



Leather Processing Level III Curriculum

**Based on December 2021, Version 4 Occupational
Standards (OS)**

December, 2021
Addis Ababa, Ethiopia

Preface

The reformed TVET-System is an outcome-based system. It utilizes the needs of the labor market and occupational requirements from the world of work as the benchmark and standard for TVET delivery. The requirements from the world of work are analyzed and documented – taking into account international benchmarking – as occupational standards (OS).

In the reformed TVET-System, curricula and curriculum development play an important role with regard to quality driven comparable TVET-Delivery. The Curricula help to facilitate the training process in a way, that trainees acquire the set of occupational competences (skills, knowledge and attitude) required at the working place and defined in the occupational standards (OS).

This curriculum has been developed by a group of professional experts from different Regional TVET Bureaus, colleges, Industries, Institutes and universities based on the occupational standard for Leather Processing Level III.

The curriculum development process has been actively supported and facilitated by **Ministry of Labor and Skills**.

TVET-Program Design

1.1. TVET-Program Title: Leather Processing Level III

1.2. TVET-Program Description

The Program is designed to develop the necessary attitude, knowledge and skills of the learners to the standard required by the occupation. The contents of this program are in line with the occupational standard. Learners who successfully completed the Program will be qualified to work as a **Technician** with competencies elaborated in the respective OS. Graduates of the program will have the required qualification to work in the **Industry Sector** in the field of **Leather Processing**.

The prime objective of this training program is to equip the trainees with the identified competences specified in the OS. Graduates are therefore expected Monitor Technical Process, Determine Suitability of Materials for End Use, Perform Production Planning Processes, Perform Selection and Grading, Perform Color Matching and Monitor and Coordinate Tannery Waste Treatment in accordance with the performance criteria described in the OS.

1.3. TVET-Program Learning Outcomes

The expected outputs of this program are the acquisition and implementation of the following units of competence: –

IND LEP3 01 1121 Monitor Technical Process

IND LEP3 02 1121 Determine Suitability of Material for End Use

IND LEP3 03 1121 Perform Production Planning Processes

IND LEP3 04 1121 Perform Selection and Grading

IND LEP3 05 1121 Perform Color Matching

IND LEP3 06 1121 Monitor and Coordinate Tannery Waste Treatment

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1.4. Duration of the TVET-Program

The Program will have duration of **476 Hours** including the on-the-job practice or cooperative training time.

No	Unit competency	On school training		Cooperative Training	Total Hours	Remarks
		Theory	Practical			
1.	Monitor Technical Process	12	10	18	40	
2.	Determine Suitability of Materials for End Use	12	12	12	36	
3.	Perform Production Planning Processes	9	0	16	25	
4.	Perform Selection and Grading	8	20	12	40	
5.	Perform Color Matching	12	21	12	45	
6.	Monitor and Coordinate Tannery Waste Treatment	9	24	12	45	
Total calculated					231	

1.5. Qualification Level and Certification

Based on the descriptors elaborated on the Ethiopian National TVET Qualification Framework (NTQF) the qualification of this specific TVET Program is “**Level III**”.

The trainee can exit after successfully completing the modules in one level and will be awarded the equivalent institutional certificate on the level completed. However, only institutional certificate of training accomplishment will be awarded.

1.6. Target Groups

Any citizen who meets the entry requirements under items 1.7 and capable of participating in the learning activities is entitled to take part in the Program.

1.7 Entry Requirements

The prospective participants of this program are required to possess the requirements or directive of the Ministry of Labor and Skills.

1.8 Mode of Delivery

This TVET-Program is characterized as a formal Program on middle level technical skills. The mode of delivery is co-operative training. The time spent by the trainees in the real work place/ industry will give them enough exposure to the actual world of work and enable them to get hands-on experience.

The co-operative approach will be supported with school-based lecture-discussion, simulation and actual practice. These modalities will be utilized before the trainees are exposed to the industry environment.

Hence based on the nature of the occupation, location of the TVET institutions, and interest of the industry alternative mode of cooperative training such as apprenticeships, internship and traineeship will be employed. In addition, in the areas where industry is not sufficiently available the established production and service centers/learning factories in TVET institutions will be used as cooperative training places. The Training-Institution and identified companies have forged an agreement to co-operate with regard to the implementation of this program.

