.	Hand Dyeing Operator	TC HLM 02	Dye Bath/Dyeing Vat and burners	Machine to Trainee ratio 1:5
30.	Hand Block Printing	TC HLM 03	In case of production units existing facility of blocks and printing table and in case of other Training Institutes printing table with blocks of different design and suitable no. of washers and boiler for steaming	Machine to Trainee ratio 1:4
31.	Dobby Handloom Weaver	TC HLM 04	Dobby Handloom	Machine to Trainee ratio 1:5
32.	Jacquard Handloom Weaver	TC HLM 05	Jacquard handloom	Machine to Trainee ratio 1:5
33.	Electroplating and Effluent Treatment	TC MET 01	<ol style="list-style-type: none"> 1. Buffering, Grinding & Polishing machine 2. Electro plating relevant line tanks 3. Effluent Treatment plant 	<ol style="list-style-type: none"> 1. Buffering, Grinding & Polishing machine (Machine to Trainee ratio 1:10) 2. Electro plating relevant line tanks (Machine to Trainee ratio 1:4) 3. Effluent Treatment plant
34.	Basic Art of Engraving	TC MET 02	Engraving equipments [Working Table (Tripod Stand), Engraving Kalam and Hammers]	Machine to Trainee ratio 1:1

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35.	Lacquering and Painting	TC MET 03	<ol style="list-style-type: none">1. Buffering, Grinding & Polishing machine2. Degreasing machine3. Spray booth4. Spray Gun5. Oven with backing6. Fresh Air System/Compressor	<ol style="list-style-type: none">1. Buffering, Grinding & Polishing machine (Machine to Trainee ratio 1:10)2. Degreasing machine (Machine to Trainee ratio 1:30)3. Spray booth (Machine to Trainee ratio 1:30)4. Spray Gun (Machine to Trainee ratio 1:30)5. Oven with backing (Machine to Trainee ratio 1:30)6. Fresh Air System/Compressor (Machine to Trainee ratio 1:30)
36.	Packaging	TC MET 04	Packaging machine (Sealing Equipments, Strapping equipments, wrapping machine, coding and labeling equipment)	Machine to Trainee ratio 1:30

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37.	Powder Coating	TC MET 05	<ol style="list-style-type: none">1. Pre treatment line of tanks for Phosphating / chromating2. Dryer Oven3. Spray booth4. Powder Spray Gun5. Curing Oven with backing6. Fresh Air System/Compressor	<ol style="list-style-type: none">1. Pre treatment line of tanks for Phosphating / chromating (Machine to Trainee ratio 1:4)2. Dryer Oven (Machine to Trainee ratio 1:30)3. Spray booth (Machine to Trainee ratio 1:30)4. Powder Spray Gun (Machine to Trainee ratio 1:30)5. Curing Oven with backing (Machine to Trainee ratio 1:30)6. Fresh Air System/Compressor (Machine to Trainee ratio 1:30)
38.	Quality Control	TC MET 06	Facility of testing lab which comprises testing equipments like Toxic Metal testing, drop tester, moisture meter and corrosion Resistance testing, Salt Spray unit, etc	Machine to Trainee ratio 1:30
39.	Computer Aided Design	TC MET 07	Computer system installed with CAD software	Machine to Trainee ratio 1:2



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40.	Welding and Soldering	TC MET 08	<ol style="list-style-type: none"> 1. Welding Machine 2. Soldering Equipments 	<ol style="list-style-type: none"> 1. Welding Machine (Machine to Trainee ratio 1:10) 2. Soldering Equipments (Machine to Trainee ratio 1:2)
41.	Carving Artisan - Stonecraft	HCS/Q1502	<ol style="list-style-type: none"> 1. Sanding / Buffing Machine 2. Marble Cutting Machine 3. Hand Cutter Machine 	<ol style="list-style-type: none"> 1. Sanding / Buffing Machine (Machine to Trainee ratio 1: 10) 2. Marble Cutting Machine (Machine to Trainee ratio 1: 10) 3. Hand Cutter Machine (Machine to Trainee ratio 1: 15)
42.	Inlay Artisan – Stonecraft	HCS/Q1504	Buffing Machine	Machine to Trainee ratio 1: 10
43.	Casting Operator (Metal Handicrafts)	HCS/Q2801	<ol style="list-style-type: none"> 1. Furnace 2. Drill Machine 	<ol style="list-style-type: none"> 1. Furnace (Machine to Trainee ratio 1: 30) 2. Drill Machine (Machine to Trainee ratio 1: 15)
44.	Stamping Operator (Metal Handicrafts)	HCS/Q2802	Stamping Machine	Machine to Trainee ratio 1: 10

