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LEATHER PROCESSING TECHNOLOGIST



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CBT CURRICULUM

National Vocational Certificate Level 2

Version 1 - November, 2019



Implemented by
giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

Published by

National Vocational and Technical Training Commission
Government of Pakistan

Headquarter

Plot 38, Kirthar Road, Sector H-9/4, Islamabad, Pakistan
www.navttc.org

Responsible

Director General Skills Standard and Curricula, National Vocational and Technical Training Commission
National Deputy Head, TVET Sector Support Programme, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Layout & design

SAP Communications

Photo Credits

TVET Sector Support Programme

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This document has been produced with the technical assistance of the TVET Sector Support Programme, which is funded by the European Union, the Federal Republic of Germany and the Royal Norwegian Embassy and has been commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ). The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in close collaboration with the National Vocational and Technical Training Commission (NAVTTTC) as well as provincial Technical Education and Vocational Training Authorities (TEVTAs), Punjab Vocational Training Council (PVTC), Qualification Awarding Bodies (QABs) and private sector organizations.

Document Version

November, 2019

Islamabad, Pakistan

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Introduction

The Leather industry is a highly labor intensive industry; labor is extensively employed in the initial stages of the Leather tanning process while greater skills are required at the finishing stage. This Course is designed to focus the need, importance and understanding of Leather tanning & processing industry as per the current competitive environment. Companies can maintain a strategic competitive advantage and produce more valued goods after better processing of leather. Increasing demand for skilled, efficient and effective employees has created demand for this course.

This course will enable functional and technical skills for leather processing technologist. The material is taught as leather processing mechanical operator, tanning technician, leather processing & finishing and quality perspective with an emphasis on where and how specific tools can be used to improve the overall performance in the leather processing.

Definition/ Description of the training program for:

- National Vocational Certificate level 2, in (Leather Processing Technologist) “Leather Processing Mechanical Operator”

Purpose of the training program

The purpose of this training is to develop a range of skills and techniques, personal skills and attributes essential for successful performance in leather processing sector in accordance with industry requirements. It also enables the student to pursue a leather processing technologist career path with greater employment and entrepreneurial skills progress to related general and/or vocational qualifications

Overall objectives of training program

After completion of vocational training the graduates of the training program will have a good balance of knowledge, skills, attitude and work experiences, which are the essential elements of employability.

This course shall be facilitating the trainees to:

- Enhance their knowledge and skills to understand various aspects of the leather processing and finishing.
- Comprehend core values essential to work effectively on processes of leather mechanical operations, beam-house operations, tanning, and post tanning operations, dyeing, finishing and quality assurance.
- To work as leather processing technologist

Competencies to be gained after completion of course

Other than understanding leather processing functions, following competency will be gained after completion of the course:

- Able to apply occupational health & safety procedures at workplace
- Understand techniques and procedure of operating Fleshing machine
- Able to perform scudding on leather
- Understand procedures of operating splitting machine
- Able to operate shaving machine
- Understand techniques of sammying & setting out.
- Able to perform drying, staking and toggling of leather
- Can create embossing effects on leather and also measure it electronically
- Manage pre-pelt and post-pelt operations
- Understand techniques and procedures of different kind of tanning
- Prepare tanned leather for finishing
- Understand procedures and techniques of dyeing leather
- Prepare essential documents and reports for leather processing at different stages.
- Manage quality of leather by performing different physical, chemical & environmental tests

Possible available job opportunities available immediately and after level4 in the future:

Trainer can work as the following, after completing this course

- Beam house Helper
- Skin/Hide Inspector
- Beam house Technician
- Beam house Expert
- Fleshing Machine Helper
- Fleshing Machine Operator
- Scudding Machine Operator
- Beam house Supervisor
- Tanning technician
- Tanning Expert
- Drum Operator
- Wet blue Selector
- Splitting Operator
- Splitting Machine Helper
- Dyeing Expert
- Dyeing Technician
- Dye Color Matcher
- Sann Set Operator
- Stacking Operator
- Toggle Operator
- Buffing Machine Operator
- Finishing Color Matcher
- Finishing Assistant
- Finishing In-charge
- Finishing Plant Operator
- Spray Plant Operator
- Floor Manager
- Quality Assuror
- Quality In-charge
- Lab Technician
- Lab Assistant
- Embossing Machine Operator
- Ironing Machine Carryout

- Measuring Machine Operator
- Vacuum Machine Operator

Trainee entry level

Title	Entry Requirements
National Vocational Certificate level 2, in Leather Processing Technologist “Mechanical Operator”	Entry for assessment for this qualification is open. However, entry into formal training institute for this qualification is the person must have middle.

Minimum qualification of trainer

Trainer must possess 2 to 3 years diploma in leather/ Mechanical technology and have working experience of minimum 3 years level 3 to 4 of leather processing technology along 5 years' experience in the field of leather processing.

Recommended trainer: trainee ratio

The recommended ratio of Trainer: Trainee should be 1:20

Medium of instruction i.e. language of instruction

Medium of instruction is English and Urdu

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

This curriculum comprises 16 modules divided comprises of generic and technical competencies. The recommended delivery time is 600 hours. Delivery of the course could therefore be full time, 5 days a week, for 6 months. 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 follows:

Module	Theory hours	Workplace hours	Total hours
Module 1: Comply Personal Health and Safety Guidelines	6	24	30
Module 2: Communicate the Workplace Policy and Procedure	4	16	20
Module 3: Perform Basic Communication (Specific)	6	24	30
Module 4: Perform Basic Computer Application (Specific)	8	32	40
Module 5: Carryout Fleshing	8	32	40
Module 6: Carryout Scudding	8	32	40
Module 7: Carryout Splitting	8	32	40
Module 8: Carryout Shaving	8	32	40
Module 9: Carryout Sammying-Setting	8	32	40
Module 10: Carryout Drying	8	32	40

Module	Theory hours	Workplace hours	Total hours
Module11: Carryout Staking	8	32	40
Module 12: Carryout toggling	8	32	40
Module 13: Carryout buffing	8	32	40
Module 14: Carryout Hydraulic Press	8	32	40
Module 15: Carryout Ironing	8	32	40
Module 16: Carryout Measuring	8	32	40

Summary – overview of the curriculum

Following is the sequence of the modules for Leather Processing Mechanical Operator (NVQF Level 2).

