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HAND & MACHINE EMBROIDERY

CBT Curriculum

National Vocational Certificate Level 4

Version 1 - February 2020



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Introduction

The art of decorating the different material like fabric, synthetic leather and leather etc. through thread and needle with hand or by using machine is known as Embroidery. An embroider is a tradesman who specializes in drawing a design on material with needle and thread. It is person's day-to-day tasks to draw the required or new designs on the material by using different kind of stitches. This person is also competent in incorporating sequin, beads, pearls, quilting etc. by using different techniques of decorative embroidery in context with required stitches. The person is able to plan and structure the work process according to the technical requirements and the company structure. He/she understands all stitching techniques, tools and have aesthetic sense to use different colour combinations as per the requirement of customer. Embroider must have the capability of understanding the culture and values of different local areas and can embroider the traditional / local products. The art started with hand embroidery now moved a step ahead, due to bulk productions semi auto machines and computerized machines are also in great demand. Exports and market requirements have increased the demands of machine and computerized embroidery experts, who are good in handling embroidery design on these machines.

Definition/ Description of the training programme for Hand and Machine Embroidery

Global fashion trends bring about swift changes in the products, processes and technology in this sector. Therefore, industry requirement for skilled workforce is increasing which can only be managed through setting relevant competency standards in collaboration with the leading industries. Being cognizant of this fact, National Vocational & Technical Training Commission (NAVTTTC) developed competency standards for Hand and Machine Embroidery under National Vocational Qualifications Framework (NVQF). These competency standards have been developed by a Qualifications Development Committee (QDC) and validated by the Qualifications Validation Committee (QVC) having representation from the leading Embroidered Garments manufacturing industry of the country.

Purpose of the training programme

The purpose of these qualifications is to set professional standards for Hand and Machine Embroidery Experts, who will serve as key elements enhancing quality of Pakistan's Hand and Machine Embroidery industry. The specific objectives of developing these qualifications are as under:

- Improve the professional competence of Hand and Machine Embroidery industry
- Capacitate the local community and trainers in modern CBT trainings, methodologies and processes as envisaged under NVQF
- Provide flexible pathways and progressions in Hand and Machine Embroidery industry
- Enable the trainees to perform their duties in efficient manner
- Establish a standardized and sustainable system of training in Hand and Machine Embroidery industry in Pakistan

Overall objectives of training programme

The objective of the training is to provide skilled manpower to improve the existing capacity of the embroidery designing sector. This training will provide the requisite skills to the trainees. It will enable the participants to meet the challenges in their field. This qualification is to produce employable, who can develop quality embroidery products for the local and international markets and can develop entrepreneurial skills to be employed / self-employed and inevitably set sustainable impact on their lives by enhancing their livelihood income.

Competencies to be gained after completion of course

At the end of the course, the trainee must have attained the following competencies:

- Contribute to Work Related Health and Safety (WHS) Initiatives
- Perform Advanced Communication
- Develop Advance Computer Application Skills
- Perform Surface Decorative Embroidery on Machine
- Perform Embellishment for Embroidery on Machine
- Perform Troubleshooting of Embroidery Machine
- Perform Basic Maintenance of Embroidery Machine
- Supervise the Embroidery Work
- Perform Embroidery on Computerized Embroidery Machine
- Manage Personal Finances
- Develop Entrepreneurial Skills

Possible job opportunities available immediately and later in the future

Embroiderer are employed in embroidery related industries. Experienced embroiderer may advance through promotions with the same employer or by moving to more advanced positions with other employers. They can become:

- Quality Inspector
- Supervisor
- Project Manager
- Machine Embroider
- Computerized Machine Embroider
- Senior Hand Embroider
- Entrepreneur

Trainee entry level

The entry for National Vocational Certificate Level 4, in (Hand and Machine Embroidery) “Level 4 Hand & Machine Embroider” is given below:

Title	Entry requirements
National Vocational Certificate level 4 in “Machine Embroidery”	The entry requirement of National Vocational Certificate Level-4 in Machine Embroidery is “Middle”.

Minimum qualification of Trainer

Teaching staff should have at least Bachelors in Engineering or Technology with 1 years' experience in relevant field **OR** DAE with 3 years' experience in relevant field

Teaching staff should also hold or be working towards a formal teaching qualification.

Other formal qualifications in the relevant sector of industry would be useful in addition to the above.

Recommended Trainer: Trainee ratio

The recommended maximum trainer: trainee ratio for this programme is 1 trainer for 20 trainees.

Medium of instruction i.e. language of instruction

Instruction will be in Urdu and English language.

Duration of the course (Total time, Theory & Practical time)

This curriculum comprises of 12 modules. The recommended delivery time is 1600 hours. Delivery of the course could therefore be full time, 6 days a week, for 01 year. Training providers are at liberty to develop other models of delivery, including part-time and evening delivery.

The full structure of the course is as follow:

Module	Total Duration (Hours)	Theory ¹ (Hours)	Practical ² (Hours)
Perform Computer Application	30	10	30
Perform Advanced Communication	30	19	11
Contribute to Work Related Health and Safety (WHS) Initiatives	30	9	21
Carry out different types of Embroidery Stitches by Free Motion Machine	290	15	275
Perform Surface Decorative Embroidery on Machine	290	15	275
Perform Embellishment for Embroidery on Machine	180	18	172
Perform Troubleshooting of Embroidery Machine	120	25	95
Perform Maintenance of Embroidery Machine	100	18	82
Supervise the Embroidery Work	150	40	110
Perform Embroidery on Computerized Embroidery Machine	200	18	182
Manage Personal Finances	30	22	8
Develop Entrepreneurial skills	150	30	120

¹ Learning Module hours in training provider premises

² Training workshop, laboratory and on-the-job workplace

Sequence of the modules

This qualification is made up of 12 modules from which 5 are generic and 1 is functional. The first 3 modules are related to basic working environment which are about health & safety, computer application and communication skills and other 2 are related to entrepreneurial skills and management of personal finances. These modules will run in parallel with technical modules which we will teach in mentioned sequence as 4,5,6,7,8 & 10. These technical modules are about to train students for the embroideries by using machines (Carry out different types of Embroidery Stitches by free motion machine, Perform Surface Decorative Embroidery on Machine, Perform Embellishment for Embroidery on Machine, Perform Troubleshooting of Embroidery Machine, Perform Basic Maintenance of Embroidery Machine). Meanwhile, supervise embroidery work module also teach in parallel with these technical and generic modules.

Each module covers a range of learning components. These are intended to provide detailed guidance to teachers (for example the Learning Elements component) and give them additional support for preparing their lessons. The detail provided by each module will contribute to a standardized approach to teaching, ensuring that training providers in different parts of the country have clear information on what should be taught.

Sequence of the modules for National Vocational Certificate Level 4 in “Hand and Machine Embroidery”

Carry out different types of Embroidery Stitches by free motion machine	Supervise the embroidery work	Contribute to Work Related Health and Safety (WHS) Initiatives	Perform Advanced Communication	Perform Computer Application
Perform Surface Decorative Embroidery on Machine			Develop Entrepreneurial Skills	Manage Personal Finances
Perform Embellishment for Embroidery on Machine				
Perform Troubleshooting of Embroidery Machine				
Perform Basic Maintenance of				

Embroidery Machine				
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Summary – overview of the curriculum

Module Title and Aim	Learning Units	Theory Days/hours	Workplace Days/hours	Timeframe of modules
Module 1: Perform Computer Application Aim: The aim of this module is to develop advanced skills, knowledge and understanding about develop advance computer application skills	LU1: Manage Information System to complete a task LU2: Prepare the Presentation	8 Hours	22 Hours	30 Hours
Module 2: Perform Advanced Communication Aim: The aim of this module is to develop advanced skills, knowledge and understanding about perform advanced communication	LU1: Demonstrate professional skills LU2: Plan and Organize work LU3: Conduct trainings at workplace	19 Hours	11 Hours	30 Hours
Module 3: Contribute to Work Related Health and Safety (WHS) Initiatives Aim: The aim of this module is to develop advanced skills, knowledge and understanding about contribute to work related health and safety (WHS) initiatives	LU1: Contribute to initiate work-related health and safety measures LU2: Contribute to establish work-related health and safety measures LU3: Evaluate the organization's WHS system	9 Hours	21 Hours	30 Hours

