Model Curriculum

QP Name: Supply Chain Supervisor - Agri Commodities
(*Electives: Trading on e-NAM portal, Negotiating with buyers, Supervise outbound transportation planning, Options: Business development and stakeholder relations, Profit and loss account management and cost accounting*)

QP Code: LSC/Q3301

QP Version: 1.0

NSQF Level: 5

Model Curriculum Version: 1.0

Logistics Sector Skill Council|| Logistics Sector Skill Council, No. 480 A, 7th floor Khivraj Complex 2, Anna Salai, Nandanam, Chennai, Tamil Nadu 600035

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Training Parameters

Sector	Supply Chain Supervisor - Agri Commodities
Sub-Sector	Supply Chain
Occupation	Supply chain operations
Country	India
NSQF Level	5
Aligned to NCO/ISCO/ISIC Code	NCO – 3323.0601 and ISCO - 08 - 4321
Minimum Educational Qualification and Experience	Completed 2nd year of UG. Or Pursuing 2nd year of UG and continuous education Or Completed 2nd year of diploma (after 12th) Or Completed 3-year diploma after 10th + 1 year relevant experience Or 12th Grade pass + 2-year relevant experience (warehousing)
Pre-Requisite License or Training	Not Applicable for License. Should be proficient and cleared Level 4
Minimum Job Entry Age	21 yrs
Last Reviewed On	28/02/2023
Next Review Date	28/02/2026
NSQC Approval Date	28/02/2023
QP Version	2.0
Model Curriculum Creation Date	07/10/2022
Model Curriculum Valid Up to Date	28/02/2026
Model Curriculum Version	V.1
Minimum Duration of the Course	630 hrs
Maximum Duration of the Course	870 hrs

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner will be able to:

- Perform a series of post-harvest activities to improve the marketability of fresh produces on e-NAM portal
- Inspect daily activities in post-harvest management such as procurement, segregation, grading, packing, storage, outbound transportation, trading on e-NAM, negotiating with buyers and outbound transportation.
- Communicate professionally with the suppliers, workers, upper management and clients
- Perform all the documentation pertaining to post-harvest value addition activity
- Implement qualitative pre-management decisions associated with post-harvest management

Compulsory Modules

The table lists the compulsory modules, their duration and mode of delivery.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Bridge Module(s)	**20**	**10**	**0**	**0**	**30**
Module 1: Introduction: Supply Chain Supervisor - Agri Commodities	20	10	0	0	30
NOS Code – LSC/N3307 **NOS name: Procurement of Agri-Products** **NOS Version No. 1** **NSQF Level: 5**	**30**	**54**	**6**	**0**	**90**
Module 2: Preparing work plan for procurement	20	37	3	0	60
Module 3: Effective communication with upper management	10	17	3	0	30
NOS Code – LSC/N3308 **NOS name: Supervise segregation of Agri-Products** **NOS Version No. 1** **NSQF Level: 5**	**30**	**54**	**6**	**0**	**90**
Module 4: Supervise cleansing and segregation for produces	20	37	3	0	60
Module 5: Prepare and submit reports for segregation	10	17	3	0	30
NOS Code – LSC/N3309 **NOS name: Supervise grading and quality check of various agri-products** **NOS Version No. 1** **NSQF Level: 5**	**20**	**37**	**3**	**0**	**60**

Module 6: Grading and Crating practices	20	37	3	0	60
NOS Code – LSC/N3310 **NOS name: Supervise packaging of agri-products** **NOS Version No. 1** **NSQF Level: 5**	**10**	**17**	**3**	**0**	**30**
Module 7: Supervise packaging process	10	17	3	0	30
NOS Code: LSC/N3311 **NOS name: Supervise storage of produce** **NOS Version No. 1** **NSQF Level: 5**	**40**	**74**	**6**	**0**	**120**
Module 8: Supervise cleaning, fumigation and storage operations	20	37	3	0	60
Module 9: Prepare and submit reports for storage	20	37	3	0	60
NOS Code: LSC/N8704 **Supervise Pre-cooling operations** **NSQF Level: 5**	**10**	**17**	**3**	**0**	**30**
Module 10: Supervision of pre-cooling operations	10	17	3	0	30
NOS Code: LSC/N8706 Manage placement of goods in controlled conditions NSQF Level: 5	**10**	**17**	**3**	**0**	**30**
Module 11: Storage and Movement of goods in Cold Storage	10	17	3	0	30
NOS Code: LSC/N9901 Maintain food and personnel safety, health and hygiene in cold storage plant NSQF Level: 5	**10**	**17**	**3**	**0**	**30**
Module 12: Compliance to health, safety and security norms	10	17	3	0	30
DGT/VSQ/N0102 **Employability NOS**	**30**	**30**			**60**
Total Duration	**210**	**330**	**30**	**0**	**570**

Elective Modules

The table lists the elective modules, their duration and mode of delivery.