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45.	Sakhta Saaz (Paper Mache)	HCS/Q4401	1. Putty Mixer 2. Hand Grinder 3. Compressor Machine	1. Putty Mixer (Machine to Trainee ratio 1: 10) 2. Hand Grinder (Machine to Trainee ratio 1: 5) 3. Compressor Machine (Machine to Trainee ratio 1: 30)
46.	Engraving/Carving/Etching Assistant	HCS/Q7001	Trimming Tool	Machine to Trainee ratio 1: 2
47.	Traditional Hand Embroiderer	HCS/Q7301	1. Embroidery Frame/Hoops (round and square) 2. Sewing Machine 3. Embroidery Machine 4. Design / Cutting Machine	1. Embroidery Frame/Hoops (round and square) (Machine to Trainee ratio 1: 1) 2. Sewing Machine (Machine to Trainee ratio 1: 6) 3. Embroidery Machine (Machine to Trainee ratio 1: 6) 4. Design / Cutting Machine (Machine to Trainee ratio 1: 6)
48.	Hand Crochet Lace Maker	HCS/Q7703	Lace Making /Crochet tools	Machine to Trainee ratio 1: 1
49.	Master Crochet Lace Maker	HCS/Q7704	Sewing Machine	Machine to Trainee ratio 1: 4

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50.	Crochet Lace Tailor	HCS/Q7705	Tailoring (Sewing) Machine	Machine to Trainee ratio 1: 4
51.	Bamboo Mat Weaver	HCS/Q8702	1. Stick / Slitting / Splitting Machine 2. Hand saw	1. Stick / Slitting / Splitting Machine (Machine to Trainee ratio 1:10) 2. Hand saw (Machine to Trainee ratio 1:4)
52.	Bamboo Basket Maker	HCS/Q8704	1. Bamboo splitting tools 2. Hand saw	1. Bamboo splitting tools (Machine to Trainee ratio 1: 3) 2. Hand saw (Machine to Trainee ratio 1: 4)
53.	Bamboo Utility Handicrafts Assembler	HCS/Q8705	1. Hand saw / zig saw 2. Circular saw 3. Bamboo shaver saw 4. Bamboo splitter	1. Hand saw / zig saw (Machine to Trainee ratio 1: 4) 2. Circular saw (Machine to Trainee ratio 1: 10) 3. Bamboo shaver saw (Machine to Trainee ratio 1: 4) 4. Bamboo splitter (Machine to Trainee ratio 1: 4)
54.	Handloom Weaver (Carpets)	HCS/Q5412	Carpet Handloom Machine	Machine to Trainee ratio 1:5

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55.	Carpet Weaver (Knotted)	HCS/Q5701	Carpet Knotted Machine	Machine to Trainee ratio 1:5
56.	Carpet Weaver (Tufted)	HCS/Q5702	Carpet Tufting Machine	Machine to Trainee ratio 1:5
57.	Jute Selector cum Assorter	TSC/Q0107	1. Jute Spreader Machine (Desirable) with other equipments 2. Jute Softener Machine (Desirable) with other equipments	Machine to Trainee ratio 1:30
58.	Jute Carding Operator	TSC/Q0108	1. Jute Breaker carding Machine with other equipments 2. Jute Finisher Carding Machine with other equipments	Machine to Trainee ratio 1:30
59.	Jute Spinning Sardar (Jobber) cum Jr. Supervisor	TSC/Q0204	Jute Spinning Frame Machines	Machine to Trainee ratio 1:30
60.	Jute Weft Winding Operator	TSC/Q0304	Any of Jute weft winding machine and/or any of Cop winding Machine in working condition	Machine to Trainee ratio 1:30
61.	Jute Beaming Operator	TSC/Q2104	Beaming and Sizing Machine	Machine to Trainee ratio 1:30