Module Title and Aim	Learning Units	Theory Days/hours	Workplace Days/hours	Timeframe of modules
Module 4: Carry out different types of Embroidery Stitches by free motion machine Aim: The aim of this module is to develop advanced skills, knowledge and understanding about carry out different types of embroidery stitches by free motion machine	LU1: Prepare work station for basic stitches LU2: Carry out Flat Stitches LU3: Carry out Zigzag Stitches	15 Hours	275 Hours	290 Hours
Module 5: Perform Surface Decorative on Machine Embroidery Aim: The aim of this module is to develop advanced skills, knowledge and understanding about perform surface decorative on machine embroidery	LU1: Prepare work station for required embroidery LU2: Perform Applique work LU3: Carry out String/ribbon work LU4: Carry out quilt techniques	15 Hours	275 Hours	290 Hours

Module Title and Aim	Learning Units	Theory Days/hours	Workplace Days/hours	Timeframe of modules
Module 6: Perform Embellishment for Embroidery on Machine Aim: The aim of this module is to develop advanced skills, knowledge and understanding about perform embellishment for embroidery on machine	LU1: Prepare work station for embellishment LU2: Carry out Sequins work LU3: Perform Mirror (Sheesha) Work	18 Hours	172 Hours	180 Hours
Module 7: Perform Troubleshooting of Embroidery Machine Aim: The aim of this module is to develop advanced skills, knowledge and understanding about perform troubleshooting of embroidery machine	LU1: Rectify the thread issues during stitching LU2: Adjust the timing of needle bar LU3: Replace /Rewind the bobbin LU4: Replace broken needle LU5: Reinstall the machine software	25 Hours	95 Hours	120 Hours
Module 8: Perform Basic Maintenance of Embroidery Machine Aim: The aim of this module is to develop advanced skills, knowledge and understanding about perform basic maintenance of embroidery machine	LU1: Perform basic cleaning of the machine LU2: Perform oiling of the machine LU3: Adjust the needle and needle bar(gaz) LU4: Adjust the shuttle LU5: Change the motor belt	18 Hours	82 Hours	100 Hours

Module Title and Aim	Learning Units	Theory Days/hours	Workplace Days/hours	Timeframe of modules
Module 9: Supervise the embroidery work Aim: The aim of this module is to develop advanced skills, knowledge and understanding about supervisor duties and production process	LU1: Acquire material from store LU2: Assign duties to workers LU3: Ensure production operations according to the plan LU4: Prepare production report	40 Hours	110 Hours	150 Hours
Module 10: Perform Embroidery on Computer Embroidery Machine Aim: The aim of this module is to develop advanced skills, knowledge and understanding about perform embroidery on computer embroidery machine	LU1: Prepare computer embroidery machine LU2: Operate computer embroidery machine LU3: Carry out finishing process	18 Hours	182 Hours	200 Hours
Module 11: Manage Personal Finances Aim: The aim of this module is to develop advanced skills, knowledge and understanding about manage personal finances	LU1: Develop a personal budget LU2: Develop long term personal budget LU3: Identify ways to maximize future finances	22 Hours	8 Hours	30 Hours

Module Title and Aim	Learning Units	Theory Days/hours	Workplace Days/hours	Timeframe of modules
Module 12: Develop Entrepreneurial Skills Aim: The aim of this module is to develop advanced skills, knowledge and understanding about develop entrepreneurial skills	LU1: Develop self against skills and attributes required for entrepreneurship LU2: Collect information on viable business ideas LU3: Collect information on various funding sources LU4: Finalize the business idea LU5: Present business idea to potential support providers	30 Hours	120 Hours	150 Hours

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Module-1

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Modules

Module 1: Perform Computer Application

Objective of the module: This unit provides an overview of Microsoft Office programs to create personal, academic and business documents following current professional and/or industry standards, i.e. Data Entry, Power Point Presentation and managing data base and graphics for Design

It applies to individuals employed in a range of work environments who need to be able to present a set range of data in simple and direct forms

Duration: 30 Hours **Theory:** 8 hours **Practical:** 22 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1. Manage Information System to complete a task	The trainee will be able to: <ul style="list-style-type: none"> Perform Scanning of document Maintain Office Record and create backup Perform Printing of document Convert Files in required format Manage sizes of Files/Folders <ul style="list-style-type: none"> Compress 	List basic technical terminology to read help files and prompts Segregation of Data Define the relation among data Define criteria in the query Creates and modify reports and forms. Outline basic database design principles	Total 13 Hours Theory: 4 Hours Practical: 9 Hours	Files Computer Printer Scanner	Theory Classroom

	<ul style="list-style-type: none"> • Zip /unzip 				
LU2. Prepare the Presentation	The trainee will be able to: <ul style="list-style-type: none"> • Prepare and save presentation to meet user requirements by using prescribed ppt templates • Format presentation as per requirement • Print the presentation • Practice verbal presentation • Practice presentation through AV Aids 	Explain Power point presentation Methods and techniques involved in presentation preparation Types of presentation and its printing Outline the different types of formal and informal presentations	Total 17 Hours Theory: 4 Hours Practical: 13 Hours	Computer Printer Projector Multimedia screen	Theory Classroom

Module-2

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Module 2: Perform Advance Communication

Objective of the module: This unit describes the performance outcomes, skills and knowledge required to develop communication skills used professionally. It covers plan and organise work and conduct trainings at workplace, along with demonstrating professional skills independently.

Duration: 30 Hours **Theory:** 19 horus **Practical:** 11 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1. Demonstrate professional skills	The trainee will be able to: <ul style="list-style-type: none"> Use different modes of communication to communicate <ul style="list-style-type: none"> Speaking Reading Writing Listening Presentation visual representation etc Develop CV Skills according requirements Upgrade professional skills by attending trainings, webinars, conferences etc. 	Different communication techniques and their use according to the requirement of the process while maintaining quality Techniques of CV writing keeping in view the job requirements Highlight the professional skills required to improve through different methods	Total 12 Hours Theory: 9 Hours Practical: 3 Hours	Computer with accessories Internet	Theory Classroom

	<ul style="list-style-type: none"> Perform Continuous professional development as required at workplace Develop interview skills 				
LU2. Plan and Organize work	The trainee will be able to: <ul style="list-style-type: none"> Identify and plan steps to complete task Implement planned steps to complete task Evaluate planning and organizing process Identify hurdles and seek solutions to complete task 	Methods to identify the task included in the process to develop further plan Implement the plan and evaluate the process by identifying the issues arise during implementation Identify the possible solutions to resolve the issues and implement solution for smooth process	Total 9 Hours Theory: 7 Hours Practical: 2 Hours		Theory Classroom
LU3. Conduct trainings at workplace	The trainee will be able to: <ul style="list-style-type: none"> Conduct training need assessment Organize training session Support trainees in 	Explaining the training skills Identification of the professional skills Describing the advanced language skills	Total 9 Hours Theory: 3 Hours Practical:		Theory Classroom

	managing their learning by facilitating them <ul style="list-style-type: none"> • Provide feedback on progress of trainees 	Explaining the need of the training type at the work place Understanding of the assessment and trainee's feedback methods Direct and indirect communication methods	6 Hours		
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Module-3

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Module 3: Contribute to Work Related Health and Safety (WHS) Initiatives

Objective of the module: This unit describes the skills and knowledge required to manage the identification, review, development, implementation and evaluation of effective participation and consultation processes as an integral part of managing work health and safety (WHS).