Elective 1: Trading on the e-Nam portal

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
NOS Code – LSC/N3312 NOS name: Trading on the e-Nam portal NOS Version No. 1 NSQF Level: 5	**30**	**30**	**0**	**0**	**60**
Module 13: Trading	15	15	0	0	30
Module 14: Process compliance and invoicing	15	15	0	0	30
Total Duration	**30**	**30**	**0**	**0**	**60**

Elective 2: Negotiating with buyers

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
NOS Code – LSC/N3313 NOS name: Negotiating with buyers NOS Version No. 1 NSQF Level: 5	**30**	**30**	**0**	**0**	**60**
Module 15: Professional practices	15	15	0	0	30
Module 16: Ethical practices	15	15	0	0	30
Total Duration	**30**	**30**	**0**	**0**	**60**

Elective 3: Outbound Transportation Strategy

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
NOS Code – LSC/N3314 NOS Name: Supervise outbound transportation planning NOS Version No. 1 NSQF Level: 5	**30**	**30**	**0**	**0**	**60**
Module 17: Supervise outbound transportation	15	15	0	0	30
Module 18: Coordinate with custom officials	15	15	0	0	30
Total Duration	**30**	**30**	**0**	**0**	**60**

Optional Modules

The table lists the optional modules, their duration and mode of delivery.

Option 1: Business Development

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
NOS Code: LSC/N9701 NOS name: Business development and stakeholder relations NOS Version No. NSQF Level: 5	**30**	**30**	**0**	**0**	**60**
Module 19: Business development and stakeholder relations	30	30	0	0	60
Total Duration	**30**	**30**	**0**	**0**	**60**

Option 2: Profit Management

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
NOS Code: LSC/N9603 NOS name: Profit and loss account management and cost accounting NOS Version No. 1 NSQF Level: 5	**30**	**30**	**0**	**0**	**60**
Module 15: Profit and loss account management and cost accounting	30	30	0	0	60
Total Duration	**30**	**30**	**0**	**0**	**60**

Module Details

Module 1: Introduction to Supply Chain Supervisor - Agri Commodities
Mapped to Bridge Module

Terminal Outcomes:

- Examine all the activities such as procurement, grading, segregation, packaging, storage, trading, negotiating with buyers and outbound transportation effectively
- Inspect the day-to-day operations at the facility by allocating resources
- Manage activities, and coordinate with clients and upper management/regulatory bodies.
- Measure the effectiveness of daily assigned activities and employees' performance.
- Develop communication skills.
- Ensure effective team management.

Duration: *<20:00>*	Duration: *<10:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Develop daily operations in a commercial environment • Define hands-on experience over cleansing of produces, preservation techniques, storage, trading and transportation activities • Develop effective communication with upper management • List the activities to be performed in a PHSC Organization • Detail food preservation skills and learn the modern methods of fresh produce/crops handling.	• Identify all the activities such as procurement, grading, segregation, packaging, storage, trading, negotiating with buyers and outbound transportation effectively • Demonstrate daily activities to be performed in a PHSC organization • Develop ability to convert the daily procurement into the deliverable lot. • Determine the capacity to store the produces for stipulated time till delivery. • Perform long-term planning, short term planning and operational level planning • Develop strategies to tackle with daily operational challenges in food produce value-addition and retail, and then delivering revenues to the organization. • Perform the necessary processing tasks, documentation work and deliver the produce to the end customer. • Analyze the process and commercialize the produces better. • Prepare run-sheets for different tasks and distribute to workers and associates
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Information technology devices such as mobile phones, computers and SAP equipped servers to store daily data. Segregation equipment, grading equipment, warehousing setup etc, WMS (learning version).	

Module 2: Preparing work plan for procurement
Mapped to NOS: LSC/N3307 Procurement of Agri-Products

Terminal Outcomes

- Describe the procurement strategy for multiple produces
- Interpret the quality of produce, shelf life and price for remuneration
- Develop a daily work plan factoring in priority cases, and cases requiring exceptional handling

Duration: <20:00>	Duration: <37:00>
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Estimate various upcoming harvests in and around the district - Communicate effectively with local Taluk level villagers, Sarpanch and villagers - Discuss the terms of acceptance about the optimum quality of produces in order to avoid receiving inferior quality produce. - Monitor and report productivity and adherence to timelines during loading and unloading - Explain how to allocate spaces in the staging area for loader/unloader for loading and unloading goods - Detail the process of performing visual inspection of inbound produces - Examine the goods while handling them using MHE and record damages - Ensure proper documentation and report as per organization's mandate	- Identify newer and regular produce grown in and around the district /region. - Prepare monthly plans for periodic procurement - Record information on best-expected outcomes or any crop failure during various seasons in advance - Record for daily incoming crops, crop variety, weight, designated prices, calculated amount, packaging used and packaging suggested in tabular formats - Determine the best/competitive prices keeping the e-NAM retail prices in consideration - Perform visual inspection of inbound produces - Inspect the goods while handling them using MHE and record damages - Prepare work plan and get it approved by the manager - Perform allocation of additional and ad-hoc manpower and equipment during unloading - Check the mandatory documentation on receipt of stock and before unloading and ensure the right quantity is received as per the documentation (intimation) - Prepare the receipt of accepting the commodity in a standard format - Inform dispatcher/security guard regarding in-time, out-time and parking bay allocated for each truck and check if the trucks are docked at their assigned bays - Plan for temporary transportation if the villager/supplier is unable to fetch the transportation
Classroom Aids	
Agricultural Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Information technology and communication devices such as mobile phones, computers and SAP equipped servers to store daily data, WMS (learning version).	