Module Title and Aim	Learning Units	Theory Days/hours	Workplace Days/hours	Timeframe of modules
<p>Module 1: Comply Personal Health and Safety Guidelines</p> <p>Aim: This Competency Standard identifies the competencies required to protect/apply occupational Safety, Health and Environment at workplace according to the industry's approved guidelines, procedures and interpret environmental rules/regulations. Trainee will be expected to identify and use Personal Protective Equipment (PPE) according to the work place requirements. The underpinning knowledge regarding Observe Occupational Safety and Health (OSH) will be sufficient to provide the basis for the job at workplace.</p>	<p>LU1: Identify Hazard at work place LU2: Apply personal protective and safety equipment (PPE). LU3: Observe occupational safety and health (OSH) LU4: Dispose of hazardous waste/materials</p>	6	24	30

Module Title and Aim	Learning Units	Theory Days/hours	Workplace Days/hours	Timeframe of modules
<p>Module 2: Communicate the Workplace Policy and Procedure Aim: This unit describes the performance outcomes, skills and knowledge required to develop communication skills in the workplace. It covers gathering, conveying and receiving information, along with completing assigned written information under direct supervision.</p>	<p>LU1. Identify workplace communication procedures LU2. Communicate at workplace LU3. Draft Written Information Review Documents</p>	4	16	20

Module Title and Aim	Learning Units	Theory Days/hours	Workplace Days/hours	Timeframe of modules
<p>Module 3: Perform Basic Communication (Specific) Aim: This unit describes the skills and knowledge required to assist in the development of communication competence by providing information regarding different forms of communication and their appropriate use.</p>	<p>LU1. Communicate in a team to achieve intended outcomes LU2. Follow Supervisor's instructions as per organizational SOPs LU3. Develop Generic communication skills at workplace</p>	6	24	30
<p>Module 4: Perform Basic Computer Application (Specific) Aim: This unit describes the skills and knowledge required to use spreadsheet to prepare a page of document, develops familiarity with Word, Excel, email, and computer graphics basics.</p>	<p>LU1. Create Word Documents LU2. Create Excel Documents Use internet for Browsing</p>	8	32	40

Module Title and Aim	Learning Units	Theory Days/hours	Workplace Days/hours	Timeframe of modules
Module 5: Carryout Fleshing Aim: After successful completion of this module, the student is competent in performing fleshing operation according to professional standards and by respecting safety and health regulations	LU1: Prepare workstation for fleshing LU2: Perform fleshing LU3: Clean workplace LU4: Maintain fleshing register	8	32	40
Module 6: Carryout Scudding Aim: After successful completion of this module, the student is competent in performing scudding operation according to professional standards and by respecting safety and health regulations	LU1: Prepare workstation for scudding LU2: Perform scudding LU3: Clean workplace LU4: Maintain scudding register	8	32	40
Module 7: Carryout Splitting Aim: After successful completion of this module, the student is competent in performing splitting operation according to professional standards and by respecting safety and health regulations	LU1: Prepare workstation for splitting LU2: Perform splitting LU3: Clean workplace LU4: Maintain splitting register	8	32	40
Module 8: Carryout Shaving Aim: After successful completion of this module, the student is competent in performing Shaving operation according to professional standards and by respecting safety and health regulations	LU1: Prepare workstation for shaving LU2: Perform shaving LU3: Clean workplace LU4: Maintain shaving register	8	32	40

Module Title and Aim	Learning Units	Theory Days/hours	Workplace Days/hours	Timeframe of modules
Module 9: Carryout Sammying-Setting Aim: After successful completion of this module, the student is competent in performing sammying-setting operation according to professional standards and by respecting safety and health regulations	LU1: Prepare workstation for sammying & setting out LU2: Perform sammying & setting out LU3: Clean workplace LU4: Maintain sammying & setting out register	8	32	40
Module 10: Carryout Drying Aim: After successful completion of this module, the student is competent in performing drying operation according to professional standards and by respecting safety and health regulations	LU1: Prepare workstation for drying LU2: Perform drying LU3: Clean workplace LU4: Maintain drying register	8	32	40
Module 11: Carryout Staking Aim: After successful completion of this module, the student is competent in performing staking operation according to professional standards and by respecting safety and health regulations	LU1: Prepare workstation for staking LU2: Perform staking LU3: Clean workplace LU4: Maintain staking register	8	32	40
Module 12: Carryout Toggling Aim: After successful completion of this module, the student is competent in performing toggling operation according to professional standards and by respecting safety and health regulations	LU1: Prepare workstation for toggling LU2: Perform toggling LU3: Clean workplace LU4: Maintain toggling register	8	32	40

Module Title and Aim	Learning Units	Theory Days/hours	Workplace Days/hours	Timeframe of modules
Module 13: Carryout Buffing Aim: After successful completion of this module, the student is competent in performing buffing operation according to professional standards and by respecting safety and health regulations	LU1: Prepare workstation for buffing LU2: Perform buffing LU3: Clean workplace LU4: Maintain buffing register	8	32	40
Module 14: Carryout Hydraulic Press Aim: After successful completion of this module, the student is competent in performing hydraulic press operation according to professional standards and by respecting safety and health regulations	LU1: Prepare workstation for hydraulic press LU2: Perform hydraulic press LU3: Clean workplace LU4: Maintain hydraulic press register	8	32	40
Module 15: Carryout Ironing Aim: After successful completion of this module, the student is competent in performing ironing operation according to professional standards and by respecting safety and health regulations	LU1: Prepare workstation for Ironing LU2: Perform ironing LU3: Clean workplace LU4: Maintain Ironing register	8	32	40
Module 16: Carryout Measuring Aim: After successful completion of this module, the student is competent in performing measuring operation according to professional standards and by respecting safety and health regulations	LU5: Prepare workstation for measuring LU6: Perform leather measuring LU7: Clean workplace LU8: Maintain measuring register	8	32	40
	Total	120	480	600

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Modules

Module 5. Carryout Fleshing

Objective of the module: After successful completion of this module, the student is competent in performing fleshing operation according to professional standards and by respecting safety and health regulations

Duration: 40 Hours **Theory:** 8 Hours **Practical:** 32 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare Workstation for Fleshing	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Remove hazardous material from work area Analyse job card from supervisor Select correct position in order to minimize fatigue Set Fleshing machine as per requirement 	<ul style="list-style-type: none"> Define PPE State importance of PPE at workstation Enlist the hazardous materials Define the risks involved in case hazardous materials are not removed. Define job card Define how fatigue may affect performance. State importance of correct position to minimize fatigue. Introduction to fleshing machine. <ul style="list-style-type: none"> Introduction to gauge and its setting Introduction to knives Introduction to pressure paddle Introduction to fleshing tools 	<p>Total: 15 Hours</p> <p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	<ul style="list-style-type: none"> Computer Multimedia Safety helmet & glasses Safety Gloves Safety Shoes Earplugs Safety Uniform Fleshing Machine Fleshing Machine Operator Manual Knives 	<ul style="list-style-type: none"> Classroom with multimedia aid Training Tannery area
LU2: Perform Fleshing	<p>The trainee will be able to:</p>	<ul style="list-style-type: none"> Introduction to fleshing Purpose of fleshing 	Total 15 Hours	<ul style="list-style-type: none"> Computer 	Classroom with multimedia aid

	<ul style="list-style-type: none"> Place hide/skin into Fleshing machine from flesh side Operate Fleshing machine as per requirement Ensure proper removal of Flesh Segregate damaged hides/skin Pile Fleshed hides/skin 	<ul style="list-style-type: none"> Define fleshing process Explain green fleshing Types of fleshing <ul style="list-style-type: none"> hand fleshing machine fleshing Introduction to grain side and flesh of hide/skin Introduction to machine operating manual Explain skin/hide feeding procedure for fleshing machine Define knife fleshing/trimming Importance of knife fleshing/trimming Define damages during fleshing 	<p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	<p>Multimedia</p> <p>Fleshing Machine</p> <p>Fleshing Machine Operator Manual</p> <p>Hide</p> <p>Skin</p> <p>Knives</p> <p>Pile Horse</p> <p>Steel Table</p>	<p>Training Tannery area</p>
<p>LU3: Clean Work Place</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Remove waste from work place as per instruction Clean machine & tools as per instruction Ensure housekeeping of workplace 	<ul style="list-style-type: none"> Introduction to washing and cleaning of; <ul style="list-style-type: none"> fleshing machine tools & equipment workstation 	<p>Total: 5 Hours</p> <p>Theory:1</p> <p>Practical: 4 Hours</p>	<p>Computer</p> <p>Multimedia</p> <p>Fleshing Machine</p> <p>Fleshing Machine Operator Manual</p> <p>Wipers</p> <p>Dust Bins</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>

LU4: Maintain Fleshing Machine Register	The trainee will be able to: <ul style="list-style-type: none"> • Record Fleshing operation entries in register • Record damages during Fleshing operation 	<ul style="list-style-type: none"> • Introduction to machine register • Procedure of recording entries in register • Importance of machine register 	Total 5 Hours Theory:1 Hours Practical: 4 Hours	Computer Multimedia Record Registers	Classroom with multimedia aid Training Tannery area
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Module 6. Carryout Scudding

Objective of the module: After successful completion of this module, the student is competent in performing scudding according to professional standards and by respecting safety and health regulations.

