Model Curriculum

QP Name: Container repair and maintenance supervisor

(Options – Yard Management/ Shipment Tracking and ERP/ Optimal Container Utilization)

QP Code: LSC/Q0404

QP Version: 1.0

NSQF Level: 5

Model Curriculum Version: 1.0

Logistics Sector Skill Council|| No. 480 A, 7th floor Khivraj Complex 2, Anna Salai, Nandanam, Chennai – 600 035

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Training Parameters

Sector	Logistics
Sub-Sector	Port Terminals
Occupation	Engineering/Maintenance, Port Operations Coordination
Country	India
NSQF Level	5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3115,2141 and ISCO-08/3115,2141
Minimum Educational Qualification and Experience	Completed 2nd year of UG OR Completed 2nd year Diploma in Mechanical / Electrical engineering (after 12th) OR Pursuing 2nd year of UG and continuous education in Mechanical / Electrical engineering OR 12th Grade pass + 2 year experience in handling container repair.
Pre-Requisite License or Training	NA
Minimum Job Entry Age	21 Years
Last Reviewed On	31-08-2023
Next Review Date	31-08-2026
NSQC Approval Date	31-08-2023
QP Version	1.0
Model Curriculum Creation Date	17-04-2023
Model Curriculum Valid Up to Date	31-08-2026
Model Curriculum Version	1.0
Minimum Duration of the Course	540
Maximum Duration of the Course	720

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:

- Describe the basic structure and function of the supply chain.
- Detail the various functions of a Container inspection, repair and maintenance supervisor.
- Detail the steps involved in checking the quality of the containers.
- Detail the steps to be followed for repair estimation and approvals.
- Detail the steps to be followed for checking the quality of Container repairs.
- Explain the concepts of integrity, ethics
- Detail the various regulatory requirements related to logistics industry
- Describe health, safety, and security procedures in warehouse
- Demonstrate the inspection procedure to ensure appropriate and safe conditions of activity area and equipment
- Illustrate the standard protocol to be followed during emergency situations, accidents and breach of safety
- Detail the steps involved in effective resource allocation and yard operations management
- Detail the steps to be followed for effective shipment tracking
- Detail the steps to be followed for optimum container utilization as per SOP

Compulsory Modules

The table lists the modules, their duration, and their 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**	**40**			**60**
Module 1: Introduction	20	40			60
LSC/N0421 Inspection of Containers NOS Version 1.0 NSQF Level 5	**30**	**50**	**10**		**90**
Module 2: Inspection of Containers	30	50	10		90
LSC/N0423 Repair Estimates and Approvals NOS Version 1.0 NSQF Level 5	**30**	**50**	**10**		**90**
Module 3: Repair Estimates and Approvals	30	50	10		90
LSC/N0422	**30**	**50**	**10**		**90**

NOS and Module Details					
Quality of Container Repairs **NOS Version 1.0** **NSQF Level 5**					
Module 4: Quality of Container repairs	30	50	10		90
LSC/N9904– Maintain integrity, ethics, and regulatory compliance in operations. **NOS Version 1.0** **NSQF Level 5**	**20**	**40**			**60**
Module 5: Guidelines on integrity and ethics	20	40			60
LSC/N9905 – Follow health, safety, and security procedures. **NOS Version 1.0** **NSQF Level 5**	**30**	**60**			**90**
Module 6: Compliance with health, safety, and security norms	30	60			90
DGT/VSQ/N0102 Employability Skills	**30**	**30**			**60**
Total Duration	**190**	**320**	**30**		**540**

Optional Modules

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

Option 1: Yard Management

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
LSC/N3501: Allocate resources and streamline operations at yard **NOS Version V1.0** **NSQF Level 5**	**30**	**30**			**60**
Module 7: Resource allocation and yard operations management	30	30			60
Total Duration	**30**	**30**			**60**

Option 2: Shipment Tracking and ERP

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
LSC/N3507: Extract and analyse shipment information from IT systems. **NOS Version V1.0** **NSQF Level 5**	**30**	**30**			**60**
Module 8: Shipment Tracking System	30	30			60
Total Duration	**30**	**30**			**60**

Option 3: Optimal Container Utilization

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
LSC/N3509: Plan and coordinate for optimal utilization of containers **NOS Version V1.0** **NSQF Level 5**	**30**	**30**			**60**
Module 9: Container Utilization Planning	30	30			60
Total Duration	**30**	**30**			**60**

Module Details

Module 1: Introduction to Container repair and maintenance supervisor
Mapped to Bridge Module

Terminal Outcomes:

- Describe the basic structure and function of the supply chain.
- Detail the various functions of a Container inspection, repair and maintenance supervisor.