Duration: 30 Hours **Theory:** 9 hours **Practical:** 21 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Contribute to initiate work-related health and safety measures	The trainee will be able to: <ul style="list-style-type: none"> • Compile database on work-related health and safety • Identify measures that address legal obligations. • Consult with individuals/ parties to identify and formulate measures and initiatives • Participate in consultative meeting 	Application of relevant mandatory health monitoring, including biological monitoring, to help secure work health and safety Difference between work-related health and safety measures and initiatives designed to meet specific legislative requirements and obligations, and those designed to support non-statutory health promotion programs, and give examples of each List factors that impact on work-related health and safety and their potential effects	Total 10 Hours Theory: 3 Hours Practical: 7 Hours		Theory Classroom
LU2: Contribute to	The trainee will be able to:	Identify internal and external sources of WHS information and data, and how to	Total 10 Hours		Theory

establish work-related health and safety measures	<ul style="list-style-type: none"> • Assist in planning of work-related health and safety measures • Contribute to the development of work-related health and safety measures • Assist to implement work-related health and safety measures (WHS Policy) and initiatives 	<p>access them</p> <p>Summarize relevant WHS legislation, other legislation (such as privacy and workers compensation) and common law rights and duties specific to work-related health and safety measures and initiatives</p> <p>Describe work-related health and safety measures and initiatives that either address specific legislative requirements and obligations, or support non-statutory health prevention programs, including:</p> <ul style="list-style-type: none"> ○ The factors impacting on worker health and safety that they address ○ Effectiveness ○ Costs and benefits ○ Criteria for decisions regarding their implementation in a specific workplace ○ How they should be implemented. 	<p>Theory:</p> <p>3 Hours</p> <p>Practical:</p> <p>7 Hours</p>		Classroom
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LU3: Evaluate the organization's WHS system	The trainee will be able to: <ul style="list-style-type: none"> Assess ongoing compliance with OHS (Occupational Health and safety) standards Take feedback from concerned persons regarding WHS measures. Assess the overall effectiveness of WHS management practices Communicate improvements in WHS Measures 	Outline organizational OHS and other relevant policies, procedures, processes and systems, including human resources Communicate with the department to organize and improve the WHS measures	Total 10 Hours Theory: 3 Hours Practical: 7 Hours		Theory Classroom
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Module-4

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Module 4: Carry out different types of Embroidery Stitches by Free Motion Machine

Objective of the module: The objective of this module is to develop knowledge, skills and understanding required to carry out different types of embroidery stitches by free motion machine

Duration: 290 Hours **Theory:** 15 Hours **Practical:** 275 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare workstation for basic stitches	The trainee will be able to: <ul style="list-style-type: none"> Collect instructed material required for assigned type of stitch for embroidery Clean the workstation from dust, fluff and oil Trace design on tracing sheet [butter paper, PVC, etc.] to be embroidered if required Transfer the design on given material Set thread and needle according to material and work instructions Interpret the instructions and artwork specifications 	Knowledge about different types of fabrics and other materials (leather, synthetic leather) used for embroidery; Embroidery threads and their classification according to thread types, shade (numbers) and sizes; Types and usage of tools & equipment (clipper, scissors, seam ripper etc.) Types of needles according to its numbers (sizes); Needle application according to required embroidery stitch Types, sizes and usage of embroidery frame (hoop) Process of cleaning by using different types of cleaning tools (sprays, brushes, dusters, etc.) Appropriate use of threads, & needles in accordance with design and surface requirements Understand the nature of design and embroidery	Total 14 Hours Theory: 3 Hours Practical: 11 Hours	Free Motion Embroidery Machine Tracing table Sharpener Ruler Needles Clippers Fabric scissors Paper scissors Measuring tape Tracing wheel Seam ripper Pins Pin cushions	Theory Classroom Practical Workshop

	<ul style="list-style-type: none"> Organize workplace according to embroidery Artwork and Design sample of the embroidered product 	<p>Arrange material, needle, & thread for the embroidery artwork</p> <p>Technical terms associated with different kinds of embroidery work</p>		<p>Thimble</p> <p>Embroidery hoop</p> <p>Plier</p>	
<p>LU2:</p> <p>Carry out Flat Stitches</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Perform basting to start embroidery on the fabric/material Perform the flat embroidery stitch following the traced/ transferred design lines Perform basic type of flat stitches (Running, Back & Stem), while ensuring firmness of embroidery stitches Perform embroidery using required type of flat stitches (Herringbone, Skip, long & short, shade), while ensuring firmness of embroidery stitches Lock the embroidery 	<p>Learn the sequence of basic embroidery in accordance with its complexity.</p> <p>Understanding the concept of embroidery stitches as outline embroidery and filling design</p> <p>Process of fixing material with embroidery hoop</p> <p>Explain types of flat stitches of embroidery in proper sequence; Running Stitch - Back Stitch - Stem Stitch - Satin Stitch - Kashmiri Stitch - Couching Stitch - Cross Stitch - Herringbone Stitch</p> <p>Techniques and applications (purposes) of flat stitches</p> <p>Processes of finishing the embroidery (clipping, trimming, stain removal, washing (if required) & ironing)</p>	<p>Total</p> <p>138 Hours</p> <p>Theory:</p> <p>6 Hours</p> <p>Practical:</p> <p>132 Hours</p>	<p>Free Motion Embroidery Machine</p> <p>Tracing table</p> <p>Sharpener</p> <p>Ruler</p> <p>Needles</p> <p>Clippers</p> <p>Fabric scissors</p> <p>Paper scissors</p> <p>Measuring tape</p> <p>Tracing wheel</p> <p>Seam ripper</p> <p>Pins</p> <p>Pin cushions</p> <p>Thimble</p> <p>Embroidery hoop</p>	<p>Theory</p> <p>Classroom</p> <p>Practical</p> <p>Workshop</p>

	<p>work with final stitch while avoiding tightness</p> <ul style="list-style-type: none"> Control the quality of embroidery according to quality standards and the artwork specifications Perform finishing procedures includes clipping, stain removal and ironing of final product 			Plier	
LU3: Carry out zigzag Stitches	The trainee will be able to: <ul style="list-style-type: none"> Perform basting to start embroidery on the fabric/material Preform the zigzag embroidery stitch i.e (satin, jump, round, E (chawal), shade, fancy) following the traced/ transferred design lines Carry out embroidery using required type of zigzag stitches, while ensuring firmness of embroidery stitches Lock the embroidery 	<p>Define basting & knotting and its importance in embroidery; Basting and knotting techniques</p> <p>Understanding the elements of design and their importance in embroidery process</p> <p>Explain types of loop stitches of embroidery in proper sequence; Chain Stitch - Lazy-daisy Stitch - Button hole Stitch - Blanket Stitch - Fishbone Stitch - Feather Stitch - fly Stitch</p> <p>Techniques and applications (purposes) of loop stitches</p> <p>Technique and importance of controlling the thread during embroidery process</p> <p>Importance and usage of process of locking</p>	Total 138 Hours Theory: 6 Hours Practical: 132 Hours	Free Motion Embroidery Machine Tracing table Sharpener Ruler Needles Clippers Fabric scissors Paper scissors Measuring tape Tracing wheel	Theory Classroom Practical Workshop

	<p>work with final stitch while avoiding tightness</p> <ul style="list-style-type: none"> • Control the quality of embroidery according to quality standards and the artwork specifications • Perform finishing procedures includes clipping, stain removal and ironing of final product 	<p>the embroidery; Techniques of locking the embroidery</p> <p>Procedure of handling the remaining thread and disposal of wasted material.</p>		<p>Seam ripper</p> <p>Pins</p> <p>Pin cushions</p> <p>Thimble</p> <p>Embroidery hoop</p> <p>Plier</p>	
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Module-5

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Module 5: Perform Surface Decorative on Embroidery Machine

Objective of the module: The objective of this module is to develop knowledge, skills and understanding required to perform surface decorative on embroidery machine.