Module 3: Effective communication with upper management
Mapped to NOS: LSC/N3307 Procurement of Agri-Products

Terminal Outcomes

- Review escalated issues to manager and find the root cause for providing corrective action
- Check that the suppliers are delivering the produce to the company by themselves.
- Prepare reports for rejecting the damaged or inferior quality produce.
- Communicate the daily quantity of produce-wise turnover, disposal and workforce attached for operations to the upper management.

Duration: *<10:00>*	Duration: *<17:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Explain basic troubleshooting regarding data management devices - Obtain Information from the ERP system - Locate geographical spread of areas and cities within the geographical reach of the organization - Read Labels and instructions regarding shipments, MHEs, equipment and work-place - Describe special characteristics and handling requirements of shipments, if any - Discuss with the manager for issues where external or additional help is required. - Collaborate with various villages, Taluks and suppliers to fulfil the increased demands or in case anyone supplier fails to deliver on time - List the preventive measures for waste reduction	- Plan for daily input and daily forwarding quantity a week in advance and shall provide estimates to the management. - Instruct suppliers to provide the photographs of produce and quantity estimates well in advance before dispatching. - Check that the suppliers are delivering the produce to the establishment by themselves. - Check daily incoming crops, crop variety, weight, designated prices, calculated amount, packaging used and packaging suggested in tabular formats. - Examine safe unloading and primary storage of the produces received - Schedule regular equipment maintenance - Recommend purchase of new equipment, installation, and commissioning
Classroom Aids	
Agricultural Charts, photographs of produce, Models, Video presentation, Flip Chart, Whiteboard/ Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Information technology and communication devices such as mobile phones, computers and SAP equipped servers to store daily data etc, WMS (learning version).	

Module 4: Supervise cleansing and segregation for produce

Mapped to NOS: LSC/N3308 Supervise segregation of Agri products

Terminal Outcomes

- Inspect facility for cleaning and disinfestation, including working space and equipment every day.
- List the activities to be performed during segregation of produce
- Inspect cleansing, segregation and crating activities to produce

Duration: *<20:00>*	**Duration**: *<37:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe various activities to be performed while supervising the workspace and equipment. • Explain the activities to be performed during the cleansing and segregation of the produce. • List the PPE used while supervising the working premises • Describe the various areas to be checked before performing segregation • List the checks to be performed during segregation of produce. • Explain proper disposal process	• Examine the cleansing and segregation of produce • Inspect the air and water cleansing of fruits, vegetables and other produce physically. • Check that the working premises have been cleaned well as per SOP • Check the upkeep of the segregation facility with proper lighting and ventilation. • Check that the floor, plastics and table areas are cleaned properly before segregation of different products. • Verify the number, variety and quantity of produce received. • Examine the segregation activity performed by staff according to local/standard variety, size, firmness, colour, visible aesthetics, and prioritized longer to shorter shelf-life of the produce into different lots. • Assess the shelf-life of produces/lot before/during segregation. • Check that there are no sources of food breakout or microbial decay. • Inspect the proper disposal of over ripe produce • Examine the produces for any fungus, yeast, or microbial damage initiation.
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/ Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Stainless steel cleansing and segregation table, table fitted lamps, air compressor setup with pipe and hose, water hose, water outlet from table, plastic fruit crates, manual segregation or mechanized segregation setups, trash bins, push trolleys etc, WMS (learning version).	

Module 5: Prepare and submit reports for segregation
Mapped to NOS: LSC/N3308 Supervise segregation of Agri-products

Terminal Outcomes

- Record produce-wise and variety-wise specific of the quantity received and quantity forwarded for segregation
- Prepare and submit reports

Duration: *<10:00>*	**Duration**: *<17:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Develop the systematic tabular record table for the daily information to be recorded for the tasks completed. • Calculate the daily segregated quantity versus received quantity • Record daily reports on ERP	• Record produce-wise and variety-wise specific record of the quantity received, and quantity forwarded for segregation. • Verify inventory report submitted against physical vs system entry • Record information on stock receipts and dispatches • Check that the inventory status is updated in the ERP concurrently based on and transactions and inventory counts
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser, desktop computers, MS Office, ERP package cum servers, printers	
Tools, Equipment and Other Requirements	
Daily Datasheets/inventory reports, desktop computers, MS Office, ERP package cum servers, printers etc., WMS (learning version).	