Duration: 20:00	Duration: 40:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Classify the components of supply chain and logistics sector - Describe the various sub-sectors and the opportunities in them - Detail the activities in Ports, CFS, ICD.	- Identify various activities of a container in Ports, CFS, ICD - Distinguish the various MHEs and equipment used in Ports, CFS, ICD - Illustrate your job role as Container inspection and maintenance supervisor and your interface with other job roles
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment, and Other Requirements	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	

Module 2: Inspection of Containers
Mapped to LSC/N0421, v1.0

Terminal Outcomes:

- Detail the steps involved in checking the quality of the containers.

Duration: 30:00	Duration: 50:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Detail the documents used for container inspection and maintenance like delivery orders/Acceptance orders etc. - Describe the container inspection procedure. - Explain the process to be followed for damaged containers. - Detail the process for handling hazardous cargo. - Describe the process of preparing the survey report	- Review and maintain the important documents received from vendors via email. - Check the delivery order or acceptance order received from truck drivers during delivery. - Perform the steps involved in the inspection of containers. - Report to CHA, CHA's representatives, shipping liners' representatives, etc. about container damage. - Identify and segregate hazardous cargo containers. - Follow the safety precautions while handling hazardous goods. - Prepare the survey reports containing damages, repair methods, appropriate size, etc. - Record and maintain the survey reports.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment, and Other Requirements	
Computer, printer, Inspection Tools	

Module 3: Repair Estimates and Approvals
Mapped to LSC/N0423, v1.0

Terminal Outcomes:

- Detail the steps to be followed for repair estimation and approvals.

Duration: 30:00	Duration: 50:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Detail the process of preparing repair estimates. - Describe the customer handling procedure related to the container damages. - Explain the procedure for getting repair approval. - Detail the steps to be followed for repair rejections.	- Prepare the repair estimates as per the repair Tariff of the vendors. - Follow the repair estimate approval process. - Respond to customer queries and rejections. - Update service/repairs undertaken in ERP and endorse usage of containers in ERP.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment, and Other Requirements	
MS Office, ERP/ TMS (learning version), stationery, computer, projector, worksheets, SOP, etc.	

Module 4: Quality of Container repairs
Mapped to LSC/N0422, v1.0

Terminal Outcomes:

- Detail the steps to be followed for checking the quality of Container repairs.

Duration: 30:00	Duration: 50:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Explain the procedure for creating a job order to repair containers. - Describe the steps involved for performing quality check. - Detail the process and documentation involved post quality inspection. - Explain the safety precautions and waste management procedures to be followed during container repair. - Detail the repair completion process.	- Create job order and issue it to the repairers. - Prepare quality checklist as per SOP. - Follow the steps involved for quality inspection. - Document the inspection details and provide instructions to the repairer. - Illustrate the repair completion procedures. - Practice the safety precautions and waste management process.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment, and Other Requirements	
MS Office, ERP/ TMS (learning version), stationery, computer, projector, worksheets, SOP, etc.	

Module 5: Guidelines on integrity and ethics
Mapped to LSC/N9904, v1.0

Terminal Outcomes:

- Explain the concepts of integrity, ethics

- Detail the various regulatory requirements related to logistics industry

Duration: 20:00	Duration: 40:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the concepts of integrity and ethics. - Detail the various regulatory requirements related to logistics industry. - Explain data and information security protocols. - Detail the escalation process for reporting deviation.	- Follow the principles of integrity and ethics. - Perform data and information security practices. - Identify corrupt practices which are followed. - Comply to the regulatory requirements. - Practice code of conduct and etiquettes as per organization. - Document all integrity and ethics violations. - Report deviation as per the escalation matrix
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
MS Office, computer, projector, stationery, LLMS (learning version), SOPs etc.	

Module 6: Compliance with health, safety and security norms
Mapped to LSC/N9905, v1.0

Terminal Outcomes:

- Describe health, safety, and security procedures in warehouse
- Demonstrate the inspection procedure to ensure appropriate and safe conditions of activity area and equipment
- Illustrate the standard protocol to be followed during emergency situations, accidents and breach of safety

Duration: 30:00	Duration: 60:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Detail the health, safety and security procedures to be followed in container terminals. - Describe the PPE to be used and its importance. - Explain the procedure for safe handling of hazardous goods. - Discuss the standard protocol to be followed during emergency situations, accidents and breach of safety. - Document health, safety and security violations - Explain the escalation matrix for reporting deviation	- Follow health, safety and security procedures in warehouse - Use appropriate PPE according to different locations. - Follow SOP while handling dangerous and hazardous goods. - Practice standard protocol in case of emergency situations, accidents, and breach of safety. - Inspect for health, safety and security violations - Implement and follow 5S at workplace - Report deviation as per the escalation matrix
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
PPE, SOP, LLMS (learning version), Teaching board, computer, projector, video player, stationery, worksheets and TV	

Module 7: Resource Allocation and Yard Operations Management
Mapped to LSC/N3501, v1.0