Duration: 290 Hours **Theory:** 15 Hours **Practical:** 275 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare work station for required embroidery	The trainee will be able to: <ul style="list-style-type: none"> Prepare the workstation for work operation (gather material, set the suitable needle, technical file/ sewing instruction/sketch and sewing thread) Clean the workstation area to make it free from any potential hazards Trace design on tracing sheet [butter paper, PVC, etc.] design accurately & neatly on the fabric if required Transfer traced design on given material Fix the pattern in the embroidery hoop/adda with the help of extra fabric 	Knowledge about different types of fabrics and other materials (leather, synthetic leather) used for embroidery; Embroidery threads and their classification according to thread types, shade (numbers) and sizes; Types and usage of tools & equipment (clipper, scissors, seam ripper etc.) Types of needles according to its numbers (sizes); Needle application according to required embroidery stitch Types, sizes and usage of embroidery frame (hoop/adda) Process of cleaning by using different types of cleaning tools (sprays, brushes, dusters, etc.) Appropriate use of threads, & needles in accordance with design and surface requirements Understand the nature of design and	Total 14 Hours Theory: 3 Hours Practical: 11 Hours	Embroidery Machine Tracing table Sharpener Ruler Needles Clippers Fabric scissors Paper scissors Measuring tape Tracing wheel Seam ripper Pins Pin cushions Thimble	Theory Classroom Practical Workshop

	<ul style="list-style-type: none"> • Fix and tighten the fabric/material on the hand frame/frame(adda) while avoiding plication • Fix appropriate needle & thread in machine considering the texture, fibre and type of embroidery to be done • Follow the instructions and artwork specifications • Check that the materials to be used are free from faults • Ensure the materials used meet the specification matching embroidery Artwork and design sample of the embroidered product 	<p>embroidery</p> <p>Arrange material, needle, & thread for the embroidery artwork</p> <p>Explain about the faults in the material (stain free, broken weave, etc.)</p> <p>Technical terms associated with different kinds of embroidery work</p>		<p>Embroidery hoop</p> <p>Plier</p>	
<p>LU2:</p> <p>Perform Applique work</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> • Estimate material consumption for required work • Transfer design on given applique material • Fuse applique material [if required] using 	<p>Knowledge of the embroidery styles, design & colour concepts in context with applique work</p> <p>Common factors affecting stitching & embroidery</p> <p>The actions need to be taken in the event of damaged tool/material in applique work</p>	<p>Total</p> <p>80</p> <p>Theory:</p> <p>4 Hours</p> <p>Practical:</p>	<p>Tracing table</p> <p>Sharpener</p> <p>Ruler</p> <p>Needles</p> <p>Clippers</p>	<p>Theory</p> <p>Classroom</p> <p>Practical</p>

	<p>ironing/pinning/basting process while maintaining surface evenness</p> <ul style="list-style-type: none"> • Cut material from design outline or Cut the material with seam allowance for rali work, whichever required according to design • Tack applique patch with machine embroidery stitches on given material at designated position • Lock the embroidery work with final stitch while avoiding tightness, if required • Control the quality of embroidery according to quality standards and the artwork specifications • Perform finishing procedures includes clipping, stain removal and ironing of final product 	<p>Measurement of material according to design consumption</p> <p>Explain different types of fusing and lining; Their application and usage techniques according to design requirements</p> <p>The problems encountered when working on different types of materials during fusing process</p> <p>Process of cutting applique piece with or without seam allowance</p> <p>Process of tacking applique piece through stitch</p> <p>Importance and usage of process of locking the embroidery; Techniques of locking the embroidery</p> <p>Different types of defects and their segregation</p> <p>Technique and importance of controlling the plication during applique process</p> <p>Procedure of handling the remaining thread and disposal of wasted material.</p>	76 Hours	<p>Fabric scissors</p> <p>Paper scissors</p> <p>Curve scissor</p> <p>Measuring tape</p> <p>Tracing wheel</p> <p>Seam ripper</p> <p>Pins</p> <p>Pin cushions</p> <p>Thimble</p> <p>Embroidery hoop</p> <p>Plier</p>	Workshop
<p>LU3:</p> <p>Carry out String/ribbon</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> • Perform basting to start embroidery on the 	<p>Define basting & knotting and its importance in embroidery; Basting and knotting techniques</p>	<p>Total</p> <p>43</p> <p>Theory:</p>	<p>Tracing table</p> <p>Sharpener</p>	Theory

work	<p>fabric/material</p> <ul style="list-style-type: none"> • Burn ribbon from starting and ending points • Lock the embroidery work with final stitch while avoiding tightness, if required. Attach ribbon with sew-in procedure by following design • Develop ribbon ornaments (flower, petal etc.) by twisting and folding techniques as per design requirements • Lock the embroidery work with final stitch while avoiding tightness, if required • Control the quality of embroidery according to quality standards and the artwork specifications • Perform required finishing procedures (e.g. clipping, stain removal and adhesive/acrylic) on the final product 	<p>Principle of designs</p> <p>Techniques of chain and lock stitch.</p> <p>Explain positive and negative area in embroidery design</p> <p>Types of cut work according to design and material</p> <p>Methods of cut work with different tools</p> <p>Explain about button hole stitch and its Techniques</p>	<p>3 Hours</p> <p>Practical: 40 Hours</p>	<p>Ruler</p> <p>Needles</p> <p>Clippers</p> <p>Fabric scissors</p> <p>Paper scissors</p> <p>Curve scissor</p> <p>Measuring tape</p> <p>Tracing wheel</p> <p>Seam ripper</p> <p>Pins</p> <p>Pin cushions</p> <p>Thimble</p> <p>Embroidery hoop</p> <p>Plier</p> <p>Solder</p>	<p>Classroom</p> <p>Practical</p> <p>Workshop</p>
<p>LU 4:</p> <p>Carry out quilt</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> • Estimate material 	<p>Knowledge about quilts and its types;</p> <p>Usage of quilts;</p> <p>Explain different types of fusing and lining</p>	<p>Total 153</p> <p>Theory:</p>	<p>Tracing table</p> <p>Sharpener</p>	<p>Theory</p>

techniques	<p>consumption according to given design</p> <ul style="list-style-type: none"> • Select appropriate needle & thread considering the texture, fibre of material for embroidery to be done • Iron the material and transfer given design on given material to remove plication • Perform cutting of the material to be quilted • Perform basting to start embroidery on the fabric/material • Pin and sew material with quilt backing sheet by avoid puckering under the given material • Lock the embroidery work with final stitch while avoiding tightness • Iron the material and transfer given design on given material to remove plication (folding) • Control the quality of embroidery according to quality standards and the artwork specifications 	<p>used in quilting; Their application and usage techniques according to quilting design requirements</p> <p>Process of attaching different materials for quilting;</p> <p>Process of cutting the material during quilting;</p> <p>Explain about running stitch and its Techniques</p>	<p>5 Hours Practical: 148 Hours</p>	<p>Ruler Needles Clippers Fabric scissors Paper scissors Curve scissor Measuring tape Tracing wheel Seam ripper Pins Pin cushions Thimble Embroidery hoop Plier Solder</p>	<p>Classroom</p> <p>Practical</p> <p>Workshop</p>
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	<ul style="list-style-type: none"> Perform required finishing procedures (e.g. clipping, stain removal and adhesive/acrylic) on the final product 				
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Module-6

HAND & MACHINE EMBROIDERY

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Module 6: Perform Embellishment for Embroidery on Machine

Objective of the module: The objective of this module is to develop knowledge, skills and understanding required to perform basic embellishment for embroidery on machine.

Duration: 180 Hours **Theory:** 18 Hours **Practical:** 162 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare work station for embellishment	The trainee will be able to: <ul style="list-style-type: none"> Prepare the workstation for work operation (gather material, set the suitable needle, technical file/ sewing instruction/sketch and sewing thread) Clean the workstation are to make it free form ny potential hazards Trace design on tracing sheet [butter paper, PVC, etc.] design accurately & neatly on the fabric if required Transfer traced design 	Knowledge about different types of fabrics and other materials (leather, synthetic leather) used for embroidery; Embroidery threads and their classification according to thread types, shade (numbers) and sizes; Types and usage of tools & equipment (clipper, scissors, seam ripper etc.) Types of needles according to its numbers (sizes); Needle application according to required embroidery stitch Types, sizes and usage of embroidery frame (hoop/adda) Process of cleaning by using different types of cleaning tools (sprays, brushes, dusters, etc.) Appropriate use of threads, & needles in accordance with design and surface requirements Understand the nature of design and embroidery	Total 8 Hours Theory: 2 Hours Practical: 6 Hours	Tracing table Sharpener Ruler Needles Clippers Fabric scissors Paper scissors Curve scissor Measuring tape Tracing wheel Seam ripper Pins Pin cushions Thimble Embroidery hoop Plier Solder	Theory Classroom Practical Workshop

