

|  |
| --- |
| **Model Curriculum**  **QP Name: Tank Farm Manager**  **QP Code: LSC/** **Q3513**  **QP Version: 2.0**  **NSQF Level: 6**  **Model Curriculum Version: 2.0** |
| **­**  Logistics Sector Skill Council|| Logistics Sector Skill Council, No. 480 A, 7th floor Khivraj Complex 2, Anna Salai, Nandanam, Chennai, Tamil Nadu 600035 |

Table of Contents

[Training Parameters 2](#_Toc107828206)

[Program Overview 3](#_Toc107828207)

[Training Outcomes 3](#_Toc107828208)

[Compulsory Modules 3](#_Toc107828209)

[Optional Modules 6](#_Toc107828210)

[Module 1: Introduction to Tank Farm Manager role 7](#_Toc107828211)

[Module 2: Tank farm infrastructure and operations management 8](#_Toc107828212)

[Module 3: Planning and commissioning of tank farm 9](#_Toc107828213)

[Module 4: Business development and stakeholder relations 10](#_Toc107828214)

[Module 5: Key accounts management 11](#_Toc107828215)

[Module 6: Performance management system 1](#_Toc107828215)2

[Module 7: Profit and loss account management and cost accounting 1](#_Toc107828216)3

[Module 8: Guideline on integrity and ethics 1](#_Toc107828216)4

[Module 9: Compliance to health, safety and security norms in tank farms .15](#_Toc107828217)

Module 10: Employability skills………………………………………………………..………………………………………….16

[Module 11: OPTION 1: Port Terminals Management 1](#_Toc107828218)8

[Annexure 1](#_Toc107828219)9

[Trainer Requirements 1](#_Toc107828220)9

[Assessor Requirements………………………………………………………………………………………………………………..](#_Toc107828221)20

[Assessment Strategy .](#_Toc107828222)21

[References 23](#_Toc107828223)

[Glossary 23](#_Toc107828224)

[Acronyms and Abbreviations 24](#_Toc107828225)

**Training Parameters**

|  |  |
| --- | --- |
| **Sector** | Logistics |
| **Sub-Sector** | LIQUID LOGISTICS |
| **Occupation** | Port Operations Coordination, Documentation and Reporting,  Liquid transportation Operations, Engineering/ Maintenance |
| **Country** | India |
| **NSQF Level** | 6 |
| **Aligned to NCO/ISCO/ISIC Code** | NCO – 2015 – 1324, ISCO-08-1324 |
| **Minimum Educational Qualiﬁcation and Experience** | Pursuing first year of 2-year PG program after completing 3 year UG degree or Pursuing PG diploma after 3 year UG degree or Completed 3 year UG degree program after 12th or Pursuing 4th year UG (in case of 4-year UG with honors/ honors with research) or 12th Grade Pass with 2 years of Vocational Education & Training. (Eg. 12th Grade with 1 year NTC plus 1 year NAC/CITS) or 12th grade with 1 year NAC + CITS 2 year relevant experience or 12th grade pass + 4 years relevant experience or Previous relevant Qualification of NSQF Level 5.5 + 1.5 years relevant experience or Certificate-NSQF (Tank Farm Supervisor - level 5) + 3 Years of relevant experience |
| **Pre-Requisite License or Training** | NA |
| **Minimum Job Entry Age** | 23 |
| **Last Reviewed On** | NA |
| **Next Review Date** | NA |
| **NSQC Approval Date** | NA |
| **QP Version** | 2.0 |
| **Model Curriculum Creation Date** | 04-08-2022 |
| **Model Curriculum Valid Up to Date** | 04-08-2025 |
| **Model Curriculum Version** | 2.0 |
| **Minimum Duration of the Course** | 690 |
| **Maximum Duration of the Course** | 750 |

# 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:

## Analyse tank farm infrastructure maintenance, budgeting, forecasting and operations.

## Develop tank farm business plan and supervise procurement, installation and commissioning

## Generate business for the organisation and manage relationships with stakeholders including clients, customs, PGAs etc.

## Manage key accounts to improve business and develop new clients

## Analyse operational and business performance to undertake improvement initiatives

## Manage business profitably by analysing profit and loss and undertaking operations improvement initiatives.

## Comply to work place integrity, ethical and regulatory practices.

## Manage workplace for safe and healthy work environment by following and ensuring compliance to regulatory and safety norms.

## Options:

## Manage port operations profitably and ensure compliance to regulatory compliances

## 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 Tank Farm Supervisor | 20 | 10 |  |  | 30 |
| LSC/N3528 Conduct daily review and facilitate operations in tank farms  NOS Version 1.0  NSQF Level 6 | **20** | **60** | **10** |  | **90** |
| Module 2: Tank farm infrastructure and operations management | 20 | 60 | 10 |  | 90 |
| LSC/N3529 Assist in tank farm planning and commissioning  NOS Version 1.0  NSQF Level 6 | **20** | **60** | **10** |  | **90** |
| Module 3: Planning and commissioning of tank farm | 20 | 60 | 10 |  | 90 |
| LSC/N9701 Business development and stakeholder relations NOS Version 1.0  NSQF Level 6 | **20** | **60** | **10** |  | **90** |
| Module 4: Business development and stakeholder relations | 20 | 60 | 10 |  | 90 |
| LSC/N9703 Build customer relations and handle key accounts NOS Version 1.0  NSQF Level 6 | **20** | **40** |  |  | **60** |
| Module 5: Key accounts management | 20 | 40 |  |  | 60 |
| LSC/N9602 Review performance and develop performance improvement plans  NOS Version 1.0  NSQF Level 6 | **20** | **40** |  |  | **60** |
| Module 6: Performance management system | 20 | 40 |  |  | 60 |
| LSC/N9603 Profit and loss management and cost accounting  NOS Version 1.0  NSQF Level 6 | **20** | **40** |  |  | **60** |
| Module 7: Profit and loss account management and cost accounting | 20 | 40 |  |  | 60 |
| LSC/ N9904 - Guideline on integrity and ethics NOS Version 1.0  NSQF Level 6 | **20** | **40** |  |  | **60** |
| Module 8: Maintain and monitor integrity and ethics in operations | 20 | 40 |  |  | 60 |
| LSC/N9905 - Follow health safety and security procedures  NOS Version 1.0  NSQF Level 6 | **20** | **40** |  |  | **60** |
| Module 9: Follow health, safety and security procedures in liquid logistics | 20 | 40 |  |  | 60 |
| Employability  DGT/VSQ/N0103 | **30** | **60** |  |  | **90** |
| Total Duration | **210** | **450** | **30** |  | **690** |

## 

## 

## Optional Modules

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

**Option 1: Port Terminals Management**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NOS and Module Details | Theory  Duration | Practical  Duration | On-the-Job Training Duration (Mandatory) | On-the-Job Training Duration (Recommended) | Total Duration |
| LSC/N3526 Manage port terminals  NOS Version 1.0  **NSQF Level 6** | **30** | **30** |  |  | **60** |
| Module 10: Port Terminals Management | 30 | 30 |  |  | 60 |
| Total Duration | **30** | **30** |  |  | **60** |

**Module Details**

## Module 1: Introduction to Tank Farm Manager

***Mapped to Bridge Module***

**Terminal Outcomes:**

* Describe the basic structure and functions of supply chain and logistics sector
* Detail the role of Tank Farm Supervisor.

|  |  |
| --- | --- |
| Duration: *20:00* | Duration: *10:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Explain the basics of supply chain and logistics sector * Describe the various sub-sectors and the opportunities in them * Detail various activities in warehouse, port yard, land, ship and air transportation * Explain job roles in ports and tank farms * Describe your job role as tank farm supervisor and its interface with other job roles * Discuss the various activities in a port yard and tank farm * Describe the various documentation in tank farm and liquid transport * Discuss the basics of hazardous goods handling | * Classify the components of Supply Chain and Logistics sector * Identify the various sub-sectors and the opportunities in them * Interpret a variety of activities that take place in warehouse, port yard, land, ship and air transportation * Illustrate the different job roles available in ports and tank farms * Demonstrate your job role as tank farm manager and how it impacts other functions * Categorize all the events in a port yard in terms of Tank farming * Prepare some of the documents used in tank farm and liquid transport * Practice the ways to handle hazardous goods |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
| Teaching board, computer, projector, video player or TV | |