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1.9 TVET-Program Structure

Unit of Competence		Module Code & Title		Learning Outcomes	Duration (In Hours)
IND LEP3 01 1121	Monitor Technical Process	IND LEP3 M01 1221	Monitoring Technical Process	<ul style="list-style-type: none"> • Determine requirements for technical processes • Organize resources • Supervise process • Measure specified process parameters • Monitor use and handling of chemicals • Keep record 	40
IND LEP3 02 1121	Determine Suitability of Materials for End Use	IND LEP3 M02 1221	Determining Suitability of Materials for End Use	<ul style="list-style-type: none"> • Inspect hide, skin or leather • Identify techniques that impact on suitability for use • Identify preservation and storage methods • Determine suitability for production 	36
IND LEP3 03 1121	Perform Production Planning Processes	IND LEP3 M03 1221	Performing Production Planning Processes	<ul style="list-style-type: none"> • Confirm production requirements • Gather specific production information 	25

			<ul style="list-style-type: none"> • Prepare production planning 		
IND LEP3 04 1121	Perform Selecting and Grading	IND LEP3 M04 1221	Performing Selection and Grading	<ul style="list-style-type: none"> • Determine requirements • Perform crust leather selection and grading • Perform finished leather selection and grading • Maintain records 	40
IND LEP3 05 1121	Perform Color Matching	IND LEP3 M05 1221	Performing Color Matching	<ul style="list-style-type: none"> • Confirm pre-operation tasks • Undertake color matching on sample trial • Undertake color matching on bulk trial 	45
IND LEP3 06 1121	Monitor and Coordinate Tannery Waste Treatment	IND LEP3 M06 1221	Monitoring and Coordinating Tannery Waste Treatment	<ul style="list-style-type: none"> • Monitor treatment plant performance • Control chemical use • Operate and control processes • Compile and maintain process records 	45

*The time duration (Hours) indicated for the module should include all activities in and out of the TVET institution.

1.10 Institutional Assessment

Two types of evaluation will be used in determining the extent to which learning outcomes are achieved. The specific learning outcomes are stated in the modules. In assessing them, verifiable and observable indicators and standards shall be used.

The **formative assessment** is incorporated in the learning modules and form part of the learning process. Formative evaluation provides the trainee with feedback regarding success or failure in attaining learning outcomes. It identifies the specific learning errors that need to be corrected, and provides reinforcement for successful performance as well. For the teacher, formative evaluation provides information for making instruction and remedial work more effective.

Summative Evaluation the other form of evaluation is given when all the modules in the program have been accomplished. It determines the extent to which competence have been achieved. And, the result of this assessment decision shall be expressed in the term ‘competent or not yet competent’.

Techniques or tools for obtaining information about trainees’ achievement include oral or written test, demonstration and on-site observation.

1.11 TVET Teachers Profile

The teachers conducting this particular TVET Program are **B Level** and have satisfactory practical experiences or equivalent qualifications.

LEARNING MODULE 01	
TVET-PROGRAMME TITLE: Leather Processing Level III	
MODULE TITLE: Monitoring Technical Processes	
MODULE CODE: IND LEP3 M01 1221	
NOMINAL DURATION : 40 Hours	
MODULE DESCRIPTION: This module covers the knowledge, attitude and skills required to supervise and monitor the technical processes, particularly in the preparation of chemicals and measuring specified process parameters	
<p>LEARNING OUTCOMES</p> <p>At the end of the module the learner will be able to:</p> <ul style="list-style-type: none"> LO1. Determine requirements for technical processes LO2. Organize resources LO3. Supervise process LO4. Measure specified process parameters LO5. Monitor use and handling of chemicals 	
<p>MODULE CONTENTS:</p> <p>LO1 Determine requirements for technical processes</p> <ul style="list-style-type: none"> 1.1 Selecting and confirming work instructions 1.2 Requirements for the technical processes <p>LO2 Organize resources</p> <ul style="list-style-type: none"> 2.1 Resources for technical process monitoring <ul style="list-style-type: none"> 2.1.1 Organizing equipment required for technical process 2.1.2 Organizing chemical required for technical process 2.2 Obtaining relevant information and other resources <p>LO3 Supervise process</p> <ul style="list-style-type: none"> 3.1 Identifying roles and responsibilities to supervise the process 3.2 Communicating process requirements to team leader or individual 3.3 Managing technical process requirements <p>LO4 Measure specified process parameters</p> <ul style="list-style-type: none"> 4.1 Preparing and calibrating basic measuring equipment 4.2 Monitoring and retrieving data for process parameters 4.3 Isolating and reporting deviations from normal 	

- 4.4 Analyzing data against process or quality specifications
- 4.5 Identifying strategies or suggestions for process improvement