	<p>on given material</p> <ul style="list-style-type: none"> • Fix the pattern in the embroidery hoop/adda with the help of extra fabric • Fix and tighten the fabric/material on the hand frame/frame(adda) while avoiding plication • Fix appropriate needle & thread in machine considering the texture, fiber and type of embroidery to be done • Follow the instructions and artwork specifications • Check that the materials to be used are free from faults • Ensure the materials used meet the specification matching embroidery Artwork and design sample of the embroidered product 	<p>Arrange material, needle, & thread for the embroidery artwork</p> <p>Explain about the faults in the material (stain free, broken weave, etc.)</p> <p>Technical terms associated with different kinds of embroidery work</p>			
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LU2: Carry out Sequins work	The trainee will be able to: <ul style="list-style-type: none"> • Perform basting to start embroidery on the fabric/material • Apply the sequin on the traced design by avoiding breakage of sequins • Lock the embroidery work with final stitch while avoiding tightness, if required • Control the quality of embroidery according to quality standards and the artwork specifications • Perform required finishing procedures (e.g. clipping, stain removal and adhesive/acrylic) on the final product 	<p>Explain about beads & sequin and its uses</p> <p>Basting and knotting techniques in beads & sequin work</p> <p>Application process of beads & sequin on the design</p> <p>Measurement of material according to design consumption</p> <p>Explain about running stitch and its uses in beads & sequin</p> <p>Importance and usage of process of locking the embroidery; Techniques of locking the embroidery</p> <p>Explain about maintaining the quality considering neatness, material, stitching, traced lines etc. in beads & sequin work</p> <p>Procedure of handling the remaining thread and disposal of wasted material.</p>	Total 86 Hours Theory: 8 Hours Practical: 78 Hours	Tracing table Sharpener Ruler Needles Clippers Fabric scissors Paper scissors Curve scissor Measuring tape Tracing wheel Seam ripper Pins Pin cushions Thimble Embroidery hoop Plier Solder	Theory Classroom Practical Workshop
LU3 Perfom Mirror (Sheesha) Work	The trainee will be able to: <ul style="list-style-type: none"> • Attach mirror with glue/adhesive on the traced design 	<p>Uses and importance of mirror in embroidery</p> <p>Types and sizes of mirror; Techniques of pasting mirror for embroidery</p>	Total 86 Hours Theory:	Tracing table Sharpener Ruler Needles	Theory Classroom

	<ul style="list-style-type: none"> • Attach mirror on the traced design with jump stitch carefully • Lock the embroidery work with final stitch while avoiding tightness, if required • Control the quality of embroidery according to quality standards and the artwork specifications • Perform required finishing procedures (e.g. clipping, stain removal and adhesive/acrylic) on the final product 	<p>Types and sizes of mirror ring; Techniques of pasting mirror ring for embroidery</p> <p>Basting and knotting techniques in context with sheesha work</p> <p>Explain jump stitch processes while avoiding breakage and its usage with mirror;</p> <p>Process to cover the mirror ring with embroidery thread by using buttonhole stitch and attach mirror ring on top of mirror</p>	<p>8 Hours</p> <p>Practical:</p> <p>78 Hours</p>	<p>Clippers</p> <p>Fabric scissors</p> <p>Paper scissors</p> <p>Curve scissor</p> <p>Measuring tape</p> <p>Tracing wheel</p> <p>Seam ripper</p> <p>Pins</p> <p>Pin cushions</p> <p>Thimble</p> <p>Embroidery hoop</p> <p>Plier</p> <p>Solder</p>	<p>Practical</p> <p>Workshop</p>
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Module-7

HAND & MACHINE EMBROIDERY

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Module 7: Perform Troubleshooting of Embroidery Machine

Objective of the module: The objective of this module is to develop knowledge, skills and understanding required to perform troubleshooting of embroidery machine.

Duration: 120 Hours **Theory:** 25 Hours **Practical:** 95 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Rectify the thread issues during stitching	The trainee will be able to: <ul style="list-style-type: none"> Power off the machine Check the tension post, if thread is tight or loose Tighten or loose the tension post screw as required Check the bobbin case for thread tension Tight or loose the screw of bobbin with screw driver as required Ensure bobbin is moving anti clock wise Rewind or change the bobbin if thread is finished 	Knowledge and understanding of troubleshooting Knowledge about assembling and disassembling of motor belt Knowledge and understanding of machine parts Knowledge and understanding of machine oils Well aware with the basic maintenance of machine Well informed with oiling techniques, oil showering quantity Knowledge about threading of the machine Knowledge and understanding of thread tension and its rectification Knowledge about computer machine formats and basic usage Knowledge of frames and their sizes knowledge and usage of Reinforcement	Total 28 Hours Theory: 8 Hours Practical: 20 Hours	Free motion machine Bobbin case Screw driver Needle Computer embroidery machine Screw wrench PPES Bobbin Threads Bobbin Rewinder L key set Frame hoop Oil can	Theory Classroom Practical Workshop

		<p>material</p> <p>Techniques of embroidery designs tracing</p> <p>Tracing materials and methods</p> <p>Techniques of transferring methods</p> <p>stain removal processes</p> <p>Usage of PPEs</p> <p>Knowledge of basic precautionary measures for maintenance</p> <p>Knowledge about usage of tool kits</p> <p>Knowledge about embroidery stitches</p> <p>Placement of designs</p>			
<p>LU2:</p> <p>Adjust the timing of needle bar</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> • Loose the needle bar with screw driver • Set the timing between shuttle and needle bar • Tighten the needle bar with the screw driver 	<p>Well aware with the needles, needle bar and fabrics</p> <p>Knowledge and understanding of range setting on the machine</p>	<p>Total</p> <p>21 Hours</p> <p>Theory:</p> <p>4 Hours</p> <p>Practical:</p> <p>17 Hours</p>	<p>Free motion machine</p> <p>Bobbin case</p> <p>Screw driver</p> <p>Sand paper (Embry)</p> <p>Needle</p> <p>Computer embroidery machine</p> <p>Screw wrench</p> <p>PPES</p> <p>Bobbin</p> <p>Threads</p> <p>Bobbin Rewinder</p>	<p>Theory</p> <p>Classroom</p> <p>Practical</p> <p>Workshop</p>

				L key set Frame hoop Oil can Needle bar Shuttle	
LU3: Replace /Rewind the bobbin	The trainee will be able to: <ul style="list-style-type: none"> • Tight or loose the screw of bobbin with screw driver as required • Rewind or change the bobbin if thread is finished 	Knowledge and usage of bobbin & Bobbin case and shuttle Movement of bobbin case Assembling and replacing of bobbin case	Total 14 Hours Theory: 2 Hours Practical: 12 Hours	Free motion machine Bobbin case Screw driver Sand paper (Embry) Needle Computer embroidery machine Screw wrench PPES Bobbin Threads Bobbin Rewinder L key set Frame hoop Oil can	Theory Classroom Practical Workshop
LU4: Replace broken needle	The trainee will be able to: <ul style="list-style-type: none"> • Loose the needle clamp screw to draw out the needle • Put the needle in the needle bar by keeping cut side of the needle on the 	Well aware with the needles, needle bar and fabrics Knowledge about parts needle (long groove, Short Groove, butt portion, shoulder, eye of the needle and needle point)	Total 14 Hours Theory: 3 Hours Practical:	Free motion machine Screw driver set Needles Computer embroidery machine Cleaning cloth	Theory Classroom Practical

	backside <ul style="list-style-type: none"> • Tight the needle clamp screw on the needle bar 	Types of needles according to its numbers (sizes); Needle application according to required embroidery stitch	11 Hours	Machine oil Cleaning Cloth L key set Frame hoop Oil can Fabric Needle bar Clipper	Workshop
LU5: Reinstall the machine software	The trainee will be able to: <ul style="list-style-type: none"> • Check the model of the machine for software • Copy software of the machine in the usb as per machine`s model number • Plug in the usb in the machine and press install/ok • Power off the machine for min & 30sec after installation of software and restart • Reinstall the software following same procedure in case of error. 	Knowledge of the different types of machines and models Knowledge and understanding of software installation Knowledge and types of the computer embroidery machines	Total 43 Hours Theory: 8 Hours Practical: 35 Hours	Computer sert L key set Cards Internet Computer Embroidery machine Usb Cleaning cloth Hard drives Screw driver set Software CD Data cable PPES	Theory Classroom Practical Workshop

Module-8

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Module 8: Perform Basic Maintenance of Embroidery Machine

Objective of the module: The objective of this module is to develop knowledge, skills and understanding required to perform basic maintenance of embroidery machine.