Module 6: Grading and Crating practices

Mapped to NOS: LSC/N3309 Supervise grading and quality check of various Agri-products

Terminal Outcomes

- Inspect facility for cleaning and disinfestation, including working space and equipment every day
- Inspect receiving, grading and crating process
- Prepare and submit reports

Duration: <20:00>	Duration: <37:00>
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Establish cleanliness and maintenance norms for the facility and equipment • Determine the working norms for staff • Plan for uninterrupted airflow • Determine the standard methods of grading as compulsory norms • Evaluate the graded lots and their crating. • Develop the methods to document incoming and graded produce information	• Organize for the cleanliness of the premises • Inspect the air and water cleansing of fruits, vegetables, and physical cleaning of staple produce. • Check ventilation and cleanliness of floor area and tables in grading facility. • Prepare the floor area and table area for grading of different products received. • Record the number of crates, variety and quantity of produces received for grading • Perform documentation of the received quantity, assess shelf-life and ensure that workers perform grading in a pre-instructed manner. • Arrange the packaging crates in produce-wise specific sizes. • Establish a proper disposal facility. • Arrange the leaf charts containing details for every crate. • Perform documentation and reporting as per organization's mandate. • Determine quality check standards
Classroom Aids:	
Spoilage Data Charts, Models, Grading video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Stainless steel grading table, table fitted lamps, air compressor setup with pipe and hose, plastic fruit crates, manual grading or mechanized grading setups, trash bins, push trolleys, daily datasheets/inventory/quality reports, desktop computers, MS Office, ERP package cum servers, printers etc, WMS (learning version).	

Module 7: Supervise packaging process
Mapped to NOS: LSC/N3310 Supervise packaging of Agri-products

Terminal Outcomes

- Inspect facility for cleaning and disinfestation, including working space and equipment every day
- Inspect Supervise receiving operations and packing process
- Prepare and submit reports

Duration: <10:00>	Duration: <17:00>
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Establish cleanliness and maintenance norms for the facility and equipment • List down the net number of bags, crates and wooden boxes after packing. • Determine the standard methods of packing as compulsory norms • Develop the methods to document incoming, discarded and packed produce information	• Plan for fumigation of the packaging area periodically as instructed by management. • Analyse the arrangement and grading of produce in the plastic bins or plastic tubs • Examine the packing of fruits, vegetables, crops and herbal produce according to standard packing methods • Examine the packing for produces that are meant to be stored for a longer duration. • Evaluate the packed lots and their reliability. • Assess the cargo packing according to customer's requirements, i.e. bigger or smaller pallets/boxes (with customized pricing). • Check cleanliness and hygiene as per SOP • Compare inventory reports for physical vs system entry
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Fumigation equipment, wide stainless-steel table for working, consumables, i.e. ventilated packaging, refrigerated packaging or hermetic packaging (air-sealed) (corrugated boxes, jute bags, net bags, cardboard boxes, plastic crates, sealed containers etc.), daily datasheets/packaging reports, packaging identification/stickers, barcode scanners, RFID scanners, push trolleys, forklifts, desktop computers, MS Office, ERP package cum servers, printers etc. , WMS (learning version).	

Module 8: Supervise cleaning, fumigation and storage operations

Mapped to NOS: LSC/N3311 Supervise storage of produce

Terminal Outcomes

- Inspect cleaning and fumigation operations
- Demonstrate Receiving, Short-term storage and Long-term storage
- Prepare and submit reports

Duration: <20:00>	Duration: <37:00>
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Establish cleanliness and maintenance norms for the facility and equipment • Discuss how to standardize the working norms for staff • Set the standard methods of storage, maintenance and food safety • Evaluate the stored lots condition from time to time • List the documents containing received quantity, period of storage, produce grade, quantity etc. • Classify the products for short term storage and long-term storage • Propose for food preservation methods • Develop the instructions and methods for produce handling and stacking • State the applicability of modern moisture and temperature warning methods • Establish good rapport with buyers/stakeholders • Demonstrate usage of chemical preservatives such as sodium benzoates, sodium nitrite and Sulphur dioxides. • List the various MHE required for supervising storage of produce	• Plan for fumigation of the storage premises. • Examine the upkeep of the storage facility with proper lighting, ventilation, air-conditioning, flue gas exhaust, marked aisles and marked storage zones • Inspect temperature and moisture management • Design the arrangement pattern/layout for different crops in a variety-wise manner to utilize storage heights. • Inspect the documentation with weight, variety, grading date, and quality of produce received information • Prepare the documents containing received quantity, period of storage, produce grade, quantity etc. • Construct separate facilities for the long term and short-term storage • Arrange the produce as per first-come-first-out approach • Establish shelving facilities • Inform the buyers/stakeholders about the due date for picking up the produce from storage • Propose for the establishment of tower storage facility for crops (silos) • Monitor product loss to a minimum by ensuring adequate pest/rodent control measure, monitoring spillages/breakages and taking necessary preventive and corrective action • Use forklifts for loading, unloading, and stacking.

	• Arrange for the appropriate number of push trolleys • Use different information processing devices like barcode scanners, RFID scanners, etc. • Prepare periodic reports for top management on storage performance

Classroom Aids:

Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser

Tools, Equipment and Other Requirements

Fumigation equipment, ventilation, air-conditioning, flue gas exhaust, weighing equipment, daily datasheets/storage reports/documentation/loss reports, run-sheets, storage identification/stickers, barcode scanners, RFID scanners, push trolleys, forklifts, desktop computers, MS Office, ERP package cum servers, printers etc. , WMS (learning version).

