



Model Curriculum

QP Name: Supply Chain Associate

(Electives: FootwearChain Associate/ FMCG/ Automotive/
Electronics/Pharmaceutical plant)

(Options: Basic inventory analysis and forecasting)

QP Code: LSC/Q3201

QP Version: 2.0

NSQF Level: 3

Model Curriculum Version: 2.0

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Training Parameters

Sector	Logistics
Sub-Sector	Supply Chain
Occupation	In-plant logistics, Transport Management
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	NCO-2015/ 4321.0601 to 0604 and ISCO -08/4321, 4322
Minimum Educational Qualification and Experience	10th grade pass or equivalent with 2 Years of relevant experience in supply chain/ warehouse OR 8th grade pass with 4 Years of relevant experience in supply chain/ warehouse OR Previous relevant Qualification of NSQF Level 2.5 with 1.5 years of relevant experience in supply chain/warehouse
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18
Last Reviewed On	07/10/2025
Next Review Date	07/10/2028
NSQC Approval Date	07/10/2025
QP Version	2.0
Model Curriculum Creation Date	28/02/2025
Model Curriculum Valid Up to Date	07/10/2028
Model Curriculum Version	2.0
Minimum Duration of the Course	390
Maximum Duration of the Course	690

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 loading and unloading as per SOP.
- Demonstrate sorting and segregation of raw materials at plant warehouse
- Perform inventory counting and maintenance activities as per SOP
- Perform picking and kitting in the plant warehouse as per SOP
- Demonstrate line feeding operations as per SOP
- Comply to workplace integrity, ethical and regulatory practices.
- Manage workplace for safe and healthy work environment by following compliance to regulatory and safety norms.
- Demonstrate handling of pharmaceutical raw materials as per SOP
- Demonstrate the process of handling leather in plant warehouse
- Demonstrate handling of raw materials in the FMCG plant
- Detail the process of handling automotive components as per guidelines and SOP
- Demonstrate the process of handling electronic components per SOP
- Perform route planning and resource scheduling activities

Compulsory Modules

The table lists the 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	20	10			30
Module 1: Introduction to Supply Chain Associate	20	10			30
LSC/N3208: Perform Receiving, Unloading and Loading V1.0 NSQF Level 3	20	30	10		60
Module 2: Loading, Unloading and Receiving	20	30	10		60
LSC/N3205 – Handle stock at In-plant warehouse V2.0 NSQF Level 3	20	30	10		60
Module 3: Handling raw materials at an in-plant warehouse	20	30	10		60
LSC/N3206 – Perform Line feeding operations V2.0 NSQF Level 3	20	30	10		60
Module 4: Line feeding operations	20	30	10		60
LSC/N3209 – Carry out basic Order Fulfillment and Picking V1.0	25	35			60

NSQF Level 3				
Module 5: Basic Order Fulfillment and Picking	25	35		60
LSC/N9911: Follow health, safety, and security procedures and maintain integrity and ethics at the workplace V1.0 NSQF Level 3	10	20		30
Module 6: Health, safety, security, integrity and ethics at the workplace	10	20		30
Employability Skills DGT/VSQ/N0101	15	15		30
Total Duration	130	170	30	330

Elective Modules

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

Elective 1: Footwear/Leather – In Plant

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
LSC/N3201 – Handling Leather in Footwear Manufacturing Plant V2.0 NSQF Level 3	30	30			60
Module 8: Leather handling	30	30			60
Total Duration	30	30			60

Elective 2: FMCG – In Plant

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
LSC/N3202 – Handling raw materials in FMCG Manufacturing Plant V2.0 NSQF Level 3	30	30			60
Module 9: FMCG raw material handling	30	30			60
Total Duration	30	30			60

Elective 3: Automotive – In Plant

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
LSC/ N3203 – Handling automotive components in the automotive manufacturing plant V2.0 NSQF Level 3	30	30			60
Module 10: Automotive component handling	30	30			60
Total Duration	30	30			60