Duration: 100 Hours **Theory:** 18 Hours **Practical:** 82 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Perform basic cleaning of the machine	The trainee will be able to: <ul style="list-style-type: none"> • Clean the shuttle with blower or oil • Clean the head of the machine • Clean the machine card through air blower carefully • Perform dusting of the machine 	Knowledge and usage of bobbin & Bobbin case and shuttle Knowledge and understanding of machine parts Well aware with the basic maintenance of machine Knowledge and understanding of temperature gauge Knowledge and types of the embroidery machines Knowledge and understanding of parts of machines Maintaining and controlling of room temperature as per machine requirement Knowledge about machine electronic cards i.e. (head, memory, CF, VGA) Knowledge about threading of the machine Well aware with the needles, needle bar and fabrics Knowledge and understanding of thread tension and its rectification techniques Understanding of thread tension during	Total 32 Hours Theory: 07 Hours Practical: 25 Hours	Free motion embroidery machine Brush different sizes Oil can Screw driver Needle Temperature gauge Computer embroidery machine Machine card Screw wrench Bobbin case PPEs Air blowers	Theory Classroom Practical Workshop

		<p>embroidery and rectification</p> <p>Knowledge about computer machine formats and basic usage</p> <p>Knowledge of frames and their sizes</p> <p>Usage of PPEs</p> <p>Knowledge of basic precautionary measures for maintenance</p> <p>Knowledge about usage of tool kits</p>		<p>Machine oil</p> <p>L key set</p>	
<p>LU2:</p> <p>Perform oiling of the machine</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> • Clean the oil pump passage and stainer if available • Shower oil on the needle bar and shuttle with shower gun as required • Check oil guage of the machine if available 	<p>Well informed with oiling techniques and oil showering quantity</p> <p>Knowledge and understanding of different types of machine oils</p> <p>Knowledge of cleaning brushes and their sizes</p> <p>Well informed with air blow speed and usage of regulator</p>	<p>Total</p> <p>25 Hours</p> <p>Theory:</p> <p>5 Hours</p> <p>Practical:</p> <p>20 Hours</p>	<p>Free motion embroidery machine</p> <p>Oil can</p> <p>Screw driver</p> <p>Needle</p> <p>Computer embroidery machine</p> <p>Screw wrench</p> <p>PPES</p> <p>Shower can</p>	<p>Theory</p> <p>Classroom</p> <p>Practical</p> <p>Workshop</p>
<p>LU3:</p> <p>Adjust the needle and needle bar</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> • Open the needle plate by unscrewing 	<p>Well aware with the needles, needle bar and fabrics</p> <p>Knowledge about parts needle (long groove, Short Groove, butt portion,</p>	<p>Total</p> <p>15 Hours</p> <p>Theory:</p>	<p>Free montion embroidery machine</p> <p>Needle bar</p>	<p>Theory</p> <p>Classroom</p>

	<ul style="list-style-type: none"> Unscrew the shuttle by moving shaft accordingly Set timing of the main shaft as per machine specification Tight screws of the shuttle and needle plate for closing 	<p>shoulder, eye of the needle and needle point)</p> <p>Types of needles according to its numbers (sizes); Needle application according to required embroidery stitch</p>	<p>2 Hours</p> <p>Practical:</p> <p>13 Hours</p>	<p>Shuttle</p> <p>Bobbin</p> <p>Clipper</p> <p>Scissor</p> <p>Oil can</p> <p>Needle</p> <p>Computer embroidery machine</p> <p>Screw wrench</p> <p>PPES</p> <p>Shower can</p>	<p>Practical</p> <p>Workshop</p>
<p>LU4:</p> <p>Adjust the shuttle</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Open the needle plate by unscrewing Unscrew the shuttle by moving shaft accordingly Set timing of the main shaft as per machine specification Tight screws of the 	<p>Knowledge about the working of shuttle</p> <p>Knowledge and understanding of lock stitch</p> <p>Knowledge and understanding of balance wheel</p> <p>Knowledge about face plate</p>	<p>Total</p> <p>15 Hours</p> <p>Theory:</p> <p>2 Hours</p> <p>Practical:</p> <p>13 Hours</p>	<p>Free motion embroidery machine</p> <p>Needle bar</p> <p>Shuttle</p> <p>Bobbin</p> <p>Clipper</p> <p>Scissor</p> <p>Oil can</p> <p>Thread</p>	<p>Theory</p> <p>Classroom</p> <p>Practical</p> <p>Workshop</p>

	shuttle and needle plate for closing			Fabric Needle Computer embroidery machine Screw wrench PPES Shower can	
LU5: Change the motor belt	The trainee will be able to: <ul style="list-style-type: none"> • Locate the safety cover on the motor belt • Unscrew the safety cover of the motor belt • Replace the motor belt carefully • Put the safety cover with screws 	Knowledge and understanding of belts and its types Well aware with the material of belts Knowledge about assembling and disassembling of motor belt	Total 13 Theory: 2 Practical: 11	Free motion machine Screw driver Needle Computer embroidery machine Screw wrench PPES Dust bin L key set Motor belts Oil can	Theory Classroom Practical Workshop

Module-9

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Module 9: Supervise the Embroidery Work

Objective of the module: This standard defines the advanced knowledge, skills and understanding required to supervise the embroidery work.

Duration: 150 Hours **Theory:** 40 Hours **Practical:** 110 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1. Acquire material from store	The trainee will be able to: <ul style="list-style-type: none"> Generate the demand order to raw material store as per production schedule Ensure availability of raw material as per required generated order Distribute raw material to production processes in required quantities 	Understanding safety precautions and Personal Protective Equipment for store. Generate the demand order to store as per production schedule Knowledge of issuance of requisition Understanding and knowledge about good communication skill in workplace Ensure availability of raw material as per required generated order (metallurgical and physical) Distribute raw material to production departments in required quantities Understanding of contingency management Understanding process travelling card (PTC) and its applications. (storage of job, quality, quantity etc)	Total 35 Hours Theory: 10 Hours Practical: 25 Hours	Computer system along with all accessories Laser Printer	Theory Classroom Practical Workshop

LU2. Assign duties to workers	The trainee will be able to: <ul style="list-style-type: none"> Assign jobs to the workers along with work instructions Train workers on their assigned tasks and work instructions Monitor the workers' performance as per instructions 	Task Management as per production requirement Understand production plan Understanding and knowledge about good communication skill in workplace Understanding of time/work force management Understanding of contingency management Understanding process travelling card (PTC) and its applications. (storage of job, quality, quantity etc)	Total 40 Hours Theory: 10 Hours Practical: 30 Hours	Computer system along with all accessories Laser Printer	Theory Classroom
LU3. Ensure production operations according to the plan	The trainee will be able to: <ul style="list-style-type: none"> Ensure quality of product as per requirement Ensure quantity of work produced as per production plan Make sure the completion of production process within the lead time 	Knowledge and understanding of process travel card Understanding of product drawing and specifications Knowledge about time and labour management skill/ time and motion study Understanding and knowledge about good communication skill in workplace	Total 35 Hours Theory: 10 Hours Practical: 25 Hours	Computer system along with all accessories Laser printer	Theory Classroom Practical Workshop

	<ul style="list-style-type: none"> Check, all workers record their production and quality on prescribed formats 	<p>Understanding of contingency management</p> <p>Understanding process travelling card (PTC) and its applications. (storage of job, quality, quantity etc)</p>			
LU4. Prepare production report	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Gather and consolidate the production data in concise form for further analysis Analyse data using relevant quality tools (control charts, bar graphs, normal charts etc.) Compile production report and submit and present the report to management within defined timeline 	<p>Understanding and knowledge of report writing</p> <p>Understanding and knowledge about good communication skill in workplace</p> <p>Understanding and usage of MS Office (Word, Excel, Power point etc)</p> <p>Knowledge about office management</p> <p>Knowledge about time management</p> <p>Knowledge about quality charts and graphs</p> <p>Understanding of contingency management</p> <p>Understanding process travelling card (PTC) and its applications. (storage of job, quality, quantity etc)</p>	<p>Total 40 Hours</p> <p>Theory: 10 Hours</p> <p>Practical: 30 Hours</p>	<p>Computer system along with all accessories</p> <p>Laser Printer</p>	<p>Theory Classroom</p> <p>Practical Workshop</p>

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Module-10

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Module 10: Perform Embroidery on Computerized Embroidery Machine

Objective of the module: The objective of this module is to develop knowledge, skills and understanding required to perform embroidery on computerized embroidery machine.