Module 9: Prepare and submit reports for storage

Mapped to NOS: LSC/N3311 Supervise storage of produces

Terminal Outcomes

- Identify the reason for variation between physical and system inventory, rectify process discrepancies and report the variation (disposal quantity) to the manager
- Communicate the daily quantity of produce-wise turnover, disposal and workforce attached for operations to the upper management
- Prepare and submit reports

Duration: *<20:00>*	Duration: *<37:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Develop reports on stored quantity, a period of storage, produce grade, quantity etc. - Discuss with the upper management/ buyers about date of dispatch from the store - Detail the process of updating of inventory status based on transactions and inventory counts. - Explain the process of storage for different products as per e-NAM regulations.	- Conclude the produce-wise and variety-wise specific record of the quantity received and quantity forwarded for dispatch/ transportation - Inspect inventory report submitted against physical vs system entry - Update information on stock receipts and dispatches - Prepare daily/weekly/monthly produce-wise reports on the quantity being stored, worker productivity etc., as per SOP. - Examine regular updating of inventory status based on transactions and inventory counts. - Record the time of communication with every supplier and time of receiving the produce in tabular format - Support in planning and execution of preventive measures for waste reduction - Support manager in planning for new equipment purchase, installation and commissioning. - Plan and schedule regular storage and equipment maintenance - Give training to the subordinates on the process of storage for different products as per e-NAM regulations.
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Daily datasheets/storage reports/documentation/loss reports, run-sheets, storage identification/stickers, barcode scanners, RFID scanners, desktop computers, MS Office, ERP package cum servers, printers etc, WMS (learning version).	

Module 10: Supervision of pre-cooling operations
Mapped to NOS: LSC/N8704

Terminal Outcomes

- Identify suitable pre-cooling technology as per product requirements
- Inspect proper segregation of goods in pre-cooling chamber
- Examine the placement and stacking of goods for uniform cooling

Duration: <10:00>	Duration: <17:00>
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain suitable pre-cooling technology as per product requirements • Detail the process of inspecting proper segregation of goods in pre-cooling chamber • Verify the placement and stacking of goods for uniform cooling • Discuss how to manage space efficiency • Explain the Inspection process of proper handling of goods	• Identify suitable pre-cooling technology as per product requirements • Inspect proper segregation of goods in pre-cooling chamber • Examine the placement and stacking of goods for uniform cooling • Manage space efficiency by timely removal of goods from pre-cooling unit to temporary staging space • Inspect proper handling of goods to avoid damage
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Teaching board, computer, projector, video player or TV, Statistical tools, stationery, MS Project, MS Office, compressor, condenser, evaporator, temperature and humidity sensor, simulator, cooling standards for different types of products, tools and tackles, consumables, WMS (learning version).	

Module 11: Storage and Movement of goods in Cold Storage
Mapped to NOS: LSC/N8706

Terminal Outcomes

- Identify standard temperature, humidity and refrigerant conditions for storing goods
- Inspect fitness levels of workers allocated for operations
- Select racking as per operating temperature and SEMA standard
- Inspect stacking as per layout prescribed, loading limits etc.
- Inspect proper trolley movement of goods
- Assess trolley operators and vehicles to minimise risks of movement

Duration: <10:00>	Duration: <17:00>
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• List the various refrigerant conditions for storing goods • Explain the process of inspecting fitness levels of workers allocated for operations • Discuss proper handling condition and safety precautions • Discuss the layout plan for palletization to check stock placement • Detail the Selection process of racking as per operating temperature and SEMA standard • Explain the process of Inspecting proper trolley movement of goods • List various methods to minimise risks of movement •	• Identify standard temperature, humidity and refrigerant conditions for storing goods • Inspect fitness levels of workers allocated for operations • Inspect adherence to proper handling condition and safety precautions • Develop a layout plan for palletization to check stock placement • Select racking as per operating temperature and SEMA standard • Inspect stacking as per layout prescribed, loading limits etc. • Inspect proper trolley movement of goods • Assess trolley operators and vehicles to minimise risks of movement •
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Teaching board, computer, projector, video player or TV, stationery, MS Office, cold storage facility, gas sensors, PPE, SEMA standards, hand-stacking equipment, fork lift trucks, various types of mechanized stacking equipment, different types of trollies etc, WMS (learning version).	

Module 12: Compliance with health, safety and security norms
Mapped to NOS: LSC/N9901

Terminal Outcomes

- Detail health, safety and security procedures in cold storage plants
- Implement various safety precautionary measures
- Detail hygiene and sanitation standards as per regulatory bodies such as FSSAI, APEDA
- Inspect protective devices, pipelines, cold storage areas as per SOP
- Implement standard protocol in case of emergency situations, accidents, and breach of safety

Duration: *<10:00>*	Duration: *<17:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Detail health, safety and security procedures in cold storage plants • List the various safety precautionary measures • Explain the compliance procedure to safety standards • Detail hygiene and sanitation standards as per regulatory bodies such as FSSAI, APEDA • List the equipments required for cold storage areas • Detail the pest control methods to ensure no pest infestation • Discuss the standard operating procedures (SOP) while handling goods • Explain standard protocol in case of emergency situations, accidents, and breach of safety •	• Perform health, safety and security procedures in cold storage plants • Implement various safety precautionary measures • Inspect activity area and equipment for compliance to safety standards • Inspect hygiene and sanitation standards as per regulatory bodies such as FSSAI, APEDA • Inspect protective devices, pipelines, cold storage areas as per SOP • Perform the pest control methods to ensure no pest infestation • Identify unsafe working conditions and take corrective measures • Inspect adherence to standard operating procedures (SOP) while handling goods • Implement standard protocol in case of emergency situations, accidents, and breach of safety •
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Teaching board, computer, projector, video player or TV, Statistical tools, stationery, MS Project, MS Office, compressor, condenser, evaporator, temperature and humidity sensor, simulator, cooling standards for different types of products, tools and tackles, consumables, LLMS (learning version), WMS (learning version).	