Elective 4: Electronics – In Plant

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
LSC/N3204 – Handling components and parts in the electronics assembly plant V2.0 NSQF Level 3	30	30			60
Module 11: Electronic component handling	30	30			60
Total Duration	30	30			60

Elective 5: Pharmaceuticals – In Plant

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
LSC/N3207 – Handling raw materials in the pharmaceutical manufacturing plant V2.0 NSQF Level 3	30	30			60
Module 12: Pharmaceutical raw materials handling	30	30			60
Total Duration	30	30			60

Optional Modules

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

Option 1: Route planning and vendor coordination

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
LSC/N3302: Perform basic inventory analysis and forecasting V2.0 NSQF Level 3	30	30			60
Module 13: Basic inventory analysis and forecasting	30	30			60
Total Duration	30	30			60

Module Details

Module 1: Introduction to Supply Chain Associate

Mapped to Bridge Module

Terminal Outcomes:

- Describe the basic structure and function of the supply chain
- Detail the various functions at an in-plant warehouse

Duration: 20:00	Duration: 10:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Explain the various sub-sectors of logistics and the opportunities in them • Detail the roles and responsibilities of a supply chain associate • Describe the various MHEs and equipment used in the warehouse • Discuss the documentation requirements for goods transport 	<p>Practical – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Classify the components of supply chain and logistics sector • Identify various activities in plant operations • Demonstrate your job role as a supply chain associate and interface with other job roles • Prepare important documents related to in-plant operations
<p>Classroom Aids</p> <p>Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser</p>	
<p>Tools, Equipment and Other Requirements</p> <p>Computers with MS office, WMS(Learning version), LLMS (Learning version)</p>	

Module 2: Loading, Unloading and Receiving

Mapped to LSC/N3208, V1.0

Terminal Outcomes:

- Perform Loading, Unloading and Receiving as per SOP.
- Detail appropriate usage of PPE, MHE and various tools for loading/unloading.

Duration: 20:00	Duration: 30:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> • List down the MHE, equipment and PPE used for loading/unloading. • Detail the types of material handling equipment (MHE) used for loading and unloading goods, including the safe handling and operation of tools, ropes, chains, and MHE to ensure safe and efficient unloading and loading processes. • Describe the procedures for inspecting goods for damage or discrepancies, how to cross-check goods against purchase orders, and the importance of documenting discrepancies and reporting them to the supervisor. • Detail about the proper packaging, labelling, and securing of goods for transport. • Describe the importance of ensuring that goods are handled with care and are safe for transportation to prevent damage during the journey. • Explain the importance of using appropriate personal protective equipment (PPE) during receiving, unloading, and loading activities. • Discuss maintaining a clear unloading/loading area to minimize hazards and ensure safety. • Elaborate on the standard operating procedures for loading and unloading goods, including ensuring compliance with schedules, vehicle checks, and appropriate reporting, as well as the importance of efficiency and safety in these operations. 	<p>Practical – Key Learning Outcomes</p> <ul style="list-style-type: none"> • obtain the unloading schedule from the supervisor, including the docking bay and time of transport arrival, and arrange the necessary material handling equipment (MHE), tools, and PPE for unloading. • visually inspect goods upon arrival for any damage, leakage, or discrepancies. • cross-check the goods against the purchase order and unloading schedule, ensuring accuracy in quantity, type, and item codes, and report discrepancies as needed. • use the appropriate material handling equipment (MHE), tools, ropes, and chains to secure and unload products from pallets, racks, or vehicles • deliver products to the specified location in accordance with the supervisor's instructions. • obtain the loading schedule and ensure that all goods are in good condition, properly packaged, and labelled for transport. • use the correct tools and PPE to secure the load, move the goods to the loading bay, and load them into vehicles. • ensure that any damaged goods during unloading or loading are immediately moved to a quarantine area and reported to the supervisor. • Park MHE correctly and submit a daily report detailing the day's activities.
<p>Classroom Aids</p> <p>Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser</p>	
<p>Tools, Equipment and Other Requirements</p> <p>WMS (Learning version), Personal Protective Equipment (PPEs), Material Handling Equipment (MHEs) like pallet truck (manual and battery operated), etc. barcode scanner, packing devices, packing material etc.</p>	