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62.	Automatic Shuttle Loom Operator	TSC/Q2201	Any shuttle loom fitted with weavers beam in working condition.	Machine to Trainee ratio 1:10
63.	Shuttle-Less Loom Weaver – Projectile	TSC/Q2202	Projectile Shuttleless loom fitted with weavers beam in working condition.	Machine to Trainee ratio 1:10
64.	Vanya Silk Reeling & Spinning Manufacturer	TC SILK 01	<ol style="list-style-type: none"> 1. Reeling cum twisting machine. 2. Buniyaad reeling machine. 3. Wet reeling machine 4. Motorised cum pedal operated spinning machine(Ring /flyer type) 5. Cocoon cooking technology/equipments (Open Pan/Two Pan/Pressurized) 6. Volume based cocoon sorting machine 7. Re-reeling machine 8. Skeinning & book making Machine. 9. Epprouvette 	Machine to Trainee ratio 1:10
65.	Mulberry Silk Reeling Manufacturer	TC SILK 02	<ol style="list-style-type: none"> 1. Cocoon Sorting Machine and assessment gadgets. 2. Hot Air Drying/Steam Stifling Machine 3. Storage Racks 	Machine to Trainee ratio 1:10



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			<ol style="list-style-type: none"> 4. Cocoon cooking equipments – Open Pan/Three Pan/Pressurised batch cooking/Conveyor cooking machine 5. Reeling Machines –Charkha, Cottage basin, Multi end, Semi-Automatic 6. Reel permeation chamber 7. Close type re-reeling machine. 8. Skeinning & book making M/c 9. Epprouvette 	
66.	Silk Weaving Manufacturer	TC SILK 03	<ol style="list-style-type: none"> 1. Soaking unit with all its accessories 2. Winding, Doubling and Twisting unit with all its accessories 3. Warping Machine with all its accessories 4. Pirn winding unit with all its accessories 5. Handloom / Powerloom / Shuttle-less looms with all its accessories 	Machine to Trainee ratio 1:30

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67.	Silk Wet Processing Manufacturer	TC SILK 04	<ol style="list-style-type: none">1. Water bath2. Beaker/Vat/Tub Dyeing Machine3. Lab. Winch / Padding Mangle with all accessories.4. Water Softening plant5. Printing Table with Blocks and Screens.6. Steam Ager7. Hydro extractor8. Colour Matching Cabinet9. Epprouvette10. Boiler for steam / hot waters	Machine to Trainee ratio 1:10
68.	Surgical Mask Machine Operator	TC TT 01	Programmable Logic Controller (PLC) based Surgical Mask Making Machine with complete line of operation to make the end product in working condition (Fully Automatic).	Machine to Trainee ratio 1:30
69.	Sanitary Napkin Machine Operator	TC TT 02	Sanitary napkin making machine with complete line of operation in working condition- Pulp pulverizer unit (Wood pulp pulverizer), super absorbent polymer feeding unit, Engraving cum top sheet feeding unit, Bottom film feeding unit, Back Release paper unit & Cutting unit,	Machine to Trainee ratio 1:30

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			Wings release paper unit, packing cum sealing unit	
70.	Needle Punch Nonwoven Machine Operator	TC TT 03	Needle Punch Nonwoven Machine with complete line of operation in working condition- opening and mixing unit, carding unit, lapping unit, needle punching unit and calender unit.	Machine to Trainee ratio 1:30
71.	Thermal Bonded Nonwoven Machine Operator	TC TT 04	Thermal Bonded Nonwoven Machine with complete line of operation in working condition- opening and mixing unit, carding unit, lapping unit, thermal bonding unit (Hot calendaring/through-Air thermal bonding/ultrasonic bonding/Radiant-heat bonding unit).	Machine to Trainee ratio 1:30

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72.	Chemical Bonded Nonwoven Machine Operator	TC TT 05	<ul style="list-style-type: none">• Chemical Bonded Nonwoven Machine with complete line of operation in working condition- opening and mixing unit, carding unit, lapping unit, chemical bonding unit (saturation bonding process/spray Technique/Foam Technique/Print Technique of Chemical Bonding/Powder bonding)• Drying of Chemical Bonded Nonwovens Machines (drum drying/belt drying/stenter drying/Infrared drying)	Machine to Trainee ratio 1:30
73.	Textile Coating Machine Operator	TC TT 06	<ul style="list-style-type: none">• Textile coating machine in working condition (Dip coating, Calendering, Direct	Machine to Trainee ratio 1:30



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Roll Coating, Knife Coating, Reverse Roll Coating, Rotary Screen Coating, Transfer Coating, Extrusion Coating, Gravure or Engraved roll coating, Spray Coating, Air-knife coating, Metering rod coating, Foamed and Crushed Foam Coating, Dry Powder Coating, Curtain Coating, Kiss Roll Coating).

- Drying of coated fabric machines
- Curing unit