LO5 Monitor use and handling of chemicals

- 5.1 Monitoring chemical processes
 - 5.1.1 Chemical process for preservation
 - 5.1.2 Chemicals process for beam house and tanning
 - 5.1.3 Chemical process for post-tanning
 - 5.1.4 Chemicals process for finishing
 - 5.1.5 Chemical process for effluent treatment
- 5.2 Reporting deviations for correction and improvement
- 5.3 Recording and maintaining changes to the process or quality of the product

LEARNING METHODS:			
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)		
	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points 	<ul style="list-style-type: none"> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees 	<ul style="list-style-type: none"> ❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> ❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> ❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> ❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipment/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ Provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> ❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ 	<ul style="list-style-type: none"> ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly 	<ul style="list-style-type: none"> ❖ Introduce the trainees with their peers
Exercise	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training 	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training 	<ul style="list-style-type: none"> ❖ Assign peer trainees ❖ Use additional nominal hours if necessary

	❖ Introduce new and relevant vocabularies		
Individual assignment	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	<ul style="list-style-type: none"> ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	
ASSESSMENT METHODS:			
Interview	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Ensure or confirm whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension 	<ul style="list-style-type: none"> ❖ Speak loudly ❖ Using sign language interpreter if necessary 	<ul style="list-style-type: none"> ❖ Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> ❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers 	<ul style="list-style-type: none"> ❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> ❖ Use oral response as an option to give answer for trainees having severe upper limb

	<ul style="list-style-type: none"> ❖ Avoid essay writing ❖ Time extension 		<p>impairment</p> <ul style="list-style-type: none"> ❖ Time extension for trainees having severe upper limb impairment
Demonstration/ Observation	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO1 Determine requirements for technical processes

- Appropriate work instructions are selected and confirmed
- Requirements for the technical process are determined and/or confirmed

LO2 Organize resources

- Equipment and/or chemicals required for the process are organized
- Relevant information and all necessary resources are obtained in accordance with process requirements

LO3 Supervise process

- Roles and responsibilities are set to undertake the process
- Appropriate personnel are assigned
- Requirements are communicated to team leader or individual and instruction given as required
- Technical process is supervised to confirm that all requirements are met

LO4 Measure specified process parameters

- Basic measuring equipment is selected, prepared and calibrated, as required to measure process parameters
- Process is monitored and data retrieved in accordance with organization's procedures
- Any deviations from normal are recognized, isolated and reported according to organization's requirements
- Data is analyzed against process or quality specifications to ensure conformance
- Strategies or suggestions for improvement to the process are identified and reported in accordance with organization's procedures

LO5 Monitor use and handling of chemicals

- Chemical using processes are monitored to ensure compliance with practices of manufacturer(s), organization workplace and OHS.
- Any deviations from established practices isolated and reported for correction and improvement
- Recording and reporting procedures are performed in accordance with organization's requirements
- Changes to the process or quality of the product is recoded and maintained

Annex: Resource Requirements

IND LEP3 M01 1221 Monitoring Technical Process				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Learner)
A. Learning Materials				
1.	TTLM	Prepared by trainer	25	1:1
2.	Theory and Practice of Leather Manufacture	Sarkar K T	5	1:5
B. Learning Facilities & Infrastructure				
1.	Lecture Room		1	1:25
2.	Library		1	1:25
3.	Model Tannery		1	1:25
4.	Testing Laboratory		1	1:25
C. Consumable Materials				
1.	Paper	A4	5rim	1:5
2.	Flip chart	23"x32"	5	1:5
3.	White board marker	2-5MM	1pack	1:25
4.	Duster	Standard	2 pcs	2:25
5.	Chalk	Different color	1 pack	1:25
D. Tools and Equipment				
1	Electronic monitoring and metering systems		As required	
2	Manual chart recording		As required	
3	Basic hand tools, laboratory testing and sampling equipment		As required	
4	PPE		As	

			required	
5	Measuring/weighing equipment		As required	
6	LCD Projector	50/60/HZ	1	1:25
7	Personal computer	Standard	1	1:25
8	Printer	Standard	1	1:25
9	White board	1m*1.5m	1	1:25
10	Black board	2m*1m	1	1:25