Module 3: Handling raw materials at In-Plant warehouse

Mapped to LSC/N3205, V2.0

Terminal Outcomes:

- Demonstrate sorting and segregation of raw materials at In-plant warehouse
- Perform inventory counting and maintenance activities as per SOP

Duration: 20:00	Duration: 30:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> • List the steps to be performed for sorting of goods as per SOP • Detail the steps to be performed after goods received are moved to the appropriate sub-stores as per guidelines • Describe the different types of storage, such as cold and ambient, and the requirements for different goods. • Discuss how to safely and efficiently operate forklifts, dollies, and other MHE to move goods. • Explain the processes and methods for conducting inventory counts and cross-checking against digital or written records. • Explain how to properly discard packaging materials and follow SOPs for handling and sorting goods. • Elaborate the importance of maintaining warehouse cleanliness and implementing pest control to protect stored goods. 	<p>Practical – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Receive and check packaging for damage, inform the supervisor, and segregate damaged goods. • Use MHE to transport goods to proper storage areas such as cold or ambient storage. • Unpack crates and sort goods according to product type, ensuring correct storage. • Properly discard packaging materials and record the quantity, weight, and volume of goods received and moved. • Perform physical inventory checks, compare with records, and conduct spot checks for discrepancies.
<p>Classroom Aids</p> <p>Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser</p>	
<p>Tools, Equipment and Other Requirements</p> <p>WMS (Learning outcomes), Personal Protective Equipment (PPEs), Material Handling Equipment (MHEs) like pallet truck (manual and battery operated), etc. barcode scanner, packing devices, packing material etc.</p>	

Module 4: Line Feeding Operations

Mapped to LSC/N3206, V2.0

Terminal Outcomes:

- Perform picking and kitting in the plant warehouse as per SOP
- Demonstrate line feeding operations as per SOP
- Detail the steps to be performed for the return of material from the line store

Duration: 20:00	Duration: 30:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Describe the procedures for obtaining kitting lists, identifying missing components, and following the BOM for assembly. • List the necessary PPE for different types of goods and work environments to ensure safety. • Explain the correct methods for using MHE to safely transport goods to designated areas in line feeding and material return processes. • Detail the correct process for feeding materials to the assembly line and the need for timely deliveries to maintain workflow. • Explain how to accurately document kitting activities, returns, and discrepancies, and report this information to supervisors for effective process management. 	<p>Practical – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Collect and check items for kitting, report any discrepancies, and kit them in the assigned bin/crate/fixture according to the Bill of Material (BOM). • Use appropriate PPE, operate Material Handling Equipment (MHE) safely, and follow SOPs for handling goods. • Transport the kitted goods to the line feeding location at the specified time, following SOPs. • Collect and return unused, rejected, or excess goods to the warehouse/store, ensuring proper handling. • Submit daily reports to the supervisor, including details of kitting, damages, delays, accidents, line feeding, and material returns.
<p>Classroom Aids</p> <p>Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser</p>	
<p>Tools, Equipment and Other Requirements</p> <p>WMS (Learning outcomes), Personal Protective Equipment (PPEs), Material Handling Equipment (MHEs) like pallet truck (manual and battery operated), etc. barcode scanner, packing devices, packing material etc.</p>	

Module 5: Basic Order Fulfilment and Picking

Mapped to LSC/N3209, V1.0

Terminal Outcomes:

- Detail the steps involved in Basic Order Fulfilment and Picking

Duration: 25:00	Duration: 35:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> Describe the factors influencing order prioritisation such as urgency, customer needs, and shipping schedules, and how to manage these priorities effectively. Detail different picking methods (e.g., single, batch, zone picking) and when to apply them based on location, equipment, and product type. Explain how to choose the correct packing materials (e.g., bubble wrap, foam inserts) based on the type of product and shipping requirements. Discuss the importance of confirming that items in the order match the picklist and ensuring that the correct SKU, size, and quantity are picked. Explain the necessary information for shipping labels, including how to correctly enter recipient details, tracking numbers, and handling instructions for proper dispatch. 	<p>Practical – Key Learning Outcomes</p> <ul style="list-style-type: none"> Confirm order details, prioritise based on urgency, and use MHE to pick items from the appropriate location, ensuring accuracy in quantity and condition. Organize required equipment (bins, crates, MHE) and PPE for safe and efficient order picking and packing. Identify and account for special handling requirements such as fragile, perishable, or custom items during order picking and packing. Choose appropriate packing materials and pack items securely to prevent damage, ensuring the packaging is aligned with the product and shipping needs. Generate and apply accurate shipping labels, ensuring all details (recipient information, tracking number, handling instructions) are correct before moving packages to the shipping area.
<p>Classroom Aids</p> <p>Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser</p>	
<p>Tools, Equipment and Other Requirements</p> <p>WMS (Learning outcomes), LLMS (Learning outcomes), Personal Protective Equipment (PPEs), Material Handling Equipment (MHEs) like pallet trucks (manual and battery operated), etc. barcode scanners, packing devices, packing material etc.</p>	

Module 6: Compliance with Health, safety, integrity and ethics at workplace

Mapped to LSC/N9911, V1.0

Terminal Outcomes:

- Discuss the health, safety and security procedures in warehousing
- Inspect the activity area and equipment, for appropriate and safe conditions

Duration: 20:00	Duration: 40:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Detail the safety regulations and procedures w.r.t fire hazards, biohazards, etc. • Explain various PPE utilized in logistics and their uses. • Describe data safety regulations and clear worktable policy. • Explain the importance of taking care of personal health and hygiene. • Detail the standard procedures to be followed during emergency situations. • Explain 5s at workplace and code of ethics. 	<p>Practical – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Follow health, safety and security measures during all activities. • Wear all safety equipment including protective gear, helmets etc., in relevant bay areas. • Recognize unsafe conditions and safety practices at the workplace and report it to concerned authorities. • Comply with data safety regulations of the organization and follow clear worktable policy. • Maintain personal health and hygiene. • Practice basic first aid methods. • Follow procedures to handle emergency situations. • Protect data and information related to business or commercial decisions • Prevent company and customer information leakage. • Refrain from indulging in corrupt practices and consult senior management when in an ethical dilemma. • Follow organization procedures with respect to documentation.
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Computers with MS office, PPE, MHE, instructional material, safety guidelines, safety signs etc., LLMS (Learning version), WMS (Learning version)	

Module 7: Employability Skills

Mapped to DGT/VSQ/N0101, V1.0

Terminal Outcomes:

- Appraise the significance of employability skills in meeting the job requirements
- Identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices.
- Illustrate English and communication skills, customer service, entrepreneurship, and getting ready for jobs and apprenticeship.

Duration: 15:00	Duration: 15:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Detail the importance of Employability Skills in meeting the job requirements • Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen. • Describe positive attitude, self -motivation, problem solving, time management skills and continuous learning mindset in different situations. • Discuss the significance of reporting sexual harassment issues in time • Appraise the significance of using financial products and services safely and securely. • Explain the importance of managing expenses, income, and savings. • Detail the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws • Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely • Categorize the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges • Discuss the significance of maintaining hygiene and dressing appropriately • Discuss how to search and register for apprenticeship opportunities 	<p>Practical – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Analyze 21st century skills. • Practice appropriate basic English sentences/phrases while speaking • Demonstrate how to communicate in a well -mannered way with others. • Illustrate working with others in a team • Demonstrate how to conduct oneself appropriately with all genders and PwD • Operate digital devices and use the associated applications and features, safely and securely • Differentiate between types of customers • Create a biodata • Experiment with various sources to search and apply for jobs • Identify customer needs and address them • Compose the significance of dressing up neatly and maintaining hygiene for an interview
<p>Classroom Aids</p> <p>Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser, UPS, LCD Projector, Computer Tables & chairs</p>	
<p>Tools, Equipment and Other Requirements</p> <p>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</p>	