Module 13: Trading

Mapped to LSC/N3312: Trading on the e-Nam Portal

Terminal Outcomes

- Explain the trading process on e-NAM portals
- Demonstrate effective negotiating skills

Duration: <15:00>	Duration: <15:00>
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Define the potentials of e-NAM portal and method of use • Develop the trading and pricing strategy according to demand, supply, quality, distance and lot order size etc.	• Plan the trading activity for produce from the time of procurement. • Quote sales price as approved by management after observing the recent market prices. • Quote quality-wise pricing (according to quality certification)
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Electronic devices to manage e-NAM trading such as mobile phones, desktop computers, MS office, servers, printers etc. , WMS (learning version).	

Module 14: Process compliance and invoicing
Mapped to LSC/N3312: Trading on the e-Nam Portal

Terminal Outcomes

- Explain the process of compliance and invoicing

Duration: *<15:00>*	Duration: *<15:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Demonstrate the process of invoicing • Discuss the possibility of chronic errors during billing and their rectification	• Verify daily invoicing. • Check for errors in calculating taxable value and tax value after applying the applicable rate of GST • Check if IGST is chargeable on the invoices raised for the export of goods/services
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Electronic devices to manage e-NAM trading such as mobile phones, desktop computers, MS office, servers, printers etc. , WMS (learning version).	

Module 15: Professional practices

Mapped to LSC/N3313: Negotiating with buyers (Quoting to buyers)

Terminal Outcomes

- Detail the Professional practices to be followed
- Develop the necessary procedure and documentation post-negotiation
- Maintain integrity and ensure data security

Duration: <15:00>	Duration: <15:00>
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain about negotiation tactics to the subordinates • Develop the necessary procedure and documentation post-negotiation • Discover nearer buyers over distant buyers. • Explain the pre-developed policies for the buyers committing to instant payments	• Establish good rapport with every buyer who shows interest in the e-NAM portal • Negotiate sales price as approved by management after observing the recent market prices. • Quote quality-wise pricing (according to quality certification) • Quote the upper limits during the first-hand declaration • Provide discounts to buyers according to the pre-developed policies for the buyers committing to instant payments • Quote supplementary charges to the buyers asking for credit payments/delayed/postponed payments according to the pre-developed policies by management. • Find the prospects of live or virtual meetings with clients. • Identify client's business needs and offer customized and bundled solutions • Negotiate on costs, close the deal and collect organizational and payment details of the client
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Electronic devices to manage e-NAM sales such as mobile phones, desktop computers, MS office, servers, printers etc. , WMS (learning version).	

Module 16: Ethical practices

Mapped to LSC/N3313: Negotiating with buyers (Quoting to buyers)

Terminal Outcomes

- Communicate with clients and stakeholders

Duration: *<15:00>*	Duration: *<15:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Develop the code of conduct and dressing norms for negotiators • List the documents pertaining to different type of products • Discuss the roadblocks with senior management when in an ethical dilemma	• Recommend the dress code and conduct off conduct for professional interactions • Resolve queries patiently in a soft and polite manner • Prepare the documents pertaining to different type of products • Follow business etiquettes • Record consumer feedback and communicate to management • Report all violations of the code of ethics promptly
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Electronic devices to manage e-NAM sales such as mobile phones, desktop computers, MS office, servers, printers etc. , WMS (learning version).	

Module 17: Supervise outbound transportation

Mapped to LSC/N3314: Planning outbound transportation strategy

Terminal Outcomes

- Inspect effective working of outbound transportation
- Examine the labelling requirements as per the customs requirement of different countries and regulations set by the e-NAM portal
- Prepare and submit reports

Duration: *<15:00>*	**Duration**: *<15:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Develop customer relationship skills • Develop the knowledge base for different modes of transportation based on the type of commodity, shelf life, distance to be covered, lot size, economic constraints etc. • Prepare proper documentation for dispatch and delivery • Prepare work instruction manuals for workers	• Prepare the release/dispatch order for confirmed orders • Discuss modes of transport with the customer in advance. • Use appropriate transportation mediums for fresh produces requiring either ventilation or refrigeration. • Choose the 3PL that provides end to end delivery service for consumable goods. • Choose proper packaging for safe delivery. • Examine the labelling requirements as per the customs requirement of different countries and regulations set by the e-NAM portal
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Electronic devices to manage transportation such as mobile phones, desktop computers, MS office, Global Positioning System (GPS) servers, printers etc. , WMS (learning version).	