Duration: 40 Hours **Theory:** 8 Hours **Practical:** 32 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare Workstation for Scudding	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Remove hazardous material from work area Analyze Job card from supervisor Place correct tools as per requirement Set Scudding area as per requirement 	<ul style="list-style-type: none"> Define PPE State importance of PPE at workstation Enlist the hazardous materials Define the risks involved in case hazardous materials are not removed. Define job card Introduction to scudding tools <ul style="list-style-type: none"> Scudding knives Sliding beam Selection of scudding knife Importance of setting scudding area 	<p>Total: 15 Hours</p> <p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	Computer Multimedia Safety helmet & glasses and mask Safety Gloves Safety Shoes Earplugs Safety Uniform Scudding Beam Curved Knives	Classroom with multimedia aid Training Tannery area
LU2: Perform Scudding	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Set pelt for Scudding Select correct curved knife for Scudding Execute Scudding on 	<ul style="list-style-type: none"> Define scudding Purpose of scudding Types of scudding Introduction to grain side and flesh of hide/skin Define scudding process & procedure <ul style="list-style-type: none"> Method of placing skin on 	<p>Total: 15 Hours</p> <p>Theory: 3 Hours</p>	Computer Multimedia Scudding Beam Curved Knives Hide	Classroom with multimedia aid Training Tannery area

	<p>PELT</p> <ul style="list-style-type: none"> • Pile Scudded PELT 	<p>scudding beam</p> <ul style="list-style-type: none"> ○ Method of using scudding knife ○ Define damages during scudding 	<p>Practical: 12 Hours</p>	<p>Skin Pit Pallet Tub Steel Table</p>	
<p>LU3: Clean Work Place</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> • Dispose waste from workplace as per instructions • Clean tools as per instruction • Ensure housekeeping of workplace 	<ul style="list-style-type: none"> • Introduction to washing and cleaning of; <ul style="list-style-type: none"> ○ scudding knives & equipment ○ scudding table ○ workstation 	<p>Total: 5 Hours</p> <p>Theory: 1 Hours</p> <p>Practical: 4 Hours</p>	<p>Computer Multimedia Scudding Beam Curved Knives Steel Table Wiper Dust Bin</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>
<p>LU4: Maintain Scudding Machine Register</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> • Record Scudding operation entries in register • Record damages during Scudding operation 	<ul style="list-style-type: none"> • Introduction to machine register • Define procedure of recording entries in register • Importance of register 	<p>Total: 5 Hours</p> <p>Theory: 1 hours</p> <p>Practical: 4 Hours</p>	<p>Computer Multimedia Record Registers</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>

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Module 7. Carryout Splitting

Objective of the module: After successful completion of this module, the student is competent in performing splitting according to professional standards and by respecting safety and health regulations.

Duration: 40 Hours **Theory:** 8 Hours **Practical:** 32 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare Workstation for Splitting	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Remove hazardous from work area Analyze Job card from supervisor Set Splitting machine as per requirement 	<ul style="list-style-type: none"> Define PPE State importance of PPE at workstation Enlist the hazardous materials Define the risks involved in case hazardous materials are not removed. Define job card Introduction to splitting machine. <ul style="list-style-type: none"> Introduction to gauge and its setting Introduction to knives Introduction to pressure paddle 	<p>Total: 15 Hours</p> <p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	<ul style="list-style-type: none"> Computer Multimedia Safety helmet & glasses Safety Gloves Safety Shoes Earplugs Safety Uniform Splitting Machine Splitting Machine Operator Manual Knives 	<ul style="list-style-type: none"> Classroom with multimedia aid Training Tannery area
LU2: Perform splitting	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Feed tanned leather into splitting machine Operate Splitting 	<ul style="list-style-type: none"> Define splitting Purpose of splitting Types of splitting Introduction to splitting process Procedure of splitting 	<p>Total: 15 Hours</p> <p>Theory: 3</p>	<ul style="list-style-type: none"> Computer Multimedia Splitting Machine Splitting Machine 	<ul style="list-style-type: none"> Classroom with multimedia aid Training Tannery

	<p>machine as per requirement</p> <ul style="list-style-type: none"> • Maintain accuracy of Splitting • Segregate damaged hides/skin • Pile leather after splitting g machine as per requirement 	<ul style="list-style-type: none"> • Define damages during splitting 	<p>Hours</p> <p>Practical: 12 Hours</p>	<p>Operator Manual</p> <p>Hide</p> <p>Skin</p> <p>Knives</p> <p>Pile Horse</p> <p>Thickness Gauge Meter</p>	<p>area</p>
LU3: Clean Work Place	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> • Remove waste from work place as per instruction • Clean machine & tools as per instruction • Ensure housekeeping of workplace 	<ul style="list-style-type: none"> • Introduction to cleaning of; <ul style="list-style-type: none"> ○ splitting machine ○ equipment ○ workstation 	<p>Total: 5</p> <p>Theory: 1 Hour</p> <p>Practical: 4 Hours</p>	<p>Computer</p> <p>Multimedia</p> <p>Splitting Machine</p> <p>Splitting Machine Operator Manual</p> <p>Air Blower</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>
LU4: Maintain Splitting Register	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> • Record Splitting operation entries in register • Record damages during Splitting 	<ul style="list-style-type: none"> • Introduction to machine register • Define procedure of recording entries in register • Importance of register 	<p>Total: 5 Hours</p> <p>Theory: 1 Hour</p> <p>Practical:</p>	<p>Computer</p> <p>Multimedia</p> <p>Record Registers</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>

	operation		4 Hours		
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Module 8. Carryout Shaving

Objective of the module: After successful completion of this module, the student is competent in performing shaving according to professional standards and by respecting safety and health regulations.