Module 8: Leather Handling

Mapped to LSC/N3201, V2.0

Terminal Outcomes:

- Demonstrate the process of handling leather in plant warehouse

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe how to assess the quality of leather upon receipt, identify any defects, and the importance of categorizing leather by grades (A, B, C). • Explain the importance of maintaining the ideal storage environment for leather, including temperature and humidity control, to prevent deterioration. • Detail the best practices for handling leather to prevent damage, such as using gloves, avoiding folding, and ensuring leather is not exposed to harmful elements like metal. • Elaborate on how to properly segregate different types of leather (e.g., oily, coloured) and the potential risks (e.g., dye transfer) of improper storage. • Describe the significance of regular inspections for pests, the need for pest control, and why it is important to avoid over-stacking leather to prevent damage. 	<ul style="list-style-type: none"> • Visually inspect leather upon receipt, checking for damages, defects, or any irregularities, and segregate based on grades (A, B, C). • Ensure leather is stored in a controlled environment, away from light, at room temperature (65-72°F), and humidity (55%) to prevent mold growth and degradation. • Handle leather with clean hands or gloves, and place leather rolls or hides on shelves, ensuring they are not folded, creased, or in direct contact with metal. • Store leather by type—such as oily leather separate from non-oily leather—and ensure that coloured leather is kept apart to prevent dye transfer. • Regularly inspect the warehouse for pests (rodents, birds, insects) and take necessary pest control actions according to SOP to maintain the quality of leather.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
WMS (Learning outcomes), leather samples, Personal Protective Equipment (PPEs), Material Handling Equipment (MHEs) like pallet trucks (manual and battery operated), etc. barcode scanners, packing devices, packing material etc.	

Module 9: FMCG raw material handling

Mapped to LSC/N3202, V2.0

Terminal Outcomes:

- Demonstrate handling of raw materials in the FMCG plant

Duration: 30:00	Duration: 30:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Describe the importance of inspecting FMCG goods on arrival, how to identify defects or quality issues, and the steps to take when issues are found. • Detail about the specific storage requirements for different types of FMCG goods, including cold storage requirements and coding methods for proper organization. • Explain the correct storage conditions for temperature-sensitive FMCG items, including the importance of maintaining accurate temperature logs and understanding regulatory compliance. • Discuss inventory management techniques such as FIFO and LIFO, and the importance of tracking expiry dates to optimize stock rotation and minimize waste. • Elaborate on the hygiene and safety regulations that apply to FMCG handling, such as the necessity of protective personal equipment (PPE), pest control standards, and compliance with food safety regulations like FSSA, HACCP, and ISO 22000:2005. 	<p>Practical – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Visually inspect incoming FMCG goods for damage, quality issues, or discrepancies and report any defective or broken items to the supervisor. • Segregate raw materials into ambient or cold storage based on their requirements and ensure proper arrangement for easy identification and retrieval. • Ensure that temperature-sensitive items, such as frozen food or dairy products, are stored in proper refrigerated or freezer units, and regularly check temperature logs. • Use appropriate material handling equipment (MHE) such as pallets, forklifts, and reach stackers for product movement, and ensure that products are not stored near waste or non-product items. • Implement the First-In, First-Out (FIFO) or Last-In, First-Out (LIFO) inventory management techniques based on the company's SOP, and track expiry dates to ensure goods nearing expiration are used first.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
WMS (Learning outcomes), sample FMCG goods, Personal Protective Equipment (PPEs), Material Handling Equipment (MHEs) like pallet truck (manual and battery operated), etc. barcode scanner, packing devices, packing material etc.	