Module 18: Coordinate with custom officials
Mapped to LSC/N3314: *Supervise outbound transportation planning*

Terminal Outcomes

- Communicate with customs officers for timely shipment clearance based on documents for clearance
- Prepare and submit reports

Duration: <15:00>	Duration: <15:00>
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Demonstrate customer relationship and customs dealing skills. • Compile inventory report submitted against system count.	• Communicate with customs officials, custom brokers, transport brokers, International Air Transport Association (IATA) agents, etc., to assist in custom clearance • Communicate with clients in case of delays, product issues, and custom related documentation issues etc. • Check regular updating of information in the ERP based on transactions and inventory counts.
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Electronic devices to custom dealing such as mobile phones, desktop computers, MS office, Global Positioning System (GPS) servers, printers etc, WMS (learning version).	

Module 19: Business development and stakeholder relations

Mapped to NOS: LSC/N9701

Terminal Outcomes

- Identify target population to be approached for business development
- Demonstrate effective oral and written business communication
- Prepare costing sheets for service delivery
- Use ERP for updating client data

Duration: *<30:00>*	**Duration**: *<30:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the target population to be approached for business development • Detail the steps to identify future client • Explain the steps involved in determining client requirement • List out the solution offered based on sales pitch • Develop costing sheet for delivery service • Detail upsells and cross-sell services • Explain the preparation process of service level agreements • Detail the scheduling process of resources as per operational requirement • Describe the nuances in building rapport with clients, customs, government agencies, insurance for healthy relationship •	• Identify target population to be approached for business development • Assess prospective clients • Identify client requirements • Offer customised or bundled solutions based on sales pitch • Demonstrate effective oral and written business communication • Prepare costing sheets for service delivery • Use ERP for updating client data • Explain upsell and cross-sell services to existing clients • Prepare service level agreements • Schedule resources as per operational requirement • Establish good rapport with clients, customs, government agencies
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Computers, MIS, ERP, business lead softwares, Teaching board, computer, projector, video player and TV, WMS (learning version).	

Module 20: Profit and loss account management and cost accounting

Mapped to NOS: LSC/N9603

Terminal Outcomes

- Describe the process of analysing profit & loss (P&L)
- Explain methods to analyse variance between budget and actual expenditure
- List the risk management procedures
- Perform Activity Based Costing (ABC)

Duration: *<30:00>*	Duration: *<30:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the process of analysing profit & loss (P&L) • Detail the budgeting process as per SOP • Explain ABC analysis • Detail the steps involved in Evaluating budgetary compliance • Explain various methods to analyse variance between budget and actual expenditure • Compare budget with actual physical output • List the risk management procedures • Detail the activities involved in performing audit • Explain the process to rationalise cost by undertaking improvement activities	• Analyze profit and loss statement • Prepare budget amendments as per the guidelines • Perform budgeting as per SOP • Prepare variance analysis report • Evaluate budgetary compliance • Perform Activity Based Costing (ABC) • Perform audit to identify reasons for deviation from costing • Perform rationalization of cost by undertaking improvement activities
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/SmartBoard, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Computers, MIS, ERP, performance review software, WMS (learning version).	

Module 21: Employability Skills
Mapped to DGT/VSQ/N0102, *v1.0*

Terminal Outcomes:

- Discuss the Employability Skills required for jobs in various industries
- Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen
- Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan

Duration: *30:00*	Duration: *30:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Outline the importance of Employability Skills for the current job market and future of work - List different learning and employability related GOI and private portals and their usage - Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen - Discuss relevant 21st century skills required for employment - Highlight the importance of practicing 21st century skills like Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life - Explain the importance of communication etiquette including active listening for effective communication - Discuss the significance of escalating sexual harassment issues as per POSH act - Discuss various financial institutions, products, and services - Explain the common components of salary such as Basic, PF, Allowances (HRA, TA, DA, etc.), tax deductions - Discuss the legal rights, laws, and aids - Describe the role of digital technology in day-to-day life and the workplace - Discuss the significance of displaying responsible online behaviour while using various social media platforms	- Research and prepare a note on different industries, trends, required skills and the available opportunities - Demonstrate how to practice different environmentally sustainable practices - Create a pathway for adopting a continuous learning mindset for personal and professional development - Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone - Read and understand text written in basic English - Write a short note/paragraph / letter/e - mail using correct basic English - Create a career development plan - Identify well-defined short- and long-term goals - Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette - Write a brief note/paragraph on a familiar topic - Role play a situation on how to work collaboratively with others in a team - Demonstrate how to behave, communicate, and conduct appropriately with all genders and PwD - Demonstrate how to conduct offline and online financial transactions, safely and securely and check passbook/statement - Calculate income and expenditure for budgeting - Demonstrate how to operate digital devices and use the associated applications and features, safely and securely

- Explain the types of entrepreneurship and enterprises
- Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan
- Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
- Discuss various tools used to collect customer feedback
- Discuss the significance of maintaining hygiene and dressing appropriately
- Discuss the significance of maintaining hygiene and dressing appropriately for an interview
- List the steps for searching and registering for apprenticeship opportunities

- Demonstrate how to connect devices securely to internet using different means
- Follow the dos and don'ts of cyber security to protect against cyber crimes
- Create an e-mail id and follow e- mail etiquette to exchange e -mails
- Show how to create documents, spreadsheets and presentations using appropriate applications
- Utilize virtual collaboration tools to work effectively
- Create a sample business plan, for the selected business opportunity
- Classify different types of customers
- Demonstrate how to identify customer needs and respond to them in a professional manner
- Draft a professional Curriculum Vitae (CV)
- Use various offline and online job search sources to find and apply for jobs
- Role play a mock interview

Classroom Aids
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser, UPS, LCD Projector, Computer Tables & chairs
Tools, Equipment and Other Requirements
Computer (PC) with latest configurations – and Internet connection with standard operating system and standard word processor and worksheet software (Licensed) (all software should either be latest version or one/two version below), Scanner cum Printer, LLMS (learning version), WMS (learning version).