Duration: 200 Hours **Theory:** 18 Hours **Practical:** 182 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare work station for required embroidery	The trainee will be able to: <ul style="list-style-type: none"> Prepare the workstation for work operation (gather material, set the suitable needle, technical file/ sewing instruction/sketch and sewing thread) Clean the workstation to make it free from any potential hazards Trace design on tracing sheet [butter paper, PVC, etc.] design accurately & neatly on the fabric if required Transfer traced design on given material 	Knowledge about different types of fabrics and other materials (leather, synthetic leather) used for embroidery; Embroidery threads and their classification according to thread types, shade (numbers) and sizes; Types and usage of tools & equipment (clipper, scissors, seam ripper etc,) Well aware with properties of embroidery material like leather, rexine, woven and non woven Knowledge about parts needle (long groove, Short Groove, butt portion, shoulder, eye of the needle and needle point) Types of needles according to its numbers (sizes); Needle application according to required embroidery stitch Types, sizes and usage of embroidery frame (hoop) Appropriate use of threads, & needles in accordance with design and surface	Total 10 Hours Theory: 2 Hours Practical: 8 Hours	Computerized Embroidery Machine Computer Set USB Finishing Table Reinforcement Material Ruler Needles Clippers Fabric scissors Measuring tape Clips Embroidery hoop/frame Plier Screw driver set	Theory Classroom Practical Workshop, Computer lab

	<ul style="list-style-type: none"> • Fix the pattern in the embroidery hoop/adda with the help of extra fabric • Fix and tighten the fabric/material on the hand frame/frame(adda) while avoiding plication • Fix appropriate needle & thread in machine considering the texture, fiber and type of embroidery to be done • Clarify the instructions and artwork specifications • Check that the materials to be used are free from faults • Ensure the materials used meet the specification matching embroidery Artwork and design sample of the embroidered product 	<p>requirements</p> <p>Understand the nature of design and material for embroidery</p> <p>Arrange material, needle, & thread for the embroidery artwork</p> <p>Interpret work tickets/plan</p> <p>Basic Mathematic Measurements used for measuring</p> <p>Knowledge about usage of tool kits</p> <p>Knowledge about embroidery stitches</p> <p>Explain about the faults in the material (stain free, broken weave, etc.)</p> <p>Technical terms associated with different kinds of embroidery work</p>		<p>Ranch</p> <p>Allen key set</p> <p>Files needle set</p> <p>Bobbins</p> <p>Blower</p> <p>Oil Can</p> <p>Thermostat</p> <p>Room AC</p>	
LU2:	The trainee will be able	Knowledge about hoop and framing	Total	Computerized Embroidery	Theory

Operate computer embroidery machine	to: <ul style="list-style-type: none"> Perform framing on computer embroidery machine Apply reinforcement material as per design if required Transfer the design file in the computer embroidery machine Check the format of the design (DST file format) Check threading of the machine and wind the bobbin Fix and tighten the fabric/material on the machine frame while avoiding plication Set the range of the design on the material/fabric Start the machine while ensuring quality of the embroidery Control the quality of embroidery according to quality standards and the artwork 	<p>materials</p> <p>Techniques for framing of different material on the hoop</p> <p>Knowledge and usage of bobbin & Bobbin case and shuttle</p> <p>Knowledge and understanding of thread tension and its rectification</p> <p>Knowledge and types of the computer embroidery machines</p> <p>Knowledge about computer machine formats and basic usage</p> <p>Knowledge and usage of Reinforcement material</p> <p>Knowledge and understanding of range setting on the machine</p> <p>Knowledge and understanding of range setting on the machine</p>	<p>148 Hours</p> <p>Theory:</p> <p>12 Hours</p> <p>Practical:</p> <p>136 Hours</p>	<p>Machine</p> <p>Computer Set</p> <p>USB</p> <p>Finishing Table</p> <p>Reinforcement Material</p> <p>Ruler</p> <p>Needles</p> <p>Clippers</p> <p>Fabric scissors</p> <p>Measuring tape</p> <p>Clips</p> <p>Embroidery hoop/frame</p> <p>Plier</p> <p>Screw driver set</p> <p>Ranch</p> <p>Allen key set</p> <p>Files needle set</p> <p>Bobbins</p> <p>Blower</p> <p>Oil Can</p> <p>Thermostat</p> <p>Room AC</p>	<p>Classroom</p> <p>Practical</p> <p>Workshop</p>
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	specifications				
LU3: Carry out finishing process	The trainee will be able to: <ul style="list-style-type: none"> Disassemble the fabric/material from the frame Remove the reinforcement material from the fabric/material Perform finishing procedures includes clipping, stain removal from the final product, if required. 	Process of cleaning by using different types of cleaning tools (sprays, brushes, dusters, etc.) Knowledge of oiling and cleaning of the machine Knowledge about PPEs and their usage	Total 42 hours Theory: 4 hours Practical: 38 Hours	Computerized Embroidery Machine Computer Set USB Finishing Table Reinforcement Material Ruler Clippers Fabric scissors Clips Plier Screw driver set Ranch Allen key set Files needle set Blower Oil Can Thermostat Room AC	Theory Classroom Practical Workshop

Module-11

HAND & MACHINE EMBROIDERY

CBT Curriculum

National Vocational
Certificate Level 4

Version 1 - February 2020

Module 11: Manage personal finances

Objective of the module: This unit of competency describes the outcomes required to manage develop, implement and monitor a personal budget in order to plan regular savings and manage debt effectively.

Duration: 30 Hours **Theory:** 22 hours **Practical:** 8 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1. Develop a personal budget	The trainee will be able to: <ul style="list-style-type: none"> Calculate current living expenses to prepare a personal budget Keep a record of all income and expenses for a short period of time to help estimate ongoing expenses. Subtract total expenses from total income to determine a surplus or deficit budget for the specified period Find reasons for a deficit budget and ways to reduce 	Explain the abilities to plan and organize to keep records and monitor a personal budget Describe abilities to set and review goals Understanding and knowledge of P & L statement Explain basic financial management and record keeping to enable development and management of a personal budget Describe benefits of financial goal setting and personal budgeting to enable effective management of personal finances Outline numeracy skills to compare income and expenditure	Total 10 Hours Theory: 8 Hours Practical: 2 Hours		Theory Classroom

	expenditure identified.				
LU2. Develop long term personal budget	The trainee will be able to: <ul style="list-style-type: none"> Analyse income and expenditure and set long term personal financial goals Develop a long-term budget based on the outcomes of short-term budgeting. Identify obstacles that might affect the business Formulate a regular savings plan based on budget 	Understanding and knowledge of SWOT and PEST Analysis List the saving opportunities and make plan to utilize savings accordingly	Total 12 Hours Theory: 9 Hours Practical: 3 Hours		Theory Classroom
LU3. Identify ways to maximize future finances	The trainee will be able to: <ul style="list-style-type: none"> Determine sources to maximize investment and profit Get further education or training to maintain or improve future income Identify the need for 	Identify and list available resources for investment Debt financing and its impact on the business activity Manages debt according to the business requirements and finalize plan to repay it	Total 8 Hours Theory: 5 Hours Practical: 3 Hours		Theory Classroom

	debt to finance living and other expenses <ul style="list-style-type: none"> • Determine the appropriate levels of debt and repayment • Consolidate existing debt, where possible, to minimize interest costs and fees 				
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Module-12

HAND & MACHINE EMBROIDERY

CBT Curriculum

National Vocational
Certificate Level 4

Version 1 - February 2020

Module 12: Develop Entrepreneurial Skills

Objective of the module: This standard defines the advanced knowledge, skills and understanding required to identify business opportunities.