Module 10: Automotive component handling

Mapped to LSC/N3203, V2.0

Terminal Outcomes:

- Detail the process of handling automotive components as per guidelines and SOP

Duration: 30:00	Duration: 30:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Detail the proper methods for sorting automotive parts based on Kanban systems and how to store frequently used components in accessible locations, while ensuring compliance with FIFO/LIFO inventory management principles. • List the different types of MHE (e.g., forklifts, trolleys, pallet jacks) and when to use specific equipment for handling automotive parts based on the size, weight, and storage requirements of the components. • Describe the importance of verifying the certifications of automotive parts to ensure they meet quality and safety standards, including the proper handling and documentation of these certifications. • Elaborate on sequencing processes, how components are selected and sequenced based on the sequencing list, and how the BOM (Bill of Materials) influences sequencing to avoid errors in production. • Explain process improvement systems such as 5S, Kaizen, Just In Time (JIT), and poka-yoke and how these principles can enhance warehouse organisation, reduce errors, and optimise material flow. 	<p>Practical – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Load automotive parts onto fixtures, crates, pallets, or boxes and store them on racks, shelves, or bins according to the Kanban list, ensuring proper organization and easy access. • Ensure automotive goods are compliant with required certifications and safety standards, inspecting for any discrepancies or damage during receiving and storage. • Utilize MHE, such as forklifts, trolleys, and manual lifting equipment, to handle large, heavy parts and bin systems for smaller components as per the supervisor's instructions. • Pack automotive parts in boxes, crates, or pallets for easy access by assembly line workers and label all parts with unique part numbers, barcodes, or QR codes for clear identification and error prevention. • Assist in inventory cycle counting as per Standard Operating Procedures (SOP), ensuring accurate stock tracking and reporting defective or broken products to the supervisor.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
WMS (Learning outcomes), Sample Automotive components, Personal Protective Equipment (PPEs), Material Handling Equipment (MHEs) like pallet truck (manual and battery operated), etc. barcode scanner, packing devices, packing material etc.	

Module 11: Electronic component handling

Mapped to LSC/N3204, V2.0

Terminal Outcomes:

- Demonstrate the process of handling electronic components per SOP

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • State the specific storage requirements for various electronic components, including temperature, humidity control (15°C to 27°C, 30% to 60% relative humidity), and anti-static precautions for sensitive items like PCBs and ICs. • Describe the importance of checking for adherence to certifications like ISO 9001:2015 and AS9100, ensuring electronic components meet quality and industry standards before handling, storing, or shipping. • Explain the importance of maintaining clean work environments and using cleanroom standards when necessary for sensitive components to prevent contamination from dust, grease, or fingerprints. • Detail the correct disposal methods for packaging materials such as plastic films, anti-static bags, and other materials in accordance with Standard Operating Procedures (SOP). • Discuss the significance of pest control in the warehouse to prevent damage to components from pests like rodents and insects, and follow proper safety guidelines to ensure the safety of the warehouse environment. 	<ul style="list-style-type: none"> • Inspect electronic components for visible damage such as scratches, cracks, or damage to packaging like anti-static bags, and ensure proper handling of delicate parts like microchips and circuit boards. • Safely transport and handle electronic components using Material Handling Equipment (MHE) and tools like tweezers or vacuum pick-up tools for delicate or small parts, ensuring no damage during handling or transfer. • Ensure that electronic components are stored properly in accordance with their specific needs, such as anti-static storage for ICs and capacitors, or placing heavier items on lower shelves to prevent accidents. • Perform cycle counts to verify the physical inventory matches the system’s records and ensure proper stock rotation using FIFO (First-In, First-Out) or LIFO (Last-In, First-Out) as applicable. • Identify and report defective or broken components to the supervisor, documenting any damage or quality issues and following procedures for returns or replacements.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
WMS (Learning outcomes), sample electronic components, Personal Protective Equipment (PPEs), Material Handling Equipment (MHEs) like pallet trucks (manual and battery operated), barcode scanners, packing devices, packing material, etc.	