**Module 2: Tank farm infrastructure and operations management**

***Mapped to LSC/N3528, v1.0***

**Terminal Outcomes:**

* Detail the Tank operations farm inspection process
* Devise disaster plan, maintenance plan, cleaning of tanks and work schedule
* Describe approval process budgets

|  |  |
| --- | --- |
| Duration: *20:00* | Duration: *60:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Describe the tank farm inspection process for assessing fitness of infrastructure and equipment * Elaborate corrective and preventive methods for operations improvement. * Detail the process of allocating budgets as per requirement. * Explain resource allocation, budgets approval and maintenance requirements approval process * Define the compliance requirements for safety, security and regulatory aspects * Detail the approval process for cleaning and maintenance. * State working relationship elements among shipping companies, freight operators, vessel, port authorities and other agencies | * Inspect the tank farm and assess fitness of infrastructure and equipment. * Evaluate operational performance metrics of tank farm * Review disaster plan, maintenance plan, cleaning of tanks and work schedule * Propose corrective and preventive actions to improve operations * Analyse the requirements and budgetary allocations. * Allocate resources, budgets and maintenance according to approval. * Forecast cargo mix based on historic data and committed business * Devise the compliance requirements as per safety, security and regulatory aspects. * Appraise cleaning, maintenance process and approve * Devise elements for building relationship with shipping companies, freight operators, vessel, port authorities and other agencies |
| **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, etc. | |

## Module 3: Planning and commissioning of tank farm

## *Mapped to LSC/* *N3529, V1.0*

**Terminal Outcomes:**

* Detail the tank farm establishment process
* Describe the stages in tank farm construction, installation and commissioning

|  |  |
| --- | --- |
| Duration: *20:00* | Duration: *60:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Describe the geographical requirements for establishing a tank farm * Detail the technical and layout requirements of a tank farm and its supporting equipment such as piping network, pumping equipment, control and measurement systems etc. * Explain tendering process, evaluation process and contractor selection process * Describe the stages in tank farm construction, installation and commissioning * Explain the coordination and interlinkages required between different vendors and subcontractors * Detail the inspections to be undertaken during the construction/installation of tank farm * Explain the escalation procedure in case of delays * Detail the commissioning tests to be undertaken and the expected operational parameters * Detail the regulatory requirements to be complied with for tank farms * Explain the approval process for commissioning of the tank farm | * Analyse cargo movement trends, and liquid cargo market in the region * Prepare a tank farm business model based on estimated volume, mix of cargo, connectivity, loading/unloading frequency etc * Demonstrate how tendering process, evaluation process and contractor selection process are implemented. * Illustrate the different stages in tank farm construction, installation and commissioning * Coordinate with different vendors and subcontractors for interlinkage requirements. * Inspect the construction/installation of tank farm. * Devise an escalation procedure for reporting delays. * Perform commissioning tests on the operational parameters. * Review the regulatory requirements to be complied for tank farms operations. * Develop and process an approval for commissioning tank farm |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
| ERP, MIS, regulatory norms, tank farm business planning model/software, tank farm infrastructure/equipment specifications, control software specification, MS Office, computer, projector, stationery, worksheets etc. | |

## Module 4: Business development and stakeholder relations

## *Mapped to LSC/* *N9701, V1.0*

**Terminal Outcomes:**

* Detail aspects of business development.
* Describe methods to prepare costing sheets, SLAs.
* Maintaining relationship with clients

|  |  |
| --- | --- |
| Duration: *20:00* | Duration: *60:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * List target population to approach for business development * Assess prospective clients * Discuss client requirements * Plan customised or bundled solutions based on sales pitch * Demonstrate effective oral and written business communication * Detail the procedure for preparing costing sheets for service delivery * Demonstrate usage of ERP for updating client data * Assess when to upsell and cross-sell services to existing clients * Describe the nuances in building rapport with clients, customs, government agencies, insurance for healthy relationship * Discuss the process of writing service level agreements | * Identify target population to approach 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 * Estimate when to upsell and cross-sell services to existing clients * Establish rapport with clients, customs, government agencies, insurance for healthy relationship * Prepare service level agreements * Schedule resources as per operational requirement |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
| Computers, MIS, ERP, business lead software.  Teaching board, computer, projector, video player and TV | |