Duration: 40 Hours **Theory:** 8 Hours **Practical:** 32 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare Workstation for Shaving	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Remove hazardous material from work area Analyze Job card from supervisor Set Shaving machine as per requirement 	<ul style="list-style-type: none"> Define PPE State importance of PPE at workstation Enlist the hazardous materials Define the risks involved in case hazardous materials are not removed. Define job card Introduction to gauge meter Introduction to shaving machine. <ul style="list-style-type: none"> Introduction to gauge and its setting Introduction to knives Introduction to pressure paddle Introduction to shaving tools 	<p>Total: 15 Hours</p> <p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	Computer Multimedia Safety helmet & glasses Safety Gloves Safety Shoes Earplugs Safety Uniform Shaving Machine Shaving Machine Operator Manual Knives/Blades Tool Kits	Classroom with multimedia aid Training Tannery area
LU2: Perform Shaving	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Feed tanned leather 	<ul style="list-style-type: none"> Define shaving Purpose of shaving Types of shaving Introduction to shaving process 	<p>Total: 15 Hours</p>	Computer Multimedia	Classroom with multimedia aid

	<p>into shaving machine</p> <ul style="list-style-type: none"> Operate Shaving machine as per requirement Measure thickness of Leather as per requirement Segregate damaged hides/skin Pile Shaved leather 	<ul style="list-style-type: none"> Procedure of shaving Define damages during shaving Reasons of damages during shaving Define Precautions during shaving 	<p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	<p>Shaving Machine</p> <p>Shaving Machine Operator Manual</p> <p>Hide</p> <p>Skin</p> <p>Knives/Blades</p> <p>Tools Kits</p> <p>Air Blower</p> <p>Thickness Gauge Meter</p>	<p>Training Tannery area</p>
<p>LU3: Clean Work Place</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Remove waste from work place as per instruction Clean machine & tools as per instruction Ensure housekeeping of workplace 	<ul style="list-style-type: none"> Introduction to cleaning of; <ul style="list-style-type: none"> Shaving machine equipment workstation 	<p>Total: 5 Hours</p> <p>Theory: 1 Hour</p> <p>Practical: 4 Hours</p>	<p>Computer</p> <p>Multimedia</p> <p>Shaving Machine</p> <p>Shaving Machine Operator Manual</p> <p>Air Blower</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>
<p>LU4: Maintain Shaving Machine Register</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Record Shaving 	<ul style="list-style-type: none"> Introduction to machine register Define procedure of recording entries in register Importance of register 	<p>Total: 5 Hours</p>	<p>Computer</p> <p>Multimedia</p> <p>Record Registers</p>	<p>Classroom with multimedia aid</p>

	operation entries in register <ul style="list-style-type: none">Record damages during Shaving operation		Theory: 1 Hour Practical: 4 Hours		Training Tannery area
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Module 9. Carryout Sammying - Setting

Objective of the module: After successful completion of this module, the student is competent in performing sammying-setting according to professional standards and by respecting safety and health regulations.

Duration: 40 Hours **Theory:** 8 Hours **Practical:** 32 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare Workstation for Sammying - Setting out	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Remove hazardous material from work place Analyze Job card from supervisor Set Sammying - Setting out machine as per requirement 	<ul style="list-style-type: none"> Define PPE State importance of PPE at workstation Enlist the hazardous materials Define the risks involved in case hazardous materials are not removed. Define job card Introduction to sammying-setting out machine. Introduction to gauge and its setting Introduction to blend knives Introduction to pressure paddle 	<p>Total 15 Hours</p> <p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	<p>Computer</p> <p>Multimedia</p> <p>Safety helmet & glasses</p> <p>Safety Gloves</p> <p>Safety Shoes</p> <p>Earplugs</p> <p>Safety Uniform</p> <p>Sammying & Setting Machine</p> <p>Sammying & Setting Machine Operator Manual</p> <p>Tools Kits</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>
LU2: Perform Sammying - Setting out	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Feed leather into 	<ul style="list-style-type: none"> Define sammying-setting out Purpose of sammying-setting out Introduction to sammying-setting out machine manual 	<p>Total 15 Hours</p>	<p>Computer</p> <p>Multimedia</p> <p>Sammying -</p>	<p>Classroom with multimedia aid</p>

	<p>Sammying – Setting out machine</p> <ul style="list-style-type: none"> Operate Sammying - Setting out machine as per requirement Pile Leather 	<ul style="list-style-type: none"> Introduction to sammying-setting out process Perform sammying-setting out 	<p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	<p>Setting Machine Pile Horse</p> <p>Sammying - Setting Machine Operator Manual</p> <p>Hide Skin</p>	<p>Training Tannery area</p>
<p>LU3: Clean Work Place</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Clean machine as per instruction Ensure housekeeping of workplace 	<ul style="list-style-type: none"> Introduction to cleaning of; <ul style="list-style-type: none"> Sammying-setting out machine Workstation 	<p>Total 5 Hours</p> <p>Theory: 1 Hour</p> <p>Practical: 4 Hours</p>	<p>Computer Multimedia</p> <p>Sammying - Setting Machine</p> <p>Sammying – Setting Machine Operator Manual</p> <p>Air Blower</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>
<p>LU4: Maintain Sammying – Setting out machine register</p>	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Record Sammying - Setting out operation entries in register Record damages during Sammying - Setting out 	<ul style="list-style-type: none"> Introduction to machine register Define procedure of recording entries in register Importance of register 	<p>Total 5 Hours</p> <p>Theory: 1 Hour</p> <p>Practical: 4 Hour</p>	<p>Computer Multimedia</p> <p>Record Registers</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>

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Module 10. Carryout Drying

Objective of the module: After successful completion of this module, the student is competent in performing drying according to professional standards and by respecting safety and health regulations.

Duration: 40 Hours **Theory:** 8 Hours **Practical:** 32 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare Workstation for Drying	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Remove hazardous from work place Analyze Job card from supervisor Select Drying method as per job requirement Set Drying machine as per requirement 	<ul style="list-style-type: none"> Define PPE State importance of PPE at workstation Enlist the hazardous materials Define the risks involved in case hazardous materials are not removed. Define job card Introduction to Drying machine. <ul style="list-style-type: none"> Timer setting Temperature setting Pressure setting 	<p>Total 15 Hours</p> <p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	<p>Computer</p> <p>Multimedia</p> <p>Safety helmet & glasses</p> <p>Safety Gloves (Welding)</p> <p>Safety Shoes</p> <p>Earplugs</p> <p>Safety Uniform</p> <p>Drying Machine</p> <p>Drying Machine Operator Manual</p> <p>Tool Kit</p> <p>Hanging Clips</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>
LU2: Perform Drying	<p>The trainee will be able to:</p>	<ul style="list-style-type: none"> Define Drying Purpose of Drying Introduction to types of drying 	<p>Total 15 Hours</p>	<p>Computer</p> <p>Multimedia</p>	<p>Classroom with multimedia aid</p>

	<ul style="list-style-type: none"> Place leather into drying machine Operate Drying machine as per requirement Hang Leather as per instruction 	<ul style="list-style-type: none"> Define damages during drying Reasons of damages during drying Introduction to Drying machine manual Introduction to Drying process Perform drying Moisture content checking importance 	<p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	Drying Machine Drying Machine Operator Manual Hide Skin Tool Kit Scraper (Fiber) Pile Horse Hanging Clips	Training Tannery area
LU3: Clean Work Place	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Clean machine as per instruction Ensure housekeeping of workplace 	<ul style="list-style-type: none"> Introduction to cleaning of; <ul style="list-style-type: none"> Drying machine Tools & equipment workstation 	<p>Total 5 Hours</p> <p>Theory: 1 Hours</p> <p>Practical: 4 Hours</p>	Computer Multimedia Drying Machine Drying Machine Operator Manual Air Blower	Classroom with multimedia aid Training Tannery area
LU4: Maintain Drying machine register	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Record Drying operation entries in register 	<ul style="list-style-type: none"> Introduction to machine register Define procedure of recording entries in register Importance of register 	<p>Total 5 Hours</p> <p>Theory: 1 Hour</p>	Computer Multimedia Record Registers	Classroom with multimedia aid Training Tannery area

	<ul style="list-style-type: none">Record damages during Drying operation		Practical: 4 Hours		
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Module 11. Carryout Staking

Objective of the module: After successful completion of this module, the student is competent in performing staking according to professional standards and by respecting safety and health regulations.

Duration: 40 Hours **Theory:** 8 Hours **Practical:** 32 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare Workstation for Staking	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Remove hazardous from work place Analyze Job card from supervisor Select Staking method as per job requirement Set Staking machine as per requirement 	<ul style="list-style-type: none"> Define PPE State importance of PPE at workstation Enlist the hazardous materials Define the risks involved in case hazardous materials are not removed. Define job card Introduction to Staking machine. Wheel Staking Machine Horizontal Staking Machine Vertical Staking Machine 	<p>Total 15 Hours</p> <p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	Computer Multimedia Safety helmet & glasses Safety Gloves Safety Shoes Earplugs Safety Uniform Staking Machine Staking Machine Operator Manual	Classroom with multimedia aid Training Tannery area
LU2: Perform Staking	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Place leather into staking machine 	<ul style="list-style-type: none"> Define Staking Purpose of Staking Introduction to types of Staking Define damages during staking Reasons of damages during staking Introduction to Staking machine 	<p>Total 15 Hours</p> <p>Theory:</p>	Computer Multimedia Staking Machine Staking Machine	Classroom with multimedia aid Training Tannery

	<ul style="list-style-type: none"> Operate Staking machine as per requirement Segregate damaged leather Pile the Leather 	<ul style="list-style-type: none"> manual Introduction to Staking process Perform Staking 	<p>3 Hours</p> <p>Practical:</p> <p>12 Hours</p>	<p>Operator Manual</p> <p>Hide</p> <p>Skin</p> <p>Clips</p> <p>Tool Kit</p> <p>Pile Horse</p>	area
LU3: Clean Work Place	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Dispose waste as per instruction Clean machine as per instruction Ensure housekeeping of workplace 	<ul style="list-style-type: none"> Introduction to cleaning of; <ul style="list-style-type: none"> Staking machine workstation 	<p>Total</p> <p>5 Hours</p> <p>Theory:</p> <p>1 Hours</p> <p>Practical:</p> <p>4 Hours</p>	<p>Computer</p> <p>Multimedia</p> <p>Staking Machine</p> <p>Staking Machine Operator Manual</p> <p>Air Blower</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>
LU4: Maintain Staking machine register	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Record Staking operation entries in register Record damages during Staking operation 	<ul style="list-style-type: none"> Introduction to machine register Define procedure of recording entries in register Importance of register 	<p>Total</p> <p>5 Hours</p> <p>Theory:</p> <p>1 Hours</p> <p>Practical:</p> <p>4 Hours</p>	<p>Computer</p> <p>Multimedia</p> <p>Record Registers</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>

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Module 12. Carryout Toggling

Objective of the module: After successful completion of this module, the student is competent in performing toggling according to professional standards and by respecting safety and health regulations.

Duration: 40 Hours **Theory:** 8 Hours **Practical:** 32 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare Workstation for Toggling	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Remove hazardous material from work place Analyze Job card from supervisor Set Toggle machine as per requirement 	<ul style="list-style-type: none"> Define PPE State importance of PPE at workstation Enlist the hazardous materials Define the risks involved in case hazardous materials are not removed. Define job card Introduction to Toggling machine Importance of controls in toggling machine Explain controls of toggling machine 	<p>Total 15 Hours</p> <p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	Computer Multimedia Safety helmet & glasses Safety Gloves Safety Shoes Earplugs Safety Uniform Toggling Machine Toggling Machine Operator Manual Toggling Clips Toggling Chambers	Classroom with multimedia aid Training Tannery area
LU2: Perform Toggling	<p>The trainee will be able to:</p>	<ul style="list-style-type: none"> Define Toggling Purpose of Toggling Introduction to Toggling machine 	<p>Total 15 Hours</p>	Computer Multimedia	Classroom with multimedia aid

	<ul style="list-style-type: none"> Set leather on Toggle stand Operate Toggling machine Pile Leather as per instruction 	<p>manual</p> <ul style="list-style-type: none"> Introduction to Toggling process Perform Toggling Define damages during toggling Reasons of damages during toggling 	<p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	<p>Toggling Machine</p> <p>Toggling Machine Operator Manual</p> <p>Hide</p> <p>Skin</p> <p>Tool Kits</p> <p>Toggling clips/clamps</p> <p>Pile Horse</p> <p>Fan</p> <p>Toggle Chamber</p>	<p>Training Tannery area</p>
LU3: Clean Work Place	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Clean machine as per instruction Ensure housekeeping of workplace 	<ul style="list-style-type: none"> Introduction to cleaning of; <ul style="list-style-type: none"> Toggling machine Tools & equipment workstation 	<p>Total 5 Hours</p> <p>Theory: 1 Hours</p> <p>Practical: 4 Hours</p>	<p>Computer</p> <p>Multimedia</p> <p>Toggling Machine</p> <p>Toggling Machine Operator Manual</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>
LU4: Maintain Toggling machine register	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Record Toggling operation entries in register 	<ul style="list-style-type: none"> Introduction to machine register Define procedure of recording entries in register Importance of register 	<p>Total 5 Hours</p> <p>Theory: 1 Hour</p>	<p>Computer</p> <p>Multimedia</p> <p>Record Registers</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>

	<ul style="list-style-type: none">Record damages during Toggling operation		Practical: 4 Hours		
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Module 13. Carryout Buffing

Objective of the module: After successful completion of this module, the student is competent in performing buffing according to professional standards and by respecting safety and health regulations.

Duration: 40 Hours **Theory:** 8 Hours **Practical:** 32 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare Workstation for Buffing	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Remove hazardous material from workplace Analyze Job card from supervisor Select Buffing paper as per job requirement Set Buffing machine as per requirement 	<ul style="list-style-type: none"> Define PPE State importance of PPE at workstation Enlist the hazardous materials Define the risks involved in case hazardous materials are not removed. Define job card Introduction to Buffing machine. Introduction to Buffing paper and its types Uses of buffing paper 	<p>Total 15 Hours</p> <p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	Computer Multimedia Safety helmet & glasses Safety Gloves Safety Shoes Earplugs Safety Uniform Buffing Machine Buffing Machine Operator Manual Buff Paper Tool Kits	Classroom with multimedia aid Training Tannery area
LU2: Perform Buffing	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Feed leather into 	<ul style="list-style-type: none"> Define Buffing Purpose of Buffing Introduction to Buffing machine manual 	<p>Total 15 Hours</p>	Computer Multimedia	Classroom with multimedia aid

	buffing machine <ul style="list-style-type: none"> Operate Buffing machine as per requirement Perform de-dusting as per requirement Check Buffing nap of Leather as per requirement Pile Buffed leather 	<ul style="list-style-type: none"> Introduction to Buffing process Perform buffing Define damages during buffing Reasons of damages during buffing Purpose of de-dusting Procedure of de-dusting 	Theory: 3 Hours Practical: 12 Hours	Buffing Machine Buffing Machine Operator Manual Hide Skin Buff Paper Tool Kits Air Blower	Training Tannery area
LU3: Clean Work Place	The trainee will be able to: <ul style="list-style-type: none"> Dispose waste as per instruction Clean machine as per instruction Ensure housekeeping of workplace 	<ul style="list-style-type: none"> Introduction to cleaning of; <ul style="list-style-type: none"> Buffing machine workstation 	Total 5 Hours Theory: 1 Hour Practical: 4 Hours	Computer Multimedia Buffing Machine Buffing Machine Operator Manual Air Blower	Classroom with multimedia aid Training Tannery area
LU4: Maintain Buffing machine register	The trainee will be able to: <ul style="list-style-type: none"> Record Buffing operation entries in register Record damages 	<ul style="list-style-type: none"> Introduction to machine register Define procedure of recording entries in register Importance of register 	Total 5 Hours Theory: 1 Hour Practical:	Computer Multimedia Record Registers	Classroom with multimedia aid Training Tannery area

	during Buffing operation		4 Hours		
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Module 14. Carryout Hydraulic Press

Objective of the module: After successful completion of this module, the student is competent in performing hydraulic press according to professional standards and by respecting safety and health regulations.

Duration: 40 Hours **Theory:** 8 Hours **Practical:** 32 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare Workstation for Hydraulic Press	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Remove hazardous material from workplace Analyze Job card from supervisor Select Embossing Plates as per requirement Set Hydraulic Press machine as per requirement 	<ul style="list-style-type: none"> Define PPE State importance of PPE at workstation Enlist the hazardous materials Define the risks involved in case hazardous materials are not removed. Define job card Introduction to Hydraulic Press machine. Introduction to Hydraulic Press Plates Types of hydraulic press plates Importance of controls in hydraulic press machine Explain controls of hydraulic press machine 	<p>Total 15 Hours</p> <p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	<p>Computer</p> <p>Multimedia</p> <p>Safety helmet & glasses</p> <p>Safety Gloves</p> <p>Safety Shoes</p> <p>Earplugs</p> <p>Safety Uniform</p> <p>Hydraulic Machine</p> <p>Hydraulic Machine Operator Manual</p> <p>Hydro press plate (Plain)</p> <p>Hydro press plate (hair-cell)</p> <p>Hydro press plate (milled)</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>

				Tool Kits	
LU2: Perform Hydraulic Press	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Place Leather into Hydraulic Press Operate Hydraulic Press as per requirement Examine Hydraulic Press Effect on leather as per requirement Pile Embossed Leather 	<ul style="list-style-type: none"> Define Embossing Purpose of Embossing Introduction to Hydraulic Press machine manual Introduction to Embossing process Perform Embossing Define damages during hydraulic press Reasons of damages during hydraulic press Precautions to take during hydraulic press 	<p>Total 15 Hours</p> <p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	<p>Computer Multimedia Hydraulic Machine Hydraulic Machine Operator Manual Hide Skin Hydro press plate (Plain) Hydro press plate (hair-cell) Hydro press plate (milled) Tool Kits Pallet Jacks Large Wooden Scraper</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>
LU3: Clean Work Place	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Clean machine as per instruction Ensure housekeeping 	<ul style="list-style-type: none"> Introduction to cleaning of; <ul style="list-style-type: none"> Hydraulic Press machine workstation 	<p>Total 5 Hours</p> <p>Theory: 1 Hour</p>	<p>Computer Multimedia Hydraulic Machine Hydraulic Machine</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>

	of workplace		Practical: 4 Hours	Operator Manual Air Blower	
LU4: Maintain Hydraulic Press machine register	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Record Hydraulic Press Machine operation entries in register Record damages during Hydraulic Press operation 	<ul style="list-style-type: none"> Introduction to machine register Define procedure of recording entries in register Importance of register 	<p>Total 5 Hours</p> <p>Theory: 1 Hour</p> <p>Practical: 4 Hours</p>	<p>Computer Multimedia Record Registers</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>

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Module 15. Carryout Ironing

Objective of the module: After successful completion of this module, the student is competent in performing ironing according to professional standards and by respecting safety and health regulations.

Duration: 40 Hours **Theory:** 8 Hours **Practical:** 32 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare Workstation for Ironing	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> • Remove hazardous from workplace • Analyze Job card from supervisor • Set Ironing machine as per requirement 	<ul style="list-style-type: none"> ○ Define PPE ○ State importance of PPE at workstation ○ Enlist the hazardous ○ Define the risks involved in case hazardous materials are not removed. ○ Define job card ○ Introduction to Ironing machine. ○ Feed roller ○ Pressure roller ○ Iron roller ○ Importance of controls in ironing machine ○ Explain controls of ironing machine 	<p>Total 15 Hours</p> <p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	<p>Computer</p> <p>Multimedia</p> <p>Safety helmet & glasses</p> <p>Safety Gloves</p> <p>Safety Shoes</p> <p>Earplugs</p> <p>Safety Uniform</p> <p>Ironing Machine</p> <p>Ironing Machine Operator Manual</p> <p>Tool Kits</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>
LU2: Perform Ironing	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> • Feed Leather into Ironing machine 	<ul style="list-style-type: none"> • Define Ironing • Purpose of Ironing • Introduction to Ironing machine manual • Introduction to Ironing process • Perform Ironing 	<p>Total 15 Hours</p> <p>Theory:</p>	<p>Computer</p> <p>Multimedia</p> <p>Ironing Machine</p> <p>Ironing Machine</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery</p>

	<ul style="list-style-type: none"> Operate Ironing machine as per requirement Examine Ironing impact on leather as per requirement Pile leather 	<ul style="list-style-type: none"> Define damages during ironing Reasons of damages during ironing Precautions to take during ironing 	3 Hours Practical: 12 Hours	Operator Manual Hide Skin Tools Kits Pallet Jack	area
LU3: Clean Work place	The trainee will be able to: <ul style="list-style-type: none"> Clean machine as per instruction Ensure housekeeping of workplace 	<ul style="list-style-type: none"> Introduction to cleaning of; <ul style="list-style-type: none"> Ironing machine workstation 	Total 5 Hours Theory: 1 Hour Practical: 4 Hours	Computer Multimedia Ironing Machine Ironing Machine Operator Manual Air Blower	Classroom with multimedia aid Training Tannery area
LU4: Maintain Ironing machine register	The trainee will be able to: <ul style="list-style-type: none"> Record Ironing operation entries in register Record damages during Ironing operation 	<ul style="list-style-type: none"> Introduction to machine register Define procedure of recording entries in register Importance of register 	Total 5 Hours Theory: 1 Hours Practical: 4 Hours	Computer Multimedia Record Registers	Classroom with multimedia aid Training Tannery area

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Module 16. Carryout Leather Measuring

Objective of the module: After successful completion of this module, the student is competent in performing leather measuring according to professional standards and by respecting safety and health regulations.