LEARNING MODULE 02
TVET-PROGRAMME TITLE: Leather Processing Level III
MODULE TITLE: Determining Suitability of materials for End Use
MODULE CODE: IND LEP3 M02 1221
NOMINAL DURATION: 36 Hours
MODULE DESCRIPTION: This module covers the knowledge attitude and skills to determine the suitability of hides, skins and semi processed leathers for the production of leather products according to customer requirements or market requirement.
<p>LEARNING OUTCOMES</p> <p>At the end of the module the learner will be able to:</p> <p>LO1 Inspect hide, skin or leather</p> <p>LO2 Identify techniques that impact on suitability for use</p> <p>LO3 Identify preservation and storage methods</p> <p>LO4 Determine suitability for production</p>
<p>MODULE CONTENTS:</p> <p>LO1 Inspect hide, skin or leather</p> <p>1.1 Identifying natural characteristics and uses of animal species for leather making</p> <p>1.2 Identifying the performance characteristics of various types leathers</p> <p>1.3 Inspect and grade hide, skin or leather for the suitability of end use</p> <p>LO2 Identify techniques that impact on suitability for use</p> <p>2.1 Identifying the defects of slaughter and dressing techniques</p> <p>2.2 Impacts of slaughtering and dressing defects for end use</p> <p>2.3 Identifying Suitable slaughtering techniques</p> <p>LO3 Identify preservation and storage methods</p> <p>4.1 Preservation methods for hide, skin and leathers</p> <p>4.2 Storage requirements for hide, skin and leathers</p> <p>4.3 The effects of improper preservation and storage</p> <p>LO4 Determine suitability for production</p> <p>4.1 Quality requirements of hide, skin and leather for end use</p> <p>4.2 Determining suitability of skin, hide and semi processed leather</p> <p>4.3 Completing documentation</p>

LEARNING METHODS:			
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)		
	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points 	<ul style="list-style-type: none"> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees 	<ul style="list-style-type: none"> ❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> ❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> ❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> ❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipment/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ Provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> ❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ 	<ul style="list-style-type: none"> ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly 	<ul style="list-style-type: none"> ❖ Introduce the trainees with their peers
Exercise	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training 	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training 	<ul style="list-style-type: none"> ❖ Assign peer trainees ❖ Use additional nominal hours if necessary

	<ul style="list-style-type: none"> ❖ Introduce new and relevant vocabularies 		
Individual assignment	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	<ul style="list-style-type: none"> ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	
ASSESSMENT METHODS:			
Interview	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension 	<ul style="list-style-type: none"> ❖ Speak loudly ❖ Using sign language interpreter if necessary 	<ul style="list-style-type: none"> ❖ Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> ❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension 	<ul style="list-style-type: none"> ❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> ❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees

			having severe upper limb impairment
Demonstration/ Observation	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO1 Inspect hide, skin or leather

- Different uses and characteristics of species are identified
- Performance characteristics are identified
- Grade is identified and confirmed
- Inspection is conducted according to OHS practices to determine quality of hide, skin or leather

LO2 Identify techniques that impact on suitability for use

- Impact of slaughter and dressing techniques on hide, skin and leather quality are identified
- Effects of slaughter and dressing techniques on suitability for use in leather manufacturing are identified
- Suitable techniques are identified

LO3 Identify preservation and storage methods

- Preservation methods for hide, skin and leathers are identified
- Storage requirements are identified and described
- Effects of incorrect preservation and storage are described

LO4 Determine suitability for production

- Quality requirements for production are confirmed
- Suitability of hide, skin and leather for production requirements is determined
- Documentation is completed

Annex: Resource Requirements

IND LEP3 M02 1221 Determining Suitability of Hide, Skin and Leather for End Use				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Learner)
A. Learning Materials				
1.	TTLM	Prepared by trainer	25	1:1
B. Learning Facilities & Infrastructure				
1.	Lecture Room	5*5m	1	1:25
2.	Library	5*5m	1	1:25
3.	Model Tannery		1	1:25
4.	Testing Laboratory		1	1:25
C. Consumable Materials				
1.	Paper	A4	5rim	1:5
2.	Flip chart	23"x32"	5	1:5
3.	White board marker	2-5MM	1pack	1:25
4.	Duster	Standard	2 pcs	2:25
5.	Chalk	Different color	1 pack	1:25
6.	Raw hides and skins, pickle, wet blue, crust leather		As required	
7.	Preserving chemicals		As required	
8.	Laboratory reagents/indicators		As required	
D. Tools and Equipment				
1	LCD Projector	50/60/HZ	1	1:25
2	Laptop computer		1	1:25
3	White board/ Black board	1m*1.5m	1	1:25

4	Thickness gauge		1	1:25
5	Moisture gauge	Aqua	1	1:25
6	Area measuring table		1	1:25

LEARNING MODULE 03	
TVET-PROGRAMME TITLE: Leather Processing Level III	
MODULE TITLE: Performing Production Planning Processes	
MODULE CODE: IND LEP3 M03 1221	
NOMINAL DURATION : 25 Hours	
MODULE DESCRIPTION: This module covers basic knowledge, attitude and skills required for production planning, particularly in dealing with planning of resource utilization, work load planning according to processes requirement.	
<p>LEARNING OUTCOMES</p> <p>At the end of the module the learner will be able to:</p> <ul style="list-style-type: none"> LO1 Confirm production requirements LO2 Gather specific production information LO3 Prepare production planning 	
<p>MODULE CONTENTS:</p> <p>LO1 Confirm production requirements</p> <ul style="list-style-type: none"> 1.1 Confirming production requirements <ul style="list-style-type: none"> 1.1.1 Stock supply 1.1.2 Quantities and quality of product 1.1.3 Delivery time 1.2 Identifying and resolving challenges of production planning 1.3 Requirements for implementation of organizational systems <p>LO2 Gather specific production information</p> <ul style="list-style-type: none"> 2.1 Gathering relevant information for production planning <ul style="list-style-type: none"> 2.1.1. Determining production capacity and batch size requirements 2.1.2. Identifying supply requirements, availability of machines and personnel <p>LO3 Prepare production planning</p> <ul style="list-style-type: none"> 3.1 Identifying the components of production planning 3.2 Framing production data and other planning information 3.3 Performing production planning and progress follow-up 3.4 Preparing basic reports and maintaining production planning 	

LEARNING METHODS:			
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)		
	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points 	<ul style="list-style-type: none"> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees 	<ul style="list-style-type: none"> ❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> ❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> ❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> ❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipment/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ Provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> ❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ 	<ul style="list-style-type: none"> ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly 	<ul style="list-style-type: none"> ❖ Introduce the trainees with their peers
Exercise	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training 	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training 	<ul style="list-style-type: none"> ❖ Assign peer trainees ❖ Use additional nominal hours if necessary

	❖ Introduce new and relevant vocabularies		
Individual assignment	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	<ul style="list-style-type: none"> ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	
ASSESSMENT METHODS:			
Interview	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Ensure or confirm whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension 	<ul style="list-style-type: none"> ❖ Speak loudly ❖ Using sign language interpreter if necessary 	<ul style="list-style-type: none"> ❖ Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> ❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing 	<ul style="list-style-type: none"> ❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> ❖ Use oral response as an option to give answer for trainees having severe upper limb impairment

	❖ Time extension		❖ Time extension for trainees having severe upper limb impairment
Demonstration / Observation	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO1 Confirm production requirements

- Projected requirements regarding stock supplies, product quantities, quality and delivery schedules are confirmed.
- Identified issues and problems concerning projected requirements are resolved in collaboration with relevant personnel.
- Requirements for implementation of organizational systems are determined

LO2 Gather specific production information

- Specific information relating to production capacity is obtained and confirmed.
- Details of production line requirements regarding batch or run sizes and other relevant information are gathered and interpreted for use in production plan preparation.
- Supply requirements, availability of machines and personnel is identified and confirmed.

LO3 Prepare production planning

- Production planning under consideration is clarified
- Production data and other planning information is prepared.
- Information is contributed and discussed
- Production planning is framed, entailing basic planning components.
- Follow-up action on planning meeting outcomes is taken.
- Production planning records are maintained and basic reports prepared

Annex: Resource Requirements

IND LEP3 M03 1221 Perform Production Planning Processes				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Learner)
A. Learning Materials				
1.	TTLM	Prepared by trainer	25	1:1
B. Learning Facilities & Infrastructure				
1.	Lecture Room	5*5m	1	1:25
2.	Library	5*5m	1	1:25
C. Consumable Materials				
1.	Paper	A4	5rim	1:5
2.	Flip chart	23"x32"	5	1:5
3.	White board marker	2-5MM	1pack	1:25
4.	Duster		2 pcs	2:25
5.	Chalk	Different color	1 pack	1:25
D. Tools and Equipment				
1	LCD Projector	50/60/HZ	1	1:25
2	Laptop computer		1	1:25
3	White board/Black board	1m*1.5m	1	1:25
4	Calculator	Scientific	1	1:25

LEARNING MODULE 04	
TVET-PROGRAMME TITLE: Leather Processing Level III	
MODULE TITLE: Performing Selection and Grading	
MODULE CODE: IND LEP3 M04 1221	
NOMINAL DURATION: 40 Hours	
MODULE DESCRIPTION: This module covers the attitudes, knowledge and skills required to select and grade crust and finished leather based on the selection and grading requirements.	
LEARNING OUTCOMES	
At the end of the module the learner will be able to:	
LO1 Determine requirements	
LO2 Perform crust leather selection and grading	
LO3 Perform finished leather selection and grading	
MODULE CONTENTS:	
LO1 Determine requirements	
1.1. Selection and grading procedures for crust and finished leather	
1.2. Identifying defects for grading crust and finished leather	
1.3. Understanding the quality and type of leathers to be produced	
LO2 Perform crust leather selection and grading	
2.1. Visual inspection procedures for crust leather	
2.2. Performing crust leather selection and grading	
2.3 Records and documentation	
LO3 Perform finished leather selection and grading	
3.1. Visual inspection procedures for finished leather	
3.2. Selection and grading of finished leather	
3.3. Storage procedures for crust and finished leathers	
3.4 Records and documentation	

LEARNING METHODS:			
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)		
	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points 	<ul style="list-style-type: none"> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees 	<ul style="list-style-type: none"> ❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> ❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> ❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> ❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipment/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ Provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> ❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ 	<ul style="list-style-type: none"> ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly 	<ul style="list-style-type: none"> ❖ Introduce the trainees with their peers
Exercise	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training 	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training 	<ul style="list-style-type: none"> ❖ Assign peer trainees ❖ Use additional nominal hours if necessary

	❖ Introduce new and relevant vocabularies		
Individual assignment	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	<ul style="list-style-type: none"> ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	
ASSESSMENT METHODS:			
Interview	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension 	<ul style="list-style-type: none"> ❖ Speak loudly ❖ Using sign language interpreter if necessary 	<ul style="list-style-type: none"> ❖ Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> ❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension 	<ul style="list-style-type: none"> ❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> ❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees

			having severe upper limb impairment
Demonstration / Observation	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO1 Determine requirements

- Selection and grading procedure and requirements are identified
- Defects affecting the quality of crust and finished leather are identified
- The quality and type of leather is identified and understood for selection and grading
- Requirements are checked to confirm correct application of procedures according workplace and OHS practices

LO2 Perform crust leather selection and grading

- Crust leather is visually inspected for physical requirements
- Tactile inspection is assessed to determine softness, thickness, roundness, tightness, elasticity, etc.
- Crust leather is selected according to organization's requirements and national standard, workplace and OHS practices
- Documentation associated with the tasks is accurately completed to meet workplace procedures
- Labels, tags or other identification are added to crust leather

LO3 Perform finished leather selection and grading

- Finished leather is inspected for physical requirements
- selection and grading is performed according to organization's requirements and national standard, workplace and OHS practices
- Transfer of finished product to storage area or warehouse is arranged
- Documentation associated with the tasks is accurately completed to meet workplace procedures
- Labels, tags or other identification are added to finished leather

LO4 Maintain Records

- Documentation associated with the tasks is accurately completed to meet workplace procedures
- Labels, tags or other identification are added to crust and finished leather, as required

Annex: Resource Requirements

IND LEP3 M04 1221 Monitoring Technical Process				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Learner)
A. Learning Materials				
1.	TTLM	Prepared by trainer	25	1:1
2.	Reference	Gerhald John	25	1:1
2.1	Possible defects in leather production			
B. Learning Facilities & Infrastructure				
1.	Lecture Room	5*5m	1	1:25
2.	Library	5*5m	1	1:25
3.	Model tannery		1	1:25
4.	Testing laboratory		1	1:25
C. Consumable Materials				
1.	Paper	A4	5rim	1:5
2.	Flip chart	23"x32"	5	1:5
3.	White board marker	2-5MM	1pack	1:25
4.	Duster	Standard	2 pcs	2:25
5.	Chalk	Different color	1 pack	1:25
6.	Various types of crust and finished leathers	As required	As required	
D. Tools and Equipment				
1	LCD Projector	50/60/HZ	1	1:25
2	Laptop computer	Standard	1	1:25
3	Printer	Standard	1	1:25
4	White board/ Black board	1m*1.5m	1	1:25

5	Assortment Table	As required		
6	PPE	Overcoat	25	1:1
7	Measuring equipment (weighing balance, cylinder, pH meter/paper)		1	1:25