Terminal Outcomes:

- Detail the steps involved in effective resource allocation and yard operations management

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe yard working plan and resource allocation - Explain vessel docking and cargo/container movement plan. - Detail the cargo loading/unloading process - Describe hazardous cargo handling procedure. - Explain the steps involved for daily operations monitoring. - Detail the yard inspection methods. - Describe the ways to handle escalated issues.	- Prepare yard working plan and resource allocation plan based on requirements - Devise a cargo/container movement plan. - Perform the steps involved in cargo loading/unloading. - Develop preventive and corrective action plans for escalated issues. - Follow hazardous cargo handling procedures - Identify and implement relationship elements among shipping companies, freight operators, vessel, port authorities and other agencies - Examine the yard for compliance to cleanliness, and SOP norms. - Provide corrective action plan for escalated cases.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Computers, MIS, ERP, performance review software, budgeting and forecasting software	

Module 8: Shipment Tracking System
Mapped to LSC/N3507, V1.0

Terminal Outcomes:

- Detail the steps to be followed for effective shipment tracking

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Detail the process for feeding information into ERP. - Explain how to track position of consignments and containers globally using ERP. - Describe the documentation and reporting process.	- Track container movement using ERP. - Compare yard inspection reports and ERP for accuracy. - Prepare plan for manpower and equipment resources for global container handling - Update container movement in ERP system accordingly. - Devise corrective and preventive actions in case of container mishandling - Perform trend analysis of order processing, website hits, procurement, delivery, seasonality, reverse logistics etc. - Prepare sales forecasts by coordinating with other departments and the associated resource requirement for fulfilment of demand.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Computers, MIS, ERP, performance review software, budgeting and forecasting software	

Module 9: Container Utilization Planning
Mapped to LSC/N3509, V1.0

Terminal Outcomes:

- Detail the steps to be followed for optimum container utilization as per SOP

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Detail LCL and FCL loading process. - Describe the procedure for allocation of resources. - Explain cargo segregation requirements in container stuffing. - Detail the steps involved for reviewing gate movement of containers and reporting.	- Optimise container utilization by devising a plan. - Devise resource allocation for container stuffing and de-stuffing - Allocate manpower, material and MHE requirement for container handling. - Review gate movement of containers. - Document and report the container movement using ERP.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Computers, MIS, ERP, performance review software, MHE	

Module 10: 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**
- Discuss the Employability Skills required for jobs in various industries - 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 importance of relevant 21st century skills. - Describe the benefits of continuous learning. - Explain the importance of active listening for effective communication - Discuss the significance of working collaboratively with others in a team - Discuss the significance of escalating sexual harassment issues as per POSH act. - List the common components of salary and compute income, expenditure, taxes, investments etc. - Discuss the legal rights, laws, and aids - Describe the role of digital technology in today's life - Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely - Explain the types of entrepreneurship and enterprises - Discuss how to identify opportunities for potential business, sources of funding and	- Practice different environmentally sustainable practices. - Exhibit 21st century skills like Self-Awareness, Behavior 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. - Demonstrate to use basic English sentences for everyday conversation in different contexts, in person and over the telephone - Read and interpret text written in basic English - Write a short note/paragraph / letter/e - mail using basic English - Create a career development plan with well-defined short- and long-term goals - Communicate effectively using verbal and nonverbal communication etiquette. - Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD - Outline the importance of selecting the right financial institution, product, and service - Demonstrate how to carry out offline and online financial transactions, safely and securely - Operate digital devices and use the associated applications and features, safely and securely - Create sample word documents, excel sheets and presentations using basic features

associated financial and legal risks with its mitigation plan	● Utilize virtual collaboration tools to work effectively
● Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement	● Devise a sample business plan, for the selected business opportunity
● Detail the significance of analyzing different types and needs of customers	● Create a professional Curriculum Vitae (CV)
● Explain the significance of identifying customer needs and responding to them in a professional manner.	● Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
● Discuss the significance of maintaining hygiene and dressing appropriately	● Perform a mock interview
● Explain the significance of maintaining hygiene and confidence during an interview	
● List the steps for searching and registering for apprenticeship opportunities	

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).

Annexure

Trainer Requirements

Trainer Prerequisites					
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	*Specialization*	*Years*	*Specialization*	
Any Degree	Port Terminals	2	Port Terminals			

Trainer Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "Container Repair and Maintenance Supervisor" mapped to QP: "LSC/Q0404, v1.0". 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". Minimum accepted score is 80%

Assessor Requirements

Assessor Prerequisites					
Minimum Educational Qualificatio n	**Specialization**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	*Specialization*	*Years*	*Specialization*	
Any Degree	Port Terminals	2	Port Terminals			

Assessor Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "Container Repair and Maintenance Supervisor" mapped to QP: "LSC/Q0404, 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". Minimum accepted score is 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 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
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
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