## Module 5: Key accounts management

## *Mapped to LSC/* *N9703, V1.0*

**Terminal Outcomes:**

* Describe customer engagement and relationship management process
* Describe upselling and cross selling

|  |  |
| --- | --- |
| Duration: *20:00* | Duration: *40:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Describe customer engagement and relationship management process * Detail process of developing customized solutions based on requirements. * Explain the actions to be taken for improving customer engagement with corrective and preventive actions. * Detail different methods to retain customers * Discriminate upselling and cross selling with examples. | * Compute ways of building engagement and relationship with customers * Develop customized solutions for customers * Analyse customer inputs, feedback, and grievances * Perform corrective and preventive actions to improve customer engagement * Illustrate the methods to retain customers with role play. * Discuss when to upsell and cross-sell services to existing clients * Assess prospective clients to understand their requirements |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
| Computers, MIS, ERP, business lead software  Teaching board, computer, projector, video player and TV  MS-Office, ERP, computer, projector, worksheets, stationery, business planning model/software etc. | |

## Module 6: Performance management system

## *Mapped to LSC/N9602, V1.0*

**Terminal Outcomes:**

* Detail the appropriate steps for performance management as per SOP

|  |  |
| --- | --- |
| Duration: *20:00* | Duration:*40:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Define performance measurement metrics for assigned activities * Explain performance review process * Explain root cause analysis for non-performing areas * Discuss the importance of performance improvement plan * Define KPIs as per organisational metrics and expectations * Explain effective ways for resolving employee grievances | * Establish performance measurement metrics for assigned activities * Demonstrate performance review process * Perform root cause analysis for non-performing areas * Develop corrective and preventive actions to avoid recurrence * Design performance improvement plan * Communicate performance improvement plan * Establish the KPIs as per organisational metrics and expectations * Examine employee grievances and undertake corrective actions |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
| SOP, MIS, ERP, worksheets, stationery, computer, projector etc | |

## Module 7: Profit and loss account management and cost accounting

## *Mapped to LSC/* *N4323, V1.0*

**Terminal Outcomes:**

* Demonstrate the process of profit and loss account management and cost accounting

|  |  |
| --- | --- |
| Duration: *20:00* | Duration: *40:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Describe P&L analysis process * Explain budgeting and monitoring process * Explain methods to analyse variance between budget and actual expenditure * Compare budget with actual physical output * Detail the procedure for making budget amendments * List the risk management procedures * Detail the procedure for performing Activity Based Costing (ABC) * Discuss the audit process to identify reasons for deviation from costing   Explain the process to rationalize cost by undertaking improvement activities | * Perform P&L analysis * Perform budgeting and monitoring process * Analyse variance between budget and actual expenditure * Cross check budget with actual physical output * Prepare budget amendments * Demonstrate risk management procedures * Perform Activity Based Costing (ABC) * Perform audit to identify reasons for deviation from costing * Implement improvement activities to rationalize cost |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
| Computers, MIS, ERP, performance review softwares | |

## Module 8: 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, ethics * Detail the various regulatory requirements related to logistics industry * Explain data and information security practices * Detail the procedure for documenting all integrity and ethics violations * Explain escalation matrix for reporting deviation | * Practice the principles of integrity and ethics * Follow the various regulatory requirements related to logistics industry * Perform data and information security practices * Discuss corrupt practices * Discuss regulatory requirements, code of conduct and etiquettes * Identify corrupt practices * Comply to regulatory requirements * Practice code of conduct and etiquettes * 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** | |
| SOP, Teaching board, computer, projector, video player, stationery, worksheets and TV | |

## Module 9: Compliance to 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: *20:00* | Duration: *40:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Detail health, safety and security procedures in warehouse * Describe the 5S to be followed * Explain the inspection procedure to ensure appropriate and safe conditions of activity area and equipment * Discuss unsafe working conditions * Describe the inspection procedure to check safe handling of hazardous goods * Discuss the standard protocol to be followed during emergency situations, accidents and breach pf safety * Document health, safety and security violations * Explain the escalation matrix for reporting deviation | * Follow health, safety and security procedures in warehouse * Implement 5S at workplace * Inspect the activity area and equipment, for appropriate and safe conditions * Identify unsafe working conditions * Inspect adherence to standard operating procedures (SOP) while handling dangerous and hazardous goods * Implement standard protocol in case of emergency situations, accidents, and breach of safety * Prepare report on health, safety and security 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** | |
| PPEs, MHEs like Forklift, reach stacker, pallet truck, barcode scanner, packaging devices, packing material, markers and stationery, etc | |