LEARNING MODULE 05	
TVET-PROGRAMME TITLE: Leather Processing Level III	
MODULE TITLE: Performing Color Matching	
MODULE CODE: IND LEP05 M05 1221	
NOMINAL DURATION: 45 Hours	
MODULE DESCRIPTION: This module covers the attitude, knowledge and skills required to perform color matching activities in leather dyeing and finishing	
LEARNING OUTCOMES	
At the end of the module the learner will be able to:	
LO1 Confirm pre-operation tasks	
LO2 Undertake color matching on sample trial	
LO3 Undertake color matching on bulk trial	
MODULE CONTENTS:	
LO1 Confirm pre-operation tasks	
1.1 Understanding the concepts of color range/spectrum and colorants	
1.2 Identifying appropriate process recipe for color matching	
1.3 Confirming the availability of input material, equipment and tools	
LO2 Undertake color matching on sample trial	
2.1 Performing color matching tasks	
2.2 Preparations for bulk trial	
2.3 Documenting color matching	
LO3 Undertake color matching on bulk trial	
4.1 Bulk trial in color matching	
4.1.1 Requirements for bulk trial color matching	
4.1.2 Performing and evaluating bulk trial color matching	
4.2 Approving and documenting the consistency of product quality	

LEARNING METHODS:			
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)		
	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points 	<ul style="list-style-type: none"> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees 	<ul style="list-style-type: none"> ❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> ❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> ❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> ❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipment/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ Provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> ❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ 	<ul style="list-style-type: none"> ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly 	<ul style="list-style-type: none"> ❖ Introduce the trainees with their peers
Exercise	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training 	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the 	<ul style="list-style-type: none"> ❖ Assign peer trainees ❖ Use additional nominal hours if necessary

	❖ Introduce new and relevant vocabularies	process/ practical training	
Individual assignment	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	<ul style="list-style-type: none"> ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	
ASSESSMENT METHODS:			
Interview	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension 	<ul style="list-style-type: none"> ❖ Speak loudly ❖ Using sign language interpreter if necessary 	<ul style="list-style-type: none"> ❖ Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> ❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing 	<ul style="list-style-type: none"> ❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> ❖ Use oral response as an option to give answer for trainees having severe upper limb impairment

	❖ Time extension		❖ Time extension for trainees having severe upper limb impairment
Demonstration/ Observation	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO1 Confirm pre-operation tasks

- Appropriate process recipe is identified and confirmed.
- Customer requirement related to the product type is confirmed, where required.
- Color range or spectrum, colorants and other chemicals are identified and understood.
- Availability of input material, equipment and tools are confirmed.
- Work instructions and process recipe are selected and confirmed
- Appropriate OHS practices are confirmed to apply

LO2 Undertake color matching on sample trial

- Color matching tasks are performed
- Matching of the color and other customer requirements are assessed
- Developed sample is confirmed with the customer swatch or market demand
- Approval of developed sample for compliance of customer requirements is obtained and endorsed
- Information and other documents related to color matching is recorded and documented

LO3 Undertake color matching on bulk trial

- Appropriate information is provided and bulk trial is carried out together with other participating departments
- The consistency of the product quality is approved and ensured
- Relevant information is recoded and documented, where require.

Annex: Resource Requirements

IND LTO3 M09 0321 Performing Color Matching In Dyeing and Finishing				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Learner)
A. Learning Materials				
1.	TTLM	Prepared by trainer	25	1:1
2.	Theory and Practice of Leather Manufacture	Sarkar K T	25	1:1
B. Learning Facilities & Infrastructure				
1.	Lecture Room	5*5m	1	1:25
2.	Library	5*5m	1	1:25
3.	Practical room	5*5m	1	1:25
4.	Model Tannery			
C. Consumable Materials				
1.	Paper	A4	5rim	1:5
2.	Flip chart	23"x32"	5	1:5
3.	White board marker	2-5MM	1pack	1:25
4.	Duster	Standard	2 pcs	2:25
5.	Chalk	Different color	1 pack	1:25
6.	Dyes	As required	As required	
7.	Finishing Chemicals	As required	As required	
8.	Tanned and crust leather	As required	As required	
D. Tools and Equipment				
1	LCD Projector	50/60/HZ	1	1:25
2	Personal computer	Standard	1	1:25
3	Printer	Standard	1	1:25
4	White board/Black board	1m*1.5m	1	1:25

5	Assortment Table	As required		
6	PPE (Overall, boot, glove, mask, eye goggle)		25	1:1
7	Measuring equipment (weighing balance, cylinder, pH meter/paper)		1	1:25
8	Mug, bowl, cotton fabric		1	1:25