Module 12: Pharmaceutical raw material handling

Mapped to LSC/N3207, V2.0

Terminal Outcomes:

- Detail the required steps in de-dusting procedure for materials
- Detail the quantity verification procedure
- Explain the escalation matrix for reporting deviation

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the importance of visually inspecting raw materials for damage, contamination, and discrepancies and the procedures for reporting and segregating affected goods. • Discuss the correct use of cleaning tools (e.g., vacuum, lint-free cloth) and Material Handling Equipment (MHE) for transferring materials safely and efficiently within the plant. • Explain the process of checking the cleanliness and calibration of weighing equipment and how to verify and record the correct weight of incoming raw materials. • Detail the importance of storing materials according to specific conditions (e.g., temperature, humidity) and regulations like FIFO (First In, First Out) for traceability and quality control. • Elaborate the safety protocols for handling raw materials, including compliance with Good Manufacturing Practices (GMP), regulatory standards (e.g., FDA), and the proper disposal of hazardous or expired materials. 	<ul style="list-style-type: none"> • Visually inspect raw materials during receiving for damage, contamination, or discrepancies in packaging, labelling, or quantity, and report issues. • Use appropriate cleaning equipment (vacuum cleaner, lint-free cloth) to clean containers/packs and transfer them to the weighing area using Material Handling Equipment (MHE). • Weigh the received materials on a calibrated balance, ensuring the quantity matches delivery documents, and record the weight in the “Quantity Verification Record.” • Place quarantine labels on materials not yet approved and move them to the quarantine area; after quality approval, affix "Approved" labels and store the materials appropriately. • Properly store raw materials in climate-controlled environments (e.g., cold storage or temperature-controlled areas) and segregate materials based on their type and required storage conditions.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
WMS (Learning outcomes), sample Pharmaceutical goods, Personal Protective Equipment (PPEs), Material Handling Equipment (MHEs) like pallet trucks (manual and battery operated), barcode scanners, packing devices, packing material, etc.	

Module 13: Basic inventory analysis and forecasting

Mapped to LSC/N3302, V2.0

Terminal Outcomes:

- Demonstrate physical inventory counting procedure as per SOP
- Perform inventory analysis as per SOP
- Perform inventory forecasting as per SOP

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the process of preparing the MIS report • Elaborate the process of maintaining inventory data using ERP. • Discuss the process of issuing material requests for line usage in ERP • Explain the steps involved in inventory analysis. • Discuss inventory analysis methods such as ABC, VED and FSN analysis • Describe about inventory forecasting. • Detail the various forecasting methods such as the Delphi method, time series model, exponential smoothing, etc. 	<ul style="list-style-type: none"> • Demonstrate the process of issuing material requests for line usage in ERP • Prepare MIS reports based on inventory data fed into the ERP system • Record inventory information with details on item code, unit name, purchase price, tracking code, etc. • Examine inventory data for discrepancies and rectify issues • Demonstrate ABC, VED and FSN analysis • Decide on the optimum amount of inventory to be held by using ABC analysis, VED analysis, FSN analysis, etc • Select the appropriate forecasting method based on business needs and suitability • Perform inventory forecasting as per SOP • Identify forecast variance and its cause
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
ERP, WMS (Learning outcomes), software packages, etc	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Any degree		2	Warehouse operations, In plant warehousing operations			

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role: "Supply Chain Associate" mapped to QP: "LSC/Q3201, V2.0". Minimum accepted score is 80%	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%

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
Any degree		2	Warehousing operations, in plant operations			

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role: "Supply Chain Associate" mapped to QP: "LSC/Q3201, V2.0". 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

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 behavioural 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
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).
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