Duration: 40 Hours **Theory:** 8 Hours **Practical:** 32 Hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare Workstation for Leather Measuring	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Remove hazardous material from workplace Analyze Job card from supervisor Set Measuring machine as per requirement 	<ul style="list-style-type: none"> Define PPE State importance of PPE at workstation Enlist the hazardous materials Define the risks involved in case hazardous materials are not removed. Define job card Introduction to Leather Measuring machine. 	<p>Total 15 Hours</p> <p>Theory: 3 Hours</p> <p>Practical: 12 Hours</p>	Safety helmet & glasses Safety Gloves Safety Shoes Earplugs Safety Uniform Leather Measuring Machine Leather Measuring Machine Operator Manual	Classroom with multimedia aid Training Tannery area
LU2: Perform Leather Measuring	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Place Leather on Measuring machine 	<ul style="list-style-type: none"> Define Measuring Purpose of Measuring Introduction to Measuring machine manual Introduction to Measuring process 	<p>Total 15 Hours</p> <p>Theory:</p>	Leather Measuring Machine Leather	Classroom with multimedia aid Training Tannery

	<ul style="list-style-type: none"> Operate Measuring machine according as per requirement Pile Measured Leather 	<ul style="list-style-type: none"> Perform measuring on measuring machine 	<p>3 Hours</p> <p>Practical:</p> <p>12 Hours</p>	<p>Measuring Machine Operator Manual</p> <p>Hide</p> <p>Skin</p> <p>Tool Kits</p> <p>Measuring Tape</p>	area
LU3: Clean work place	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Clean machine as per instruction Ensure housekeeping of workplace 	<ul style="list-style-type: none"> Introduction to cleaning of; <ul style="list-style-type: none"> Leather Measuring Machine workstation 	<p>Total</p> <p>5 Hours</p> <p>Theory:</p> <p>1 Hours</p> <p>Practical:</p> <p>4 Hours</p>	<p>Leather Measuring Machine</p> <p>Leather Measuring Machine Operator Manual</p> <p>Air Blower</p>	
LU4: Maintain Leather Measuring machine register	<p>The trainee will be able to:</p> <ul style="list-style-type: none"> Record Measuring operation entries in register Record Measurement of leather 	<ul style="list-style-type: none"> Introduction to machine register Define procedure of recording entries in register Importance of register 	<p>Total</p> <p>5 Hours</p> <p>Theory:</p> <p>1 Hours</p> <p>Practical:</p> <p>4 Hours</p>	<p>Record Registers</p>	<p>Classroom with multimedia aid</p> <p>Training Tannery area</p>

General assessment guidance for *Leather Processing Technologist*

Good practice in Pakistan makes use of sessional and final assessments, the basis of which is described below. Good practice by vocational training providers in Pakistan is to use a combination of these sessional and final assessments, combined to produce the final qualification result.

Sessional assessment is going on all the time. Its purpose is to provide feedback on what students are learning:

Good practice in Pakistan makes use of sessional and final assessments, the basis of which is described below. Good practice by vocational training providers in Pakistan is to use a combination of these sessional and final assessments, combined to produce the final qualification result.

Sessional assessment is going on all the time. Its purpose is to provide feedback on what students are learning:

- To the student: to identify achievement and areas for further work
- To the teacher: to evaluate the effectiveness of teaching to date, and to focus future plans.

Assessors need to devise sessional assessments for both theoretical and practical work. Guidance is provided in the assessment strategy

Final assessment is the assessment, usually on completion of a course or module, which says whether or not the student has "passed". It is – or should be – undertaken with reference to all the objectives or outcomes of the course, and is usually fairly formal. Considerations of security – ensuring that the student who gets the credit is the person who did the work – assume considerable importance in final assessment.

Methods of assessment

For lessons with a high quantity of theory, written or oral tests related to learning outcomes and/ or learning content can be conducted. For workplace lessons, assessment can focus on the quality of planning the related process, the quality of executing the process, the quality of the product and/or evaluation of the process.

Methods include direct assessment, which is the most desirable form of assessment. For this method, evidence is obtained by direct observation of the student's performance.

Examples for direct assessment of a Leather Processing Technologist include:

- Work performances, for example preparing tanning recipe for given pelt.

- Demonstrations, for example demonstrating post pelt operations, such as bating, degreasing of pelt.
- Direct questioning, where the assessor would ask the student what precautions should be taken during post pelt operations.
- Paper-based tests, such as multiple choice or short answer questions on pre-pelt operations, dyeing operations, carryout fleshing, and carryout splitting.

Indirect assessment is the method used where the performance could not be watched and evidence is gained indirectly.

Examples for indirect assessment of a Leather Processing Technologist include:

- Work products, pelt, wet blue, dyed crust
- Workplace documents, such as a register for recoding staking operations.

Indirect assessment should only be a second choice. (In some cases, it may not even be guaranteed that the work products were produced by the person being assessed.)

Principles of assessment

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

Fairness means that there should be no advantages or disadvantages for any assessed person. For example, it should not happen that one student gets prior information about the type of work performance that will be assessed, while another candidate does not get any prior information.

Validity means that a valid assessment assesses what it claims to assess. For example, if shaving skills are to be assessed and certificated, the assessment should involve performance criteria that are directly related to that shaving activity. An interview about the effect of the shaving processes on different type of raw material would not meet the performance criteria.

Reliability means that the assessment is consistent and reproducible. For example, if the work performance of carryout scudding has been assessed, another assessor (eg the future employer) should be able to see the same work performance and witness the same level of achievement.

Flexibility means that the assessor has to be flexible concerning the assessment approach. For example, if there is a power failure during the assessment, the assessor should modify the arrangements to accommodate the students' needs.

Assessment strategy for *Leather Processing Technologist*

This curriculum consists of 16 modules:

Module 1: Comply Personal Health and Safety Guidelines

Module 2: Communicate the Workplace Policy and Procedure

Module 3: Perform Basic Communication (Specific)

Module 4: Perform Basic Computer Application (Specific)

Module 5: Carryout Fleshing

Module 6: Carryout Scudding

Module 7: Carryout Splitting

Module 8: Carryout Shaving

Module 9: Carryout Sammying-Setting

Module 10: Carryout Drying

Module 11: Carryout Staking

Module 12: Carryout toggling

Module 13: Carryout buffing

Module 14: Carryout Hydraulic Press

Module 15: Carryout Ironing

Module 16: Carryout Measuring

Sessional assessment

The sessional assessment for all modules shall be in two parts: theoretical assessment and practical assessment. The sessional marks shall contribute to the final qualification.

Theoretical assessment for all learning modules must consist of a written paper lasting at least 15-20mins per module. This can be a combination of multiple choice and short answer questions.

For practical assessment, all procedures and methods for the modules must be assessed on a sessional basis. Guidance is provided below under Planning for assessment.

Final assessment

Final assessment shall be in two parts: theoretical assessment and practical assessment. The final assessment marks shall contribute to the final qualification.

The final theoretical assessment shall consist of 15-20min paper.

For the final practical assessment, each student shall be assessed over a period of two days, with one 8-hour sessions on each day. This represents a total of two sessions totaling 16 hours of practical assessment for each student. During this period, each student must be assessed on his/her ability to prepare a pelt, wet blue, dyed crust or Finished Leather.

There is no final practical assessment for Module 1: Apply Occupational Health & Safety Procedures at Workplace; Module 15: Maintain Safe Work Environment; or Module 23: Develop Professionalism. Practical work for these modules shall be assessed on a sessional basis only.

The assessment team

The number of assessors must meet the needs of the students and the training provider. For example, where two assessors are conducting the assessment, there must be a maximum of five students per assessor. In this example, a group of 20 students shall therefore require assessments to be carried out over a four-day period. For a group of only 10 students, assessments would be carried out over a two-day period only.

Planning for assessment

Sessional assessment: assessors need to plan in advance how they will conduct sessional assessments for each module. The tables on the following pages are for assessors to use to insert how many hours of theoretical and practical assessment will be conducted and what the scheduled dates are.