## Module 10: Employability Skills

***Mapped to LSC/N, 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: *60:00* |
| **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 * 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 | * 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 * 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 | |

**OPTION 1: Port Terminals Management**

***Mapped to LSC/*** ***N3526, v1.0***

**Terminal Outcomes:**

* + Detail planning and operations for terminals
  + Inspecting yard, goods and cargo movement
  + Coordinate with customs, Participating Government Agencies (PGAs) and clients

|  |  |
| --- | --- |
| Duration: *30:00* | Duration: *30:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Detail the liquid cargo movement and port space utilisation process * Describe the cleanliness, safety and security measures to be undertaken in ports * Explain the yard and bay segregation and storage process * Detail the preventive and corrective maintenance process for terminal equipment * Detail hazardous goods management process * Detail disaster management protocol with plans * List the interactions and documentation requirements while dealing with customs officials, PGAs, clients, shippers, freight owners, etc. * Describe engagement process with client, customs, PGAs, shippers, freight owners etc. | * Analyse cargo movement and port space utilisation * Prepare work plans for terminal management * Budget resources and equipment for terminal management * Analyse MIS reports to identify root cause for under-performance * Propose corrective and preventive actions to improve operations * Demonstrate the cleanliness, safety and security measures to be undertaken in ports * Discuss the yard and bay segregation and storage process * Illustrate the maintenance process for terminal equipment with preventive and corrective. * Exhibit handling of hazardous goods and management * Practice disaster management protocol with drill schedules. * Prepare the list of interactions and documentation requirements while dealing with customs officials, PGAs, clients, shippers, freight owners, etc. with engagement process. |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
| ERP, MIS, port operations manual, regulatory requirements manual, hazardous goods handling manual, computer, projector, worksheets, stationery etc. | |

# Annexure

## Trainer Requirements

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Trainer Prerequisites | | | | | | |
| Minimum Educational Qualification | **Specialization** | **Relevant Industry Experience** | | **Training Experience** | | **Remarks** |
| ***Years*** | ***Specialization*** | ***Years*** | ***Specialization*** |  |
| Graduate |  | 2 | Port Operations Coordination, Documentation and Reporting,  Liquid transportation Operations, Engineering/ Maintenance | 1 | Port Operations Coordination, Documentation and Reporting,  Liquid transportation Operations, Engineering/ Maintenance |  |

|  |  |
| --- | --- |
| Trainer Certification | |
| Domain Certification | **Platform Certification** |
| Certified for Job Role: “Tank farm Manager” mapped to QP: “LSC/ Q3513, v2.0”. Minimum accepted score is 80% | Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “MEP/Q2601”. Minimum accepted score is 80% |

## Assessor Requirements

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Assessor Prerequisites | | | | | | |
| Minimum Educational Qualification | **Specialization** | **Relevant Industry Experience** | | **Training/Assessment Experience** | | **Remarks** |
| ***Years*** | ***Specialization*** | ***Years*** | ***Specialization*** |  |
| Graduate | NA | 1 | Port Operations Coordination, Documentation and Reporting,  Liquid transportation Operations, Engineering/ Maintenance | 1 | Port Operations Coordination, Documentation and Reporting,  Liquid transportation Operations, Engineering/ Maintenance |  |

|  |  |
| --- | --- |
| Assessor Certification | |
| Domain Certification | **Platform Certification** |
| Certified for Job Role: “Tank farm Manager” mapped to QP: “LSC/ Q3513, v2.0”. Minimum accepted score is 80% | Recommended that the Assessor is certified for the Job Role: “Assessor”, mapped to the Qualification Pack: “MEP/Q2601”. 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 are 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.

1. **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.
2. **On-Job Training:** OJT would be evaluated based on standard logbook capturing departments worked on, key observations of learner, feedback and remarks of supervisor or mentor.
3. **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:
   1. True / False Statements
   2. Multiple Choice Questions
   3. Matching Type Questions
   4. Fill in the blanks
   5. Scenario based Questions
   6. 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 |