Duration: 150 Hours **Theory:** 30 Hours **Practical:** 120 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1. Develop self against skills and attributes required for entrepreneurship	The trainee will be able to: <ul style="list-style-type: none"> Set personal objectives for pursuing entrepreneurship Document gaps in self for skills and attributes required for an entrepreneur Take appropriate actions to cover identified gaps 	The fundamentals of entrepreneurship including, causal and effectual entrepreneurship The characteristics, skills and attributes possessed by entrepreneurs Risks and rewards for an entrepreneur Identifying personal strengths and weaknesses Techniques to conduct self-assessment for entrepreneurial skills Identification of learning mediums	Total: 33 Hours Theory: 6 Hours Practical: 27 Hours	Computer Internet Printer	Theory Classroom
LU2. Collect information on viable business ideas	The trainee will be able to: <ul style="list-style-type: none"> Conduct an elementary market survey to collect basic information on 	Basic survey methods Deming cycle (Plan Do Check (study) Act) Concept of the business value chain	Total: 47 Hours Theory: 12 Hours	Computer Internet Printer	Theory Classroom

	<p>business ideas relevant to own interests</p> <ul style="list-style-type: none"> • Compile the information collected through the market survey • Gather customer needs for identified business ideas • Shortlist the best option in terms of cost, service, quality, sales, profit margin, overall expenses 	<p>Documentation techniques</p> <p>Report writing</p> <p>Customer need analysis including existing business, types of customers, location, needs recognition</p> <p>Elementary cost evaluation</p> <p>Techniques of evaluating business options in terms of cost, service, quality, sales, profit margin, overall expenses</p> <p>Break even</p>	<p>Practical: 35 Hours</p>		
<p>LU3.</p> <p>Collect information on various funding sources</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> • Identify the available funding sources based on their terms and conditions, maximum loan limit, payback time, interest rate • Choose the best available option according to investment 	<p>Funding sources including family, friends, funding agencies, grants, government institutions, commercial banks, business incubation centres.</p> <p>Techniques to prepare documents for the best available option regarding funding sources</p>	<p>Total: 30 Hours</p> <p>Theory: 5 Hours</p> <p>Practical: 25 Hours</p>	Computer	<p>Theory</p> <p>Classroom</p>

	<ul style="list-style-type: none"> requirement • Prepare documents according to the loan agreement requirement • Include the information of funding sources in the business plan 				
LU4. Finalize the business idea	The trainee will be able to: <ul style="list-style-type: none"> • Estimate the available resources • Identify relevant customer segments and their needs • Identify existing solutions in the market • Devise the business idea for specific customer needs • Identify key technologies required for execution of business idea 	Types of resources required for business (financial, human and physical resources) Basic estimation of available resources Bases for consumer segmentation (behavioral, demography, geography, psychographic etc.) Comparing existing solutions including offered products/services, prevailing prices, positioning maps. Techniques of conducting customer profiling Scale of business, estimated volume of business, process of business, key technologies of business ideas	Total: 40 Hours Theory: 7 Hours Practical: 33 Hours	Computer	Theory Classroom

General assessment guidance for Hand and Machine Embroidery

GENERAL ASSESSMENT GUIDANCE for the Hand and Machine Embroidery

Each module/ competency standard will be assessed through a combination formative assessment at the completion of each module as an internal assessment and a final summative assessment on the completion of the qualification by the Qualification Awarding Body through a qualified assessor.

Formative assessment: the institute conducts formative assessments on the completion of each module as an internal assessment by the resource person. Its purpose is to provide feedback to the trainees on real time environment:

- To the trainee: to identify achievement and areas for further improvements
- To the trainer: to evaluate the effectiveness of transfer of skill and knowledge and plan for further.

Summative assessment: On completion of the qualification the Qualification Awarding Body (QAB) conducts a formal summative assessment where the qualified national assessor declares a candidate “Competent” or “Not Yet Competent” with a detailed feed back to the trainees on the performing of the activities as per modules.

Methods of assessment

During assessment a direct observation during performance by the trainee is conducted while collecting solid evidence based on each module.

Examples for direct assessment of a Jewellery electroplating and finishing expert include:

- Work performances: performing the tasks in lab for each assignment as prescribed in the modules.
- Demonstrations: performing and presenting the final outcomes of the completion of each module.
- Direct questioning, where the assessor would ask the trainees questions related to their learning outcomes.
- Paper-based tests: if required the assessor will use some paper-based test to know the understanding of the trainees during the learning phase.

Indirect assessment is the method used where the performance could not be watched and evidence is gained indirectly. Indirect assessment will only be a second choice.

Principles of assessment

All assessments should be valid, reliable, fair and flexible:

Fairness refers that each trainee should get to equal chance for performing the duties during the assessment process.

Validity means that an assessment is conducted for what it claims to assess.

Reliability refers to consistency in outcomes based on performance or demonstration.

Flexibility means that the assessor has to be flexible concerning the assessment approach in evaluating the trainees for its competence.

Complete list of tools and equipment

Sr#	Name of Item/ Equipment/ Tools	Quantity
1	Air blowers	04
2	Allen key set	04
3	Bobbin	20
4	Bobbin case	20
5	Bobbin Rewinder	10
6	Brush different sizes	04 set
7	Cards	10
8	Thread cutter	20
9	Clip	100
10	Computer system along with all accessories	20
11	Computerized Embroidery Machine (04 Head)	04
12	Computerized Embroidery Machine With Sequine work device (02 Head)	01
13	Computerized Embroidery Machine With Dori work device (02 Head)	01
14	Free Motion Embroidery Machine	20
15	Data cable	06
16	Dust bin	10
17	Embroidery hoop/frame (Small, Medium, Large)	20 each
18	Fabric scissors	20
19	Files (raiti)	20
20	Files needle set	20
21	L key set	20
22	Nose Plier set	10
23	Plier set	10
24	Curve scissor	20
25	Fabric Scissor	20

26	Paper Scissor	20
27	Screw driver set	20
28	Screw wrench	20
29	Finishing Table (4x8)	05
30	Usb drive	20
31	Internet router (8 mbps)	01
32	Laser Printer	02
33	Machine card	20
34	Measuring tape	20
35	Multimedia screen	02
36	Multimedia	02
37	Needle bar	20
38	Oil can	20
39	Pin cushions	5
40	PPEs (Goggles, Gloves)	20
41	Split AC (1.5 ton)	06
42	Ruler	20
43	Scanner	02
44	Seam ripper	20
45	Shower bottle	20
46	Shuttle	10
47	Software Package (Windows, applications, Microsoft)	01
48	Machine Software Package	01
49	Soldering iron	20
50	Temperature gauge	06
51	Tracing table	05
52	Tracing wheel	20
53	Computer Table	20
54	Computer Chair	20
55	Wood Stools (height 18 inch) for free motion machine	20

56	Wood Stools (height 24 inch) for finishing table	20
57	White board	02

List of consumable supplies

Sr#	Name of Consumable Supplies
1.	Process travel card (PTC)
2.	Log/form
3.	Machine oil
4.	Cleaning Cloth
5.	Fabric
6.	Sand paper (Embry)
7.	Tailoring chalk
8.	Kerosene oil
9.	Threads
10.	Dusters
11.	Surface cleaners Sprays
12.	Oil gun
13.	Detergent
14.	Rubber
15.	Pencil
16.	Paper Tape
17.	Pointer
18.	Leather
19.	Synthetic leather
20.	Glue stick
21.	Sand paper Embry
22.	Tracing sheets/ Butter paper
23.	Tracing inks
24.	Fabric/material
25.	Embroidery material
26.	Motor belt
27.	Machine oil
28.	Reinforcement Material

29.	Needles
30.	Pins
31.	Sand paper (Embry)
32.	Sharpener
33.	Eraser
34.	Pencil
35.	Thimble pins
36.	PPEs (Mask, Cap, Apron, finger thimble)
37.	White board marker

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