Final assessment: Training providers need to decide ways to combine modules into a cohesive two-day final assessment program for each group of five students. Training providers must agree for practical assessments in advance

list of tools and equipment for complete qualification

List of Machinery

Sr. #	Description	Quantity
1.	Trial Steel Drum + wooden drum Automated, 300mm x 800mm	6 + 3
2.	Fleshing Machine (4")	1
3.	Splitting Machine	1
4.	Shaving Machine	1
5.	Sammying-Setting Out Machine	1
6.	Vacuum Dryer	1
7.	Staking Machine + (Chakrram Machine)	1+1
8.	Toggling Chamber	1
9.	Buffing Machine	1
10.	Embossing Machine	1
11.	Hydraulic Press Machine	1
12.	Measuring Machine	1
13.	Spray Unit with compressor	1
14.	Finishing guns with accessories	1
15.	De-dusting Machine	1
16.	Ironing Machine	1
17	Dry Milling Drum	1
18	Fini-flex Machine	1

List of Tools & Equipment's

Sr. no.	Tools & Equipment	Quantity
1.	Knife – 8"	10
2.	Pallets (3'x4')	10
3.	Digital Weight Balance (up to 50Kg)	2
4.	Pit (5'x4'x3')	1
5.	Peddle (5'x4'x3')	1
6.	Jute Brush	5
7.	Plastic Container for mixing (5kg Capacity)	5
8.	Pallet Jack	2
9.	Baume Meter	2
10.	Graduated Measuring Cylinder (250ml)	1
11.	Curve Knives	5
12.	Curve Stand for Scudding	5
13.	Table with Tube light (Selection Table)	2
14.	Pile Horse	10
15.	Thickness Gauge Meter	2
16.	Knife Cutter	5
17.	Air Blower	4
18.	Digital Weight Balance (1gram to	2

	5000gm)	
19.	Plastic Mugs	10
20.	Thermometer	2
21.	Hair Dryer	2
22.	Scissors	5
23.	Scraper Fiber	5
24.	Hanging clips	50
25.	Toggle clips	100
26.	Fan	2
27.	Wrench Pana	5
28.	Buffer Papers (180-1200)	50ft each paper
29.	Lab Coat	5
30.	Filter Cloth	10
31.	Plastic Jar	10
32.	Stirrer	1
33.	Hydro press plates (Plain)	1
34.	Hydro press plates (hair-cell)	1
35.	Hydro press plates (milled)	1
36.	Large Wooden Scraper	2
37.	Wooden Table	2
38.	Measuring tape	5
39.	Press Cutter	1
40.	Set of cutting Dies for physical test	1

	specimen	
41.	Tensile Tester with accessories	1
42.	Tear strength tester with accessories	1
43.	Temperature & humidity Control Chamber	1
44.	Rub Fastness Tester with accessories (Crock, vestige, circular)	1
45.	Finish Adhesion Tester with accessories	1
46.	Gray Scales Set	1
47.	Shrinkage temperature Kit	1
48.	Digital pH meter	1
49.	Digital TDS Meter	1
50.	Soxhlet apparatus and related glassware	3
51.	Heating mental	3
52.	Chrome Testing apparatus & glassware	1
53.	Digital Weight Balance (0.0001gm to 310gm)	2
54.	Oven (0-250C)	1
55.	Desiccator	1
56.	Fuming Chamber	1

List of consumable supplies

List of Consumables

Sr. no.	Tools & Equipment	Quantity
1.	Common Salt	10kg
2.	Soaking Agent Detergent	250gm
3.	pH paper (Ranging 1-14)	100
4.	Sodium Sulphide	400gm
5.	Lime	500gm
6.	China Clay	500gm
7.	Biocides	100gm
8.	Soda Ash	100gm
9.	Hide	As per required
10.	Skin	As per required
11.	Ammonium Salt	250gm
12.	Sodium Meta Sisulphate	100gm
13.	Bating Agent	100gm
14.	Detergent	100gm
15.	Brine Solution	50gm
16.	Degreasing Agent	25gm

17.	Sodium Formulate	100gm
18.	Formic Acid	500gm
19.	Sulfuric Acid	50gm
20.	pH indicator	3 types
21.	Chrome Salt	5 kg
22.	Sodium Bicarbonate	150gm
23.	fungicide	50gm
24.	BCG indicator	500gm
25.	Neutralizing Agent	200gm
26.	Sodium formate	200gm
27.	Soda bi carbonate	1000gm
28.	Resins	200gm
29.	Fillers	200gm
30.	Veg Re-tainnices	200gm
31.	Sytans	500gm
32.	Synthetic oil	500gm
33.	Foil Oil	200gm
34.	Emulsifier	200gm
35.	Blend Oil	200gm
36.	Lecithin oil	200gm
37.	Dye	200gm
38.	Lubricants	200gm
39.	Re-Tan Auxiliary	100gm

40.	Fixing Agent	100gm
41.	Casein Binder	500gm
42.	aniline liquid Dye (different colors)	100gm each
43.	Solvent	200gm
44.	Pigment (different colors)	100gm each
45.	Acrylic & Co-acrylic binders	200gm each
46.	Polyurethane binder	200gm
47.	Waxes	1box
48.	Nitro Cellulose Lacquer	5kg
49.	PU lacquer	5kg
50.	Feel Modifier	5kg
51.	Chemicals for lab tests	1kg

List of Personal Protective Equipment

Sr. #	Description	Specifications	Quantity
1.	First AID Box	Standard	2
2.	Fire Extinguisher Cylinder	Co2- 5 Kg	5
3.	Fire Blanket	Standard	2
4.	Fire Bucket	Standard	2
5.	Safety Gloves	Standard	5
6.	Safety Goggles	White	5
7.	Safety Shoes	Standard	5
8.	Safety Belt	Standard	5

List of Stationary

Sr. #	Description
1.	Handbooks / Registers
2.	Pencils/ pens
3.	Rubbers
4.	Sharpeners
5.	Paper Cutter
6.	Seizers
7.	Colors
8.	White charts
9.	Brown sheets
10.	White board markers
11.	Permanent markers
12.	File cover and files
13.	Tag cards
14.	Small Knife and blades

Credit values

The credit value of the National Certificate Level-2 in Leather Processing Technologist is defined by estimating the amount of time/ instruction hours required to complete each competency unit and competency standard. The NVQF uses a standard credit value of 1 credit = 10 hours of learning (Following Higher Education Commission (HEC) guidelines).

The credit values are as follows:

S.no.	Competency Standards	Estimated Hours	Credit Hours
1.	Module 1: Comply Personal Health and Safety Guidelines	30	3
2.	Module 2: Communicate the Workplace Policy and Procedure	20	2
3.	Module 3: Perform Basic Communication (Specific)	30	3
4.	Module 4: Perform Basic Computer Application (Specific)	40	4
5.	Module 5: Carryout Fleshing	40	4
6.	Module 6: Carryout Scudding	40	4
7.	Module 7: Carryout Splitting	40	4
8.	Module 8: Carryout Shaving	40	4
9.	Module 9: Carryout Sammying-Setting	40	4

S.no.	Competency Standards	Estimated Hours	Credit Hours
10	Module 10: Carryout Drying	40	4
11	Module11: Carryout Staking	40	4
12	Module 12: Carryout toggling	40	4
13	Module 13: Carryout buffing	40	4
14	Module 14: Carryout Hydraulic Press	40	4
15	Module 15: Carryout Ironing	40	4
16	Module 16: Carryout Measuring	40	4