LEARNING MODULE 06			
TVET-PROGRAMME TITLE: Leather Processing Level III			
MODULE TITLE: Monitoring and Coordinating Tannery Waste Treatment			
MODULE CODE: IND LEP3 M06 1221			
NOMINAL DURATION: 45 Hours			
MODULE DESCRIPTION: This module covers the knowledge, attitude and skills required to monitor, coordinate the operation, measure and report on tannery waste performance and process quality control.			
LEARNING OUTCOMES			
At the end of the module the learner will be able to:			
LO1 Monitor treatment plant performance			
LO2 Control chemical use			
LO3 Operate and control processes			
LO4 Compile process records			
MODULE CONTENTS:			
LO1 Monitor treatment plant performance			
1.1 Understanding effluent treatment plant operations and related legislations			
1.2 Measuring tannery wastewater parameters			
1.2.1. Identifying appropriate measurement and monitoring equipment			
1.2.2. Testing and analyzing wastewater samples			
1.2.3. Assess the performance of treatment plant for compliance			
LO2 Control chemical use			
2.1 Chemical usage and handling procedures for wastewater treatment			
2.2 Determining the chemical dose			
LO3 Operate and control processes			
3.1 Performing and monitoring operations and process control measures			
3.2 Confirming performance of effluent treatment process by third-party			

LO4 Compile process records

- 4.1. Organization and national statutory & legislative records
- 4.2. Daily, monthly and annual influent and effluent loads
- 4.3. Daily, monthly and annual resource consumptions
- 4.4. Compliance and third-party assessment records

LEARNING METHODS:			
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)		
	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points 	<ul style="list-style-type: none"> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees 	<ul style="list-style-type: none"> ❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> ❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> ❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> ❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipment/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ Provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> ❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ 	<ul style="list-style-type: none"> ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly 	<ul style="list-style-type: none"> ❖ Introduce the trainees with their peers
Exercise	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies 	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training 	<ul style="list-style-type: none"> ❖ Assign peer trainees ❖ Use additional nominal hours if necessary

Individual assignment	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	<ul style="list-style-type: none"> ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	
ASSESSMENT METHODS:			
Interview	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension 	<ul style="list-style-type: none"> ❖ Speak loudly ❖ Using sign language interpreter if necessary 	<ul style="list-style-type: none"> ❖ Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> ❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension 	<ul style="list-style-type: none"> ❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> ❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment

Demonstration/ Observation	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension
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ASSESSMENT CRITERIA:

LO1 Monitor treatment plant performance

- Routine plant operations are assessed in accordance with organizational and plant requirements
- Samples from each process are tested and analyzed to determine the performance against plant operational requirements
- Appropriate equipment are checked and confirmed for use in measurement and monitoring
- Process data is collected and reported according to organizational and plant requirements

LO2 Control chemical use

- Chemicals are used, handled, stored in accordance with organizational and regulatory requirements
- Chemical dosing is determined and assessed in accordance with plant processes and organizational and regulatory requirements.
- Information related to chemical supply and usage is maintained in accordance with statutory requirements

LO3 Operate and control processes

- Processes are monitored to maintain parameters of operation.
- Process operations and control is carried according to work place context and applicable regulations and legislation
- Process faults and operational conditions of plant are identified and reported in accordance with organizational/statutory requirements.
- Process performance compliance to the set requirements is confirmed by third-party assessment , where applicable

LO4 Compile process records

- Reports are compiled from plant and system data to meet organizational/statutory requirements
- Records are documented and maintained

Annex: Resource Requirements

IND LTO3 M10 0321 Monitoring and Coordinating Tannery Waste Treatment				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Learner)
A. Learning Materials				
1.	TTLM	Prepared by trainer	25	1:1
2.	Waste water management: with special reference to tanneries	S.N.Kaul	25	1:1
B. Learning Facilities & Infrastructure				
1.	Lecture Room	5*5m	1	1:25
2.	Library	5*5m	1	1:25
3.	Model Effluent treatment plant		1	1:25
4.	Testing laboratory	5*5m	1	1:25
C. Consumable Materials				
1.	Paper	A4	5rim	1:5
2.	Flip chart	23"x32"	5	1:5
3.	White board marker	2-5MM	1pack	1:25
4.	Duster	Standard	2 pcs	2:25
5.	Chalk	Different color	1 pack	1:25
6.	Influent/ effluent treatment chemicals (Lime, alum, polyelectrolytes, iron Sulphate)	As required		
7.	Waste water from tannery	As required		
D. Tools and Equipment				
1	LCD Projector	50/60/HZ	1	1:25
2	Laptop computer		1	1:25
3	White board/Black board	1m*1.5m	1	1:25
4	Measuring equipment (weighing		1	1:25

	balance, cylinder, pH meter/paper, Imhoff cone)			
5	Mug, plastic bowl		5	1:5

Acknowledgement

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