Annexure

Trainer Requirements

<table>
<tr><td colspan="7" align="center">Trainer Prerequisites</td></tr>
<tr><td rowspan="2">Minimum Educational Qualification</td><td rowspan="2">Specialization</td><td colspan="2">Relevant Industry Experience</td><td colspan="2">Training Experience</td><td rowspan="2">Remarks</td></tr>
<tr><td><i>Years</i></td><td><i>Specialization</i></td><td><i>Years</i></td><td><i>Specialization</i></td></tr>
<tr><td>Graduate</td><td></td><td>2</td><td>Supply Chain - Agri</td><td>2</td><td>Supply Chain - Agri</td><td></td></tr>
</table>

<table>
<tr><td colspan="2" align="center">Trainer Certification</td></tr>
<tr><td align="center">Domain Certification</td><td align="center">Platform Certification</td></tr>
<tr><td>Certified for Job Role: "Supply Chain Supervisor - Agri Commodities" mapped to QP: "LSC/Q3301 v1.0". Minimum accepted score is 80%</td><td>Recommended that the Trainer is certified for the Job Role: "Trainer (VET and Skills)", mapped to the Qualification Pack: "MEP/Q2601, V2.0" with minimum score of 80%</td></tr>
</table>

Assessor Requirements

Assessor Prerequisites					
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	*Specialization*	*Years*	*Specialization*	
Graduate		2	Supply Chain - Agri	1	Supply Chain - Agri	

Assessor Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "Supply Chain Supervisor - Agri Commodities" mapped to QP: "LSC/Q3301, v1.0". Minimum accepted score is 80%	Recommended that the Assessor is certified for the Job Role: "Assessor (VET and Skills)", mapped to the Qualification Pack: "MEP/Q2701, V2.0" with minimum score of 80%

Assessment Strategy

This section includes the processes involved in identifying, gathering and interpreting information to evaluate the learner on the required competencies of the program.

The emphasis is on 'learning-by-doing' and practical demonstration of skills and knowledge based on the performance criteria. Accordingly, assessment criteria for each job role is set and made available in qualification pack.

The assessment papers for both theory and practical would be developed by Subject Matter Experts (SME) hired by Logistics Sector Skill Council or with the LSC accredited Assessment Agency as per the assessment criteria mentioned in the Qualification Pack. The assessments papers would also be checked for the various outcome-based parameters such as quality, time taken, precision, tools & equipment requirement etc.

Each NOS in the Qualification Pack (QP) is assigned a relative weightage for assessment based on the criticality of the NOS. Therein each Element/Performance Criteria in the NOS is assigned marks on relative importance, criticality of function and training infrastructure.

The following tools would be used for final assessment:

1. **Practical Assessment:** This comprises of a creation of mock environment in the skill lab which is equipped with all equipment required for the qualification pack.

   Candidate's soft skills, communication, aptitude, safety consciousness, quality consciousness etc. is ascertained by observation and marked in observation checklist. The outcome is measured against the specified dimensions and standards to gauge the level of their skill achievements.

2. **Viva/Structured Interview:** This tool is used to assess the conceptual understanding and the behavioral aspects with regard to the job role and the specific task at hand. It also includes questions on safety, quality, environment and equipment etc.

3. **On-Job Training:** OJT would be evaluated based on standard log book capturing departments worked on, key observations of learner, feedback and remarks of supervisor or mentor.

4. **Written Test:** Question paper consisting of 100 MCQs (Hard:40, Medium:30 and Easy: 30) with questions from each element of each NOS. The written assessment paper is comprised of following types of questions:

   i.   True / False Statements
   ii.   Multiple Choice Questions
   iii. Matching Type Questions.
   iv.   Fill in the blanks
   v.   Scenario based Questions
   vi.   Identification Questions

QA Regarding Assessors:

Assessors are selected as per the "eligibility criteria" laid down by LSC for assessing each job role. The assessors selected by Assessment Agencies are scrutinized and made to undergo training and introduction to LSC Assessment Framework, competency-based assessments, assessors guide etc. LSC conducts "Training of Assessors" program from time to time for each job role and sensitize assessors regarding assessment process and strategy which is outlined on following mandatory parameters:

1) Guidance regarding NSQF
2) Qualification Pack Structure
3) Guidance for the assessor to conduct theory, practical and viva assessments
4) Guidance for trainees to be given by assessor before the start of the assessments.
5) Guidance on assessments process, practical brief with steps of operations practical observation checklist and mark sheet
6) Viva guidance for uniformity and consistency across the batch.
7) Mock assessments
8) Sample question paper and practical demonstration

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something or how to perform a task. It is the ability to work or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards