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| **Model Curriculum**  **QP Name: Cargo Equipment Handler ((Electives – Rail Mounted Quay (RMQ) Crane/ Grab Ship Unloader (GSU) Crane/ Rubber Tyre Gantry (RTG) Crane/ Reach Stacker) (Options – Yard and Cargo Handling))****QP Code: LSC/Q3701****QP Version: 2.0** **NSQF Level: 4****Model Curriculum Version: 2.0**  |
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**Training Parameters**

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| --- | --- |
| **Sector**  | Logistics |
| **Sub-Sector** | Port terminals, Container Freight Stations (CFS) and Inland Container Depots (ICD) |
| **Occupation** | Crane/ Material Handling Equipment (MHE) operation |
| **Country** | India |
| **NSQF Level** | 4 |
| **Aligned to NCO/ISCO/ISIC Code** | NCO – 2015 – 8343.05,06,07,12,16 – 8344.01,0201 and ISCO – 08 – 8343, 8344 |
| **Minimum Educational Qualiﬁcation and Experience**  | 11th grade pass or Completed 1st year of 3-year diploma (after 10th) and pursuing regular diploma or 10th grade pass plus 1-year NTC/ NAC or 8th grade pass plus 2-year NTC + 1 Year NAC or 8th pass plus 1-year NTC + 1-Year NAC plus CITS or 10th grade pass and pursuing continuous schooling or 10th Grade Pass + 2 year relevant experience |
| **Pre-Requisite License or Training**  | Trained in operating and maintaining MHE. Should have Light Motor Vehicle (LMV) license for four-wheeler driving.  |
| **Minimum Job Entry Age** | 18 |
| **Last Reviewed On**  | NA |
| **Next Review Date** | NA |
| **NSQC Approval Date** | NA |
| **QP Version**  | 2.0 |
| **Model Curriculum Creation Date** | 02-08-2022 |
| **Model Curriculum Valid Up to Date** | 02-08-2025 |
| **Model Curriculum Version**  | 2.0 |
| **Minimum Duration of the Course** | 450 |
| **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:

* Execute cargo handling operations using Material Handling Equipment (MHE), and associated equipment.
* Perform preventive and first line maintenance of MHE.
* Apply the necessary precautions while handling dangerous and hazardous goods.
* Inspect compliance to dangerous goods handling methods and guide teams.
* 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
* Operate various machinery such as Rail Mounted Quay Crane (RMQC), Grab Ship Unloader (GSU), Rubber Tyre Gantry Crane (RTG), Reach Stacker (RS) to load/unload and move goods
* Analyse cargo ageing and space occupied in yard and plan cargo movement.
* Supervise safe and secure cargo movement and prepare the necessary reports and documentation.

## Compulsory Modules

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NOS and Module Details | TheoryDuration | PracticalDuration | On-the-Job Training Duration (Mandatory) | On-the-Job Training Duration (Recommended) | Total Duration |
| Bridge Module | **20** | **10** |  |  | **30** |
| Module 1: Introduction to Cargo Equipment Handler | 20 | 10 |  |  | 30  |
| **LSC/N3701 – Perform cargo handling**V1.04 | **20** | **60** | **10** |  | **90** |
| Module 2: Cargo handling operations | 20 | 60 | 10 |  | 90 |
| LSC/N3702– Perform preventive and first line maintenance of MHE at portsV1.04 | **20** | **60** | **10** |  | **90** |
| Module 3: First-line preventive maintenance of MHE | 20 | 60 | 10 |  | 90 |
| LSC/N9904 – Maintain integrity and ethics in operationsV1.04 | **20** | **40** |  |  | **60** |
| Module 4: Guidelines on integrity and ethics | 20 | 60 |  |  | 60 |
| LSC/N9905– Follow health, safety and security procedures V1.04 | **10** | **40** | **10** |  | **60** |
| Module 5: Compliance to health, safety and security norms | 10 | 40 | 10 |  | 60 |
| Employability SkillsDGT/VSQ/N0102 | **30** | **30** |  |  | **60** |
| Total Duration | **120** | **240** | **30** |  | **390** |

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## Elective Modules

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

**Elective 1: Rail Mounted Quay (RMQ) Crane**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NOS and Module Details | TheoryDuration | PracticalDuration | On-the-Job Training Duration (Mandatory) | On-the-Job Training Duration (Recommended) | Total Duration |
| **LSC/N3703 – Operate Rail Mounted Quay Crane (RMQC)****V1.0****4** | **30** | **30** |  |  | **60** |
| Module 6: Rail mounted quay crane operations | 30 | 30 |  |  | 60 |
| Total Duration | **30** | **30** |  |  | **60** |

**Elective 2: Grab Ship Unloader (GSU) crane**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NOS and Module Details | TheoryDuration | PracticalDuration | On-the-Job Training Duration (Mandatory) | On-the-Job Training Duration (Recommended) | Total Duration |
| **LSC/N3704 – Operate Grab Ship Unloader (GSU) crane****V1.0****4** | **30** | **30** |  |  | **60** |
| Module 7: Grab ship unloader (GSU) crane operations | 30 | 30 |  |  | 60 |
| Total Duration | **30** | **30** |  |  | **60** |

**Elective 3: Rubber Tyre Gantry (RTG) crane**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NOS and Module Details | TheoryDuration | PracticalDuration | On-the-Job Training Duration (Mandatory) | On-the-Job Training Duration (Recommended) | Total Duration |
| **LSC/N3705 – Operate Rubber Tyre Gantry (RTG) crane****V1.0****4** | **30** | **30** |  |  | **60** |
| Module 8: Rubber tyre gantry crane operations | 30 | 30 |  |  | 60 |
| Total Duration | **30** | **30** |  |  | **60** |

**Elective 4: Reach Stacker**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NOS and Module Details | TheoryDuration | PracticalDuration | On-the-Job Training Duration (Mandatory) | On-the-Job Training Duration (Recommended) | Total Duration |
| **LSC/N3706 – Operate Reach Stacker****V1.0****4** | **30** | **30** |  |  | **60** |
| Module 9: Reach stacker operations | 30 | 30 |  |  | 60 |
| Total Duration | **30** | **30** |  |  | **60** |

Option Modules

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

**Option 1: Yard and cargo Handling**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NOS and Module Details | TheoryDuration | PracticalDuration | On-the-Job Training Duration (Mandatory) | On-the-Job Training Duration (Recommended) | Total Duration |
| **LSC/N3502 – Yard planning and cargo handling****V1.0****4** | **30** | **30** |  |  | **60** |
| Module 10: Yard planning and cargo handling operations | 30 | 30 |  |  | 60 |
| Total Duration | **30** | **30** |  |  | **60** |

**Module Details**

## Module 1: Introduction to Cargo Equipment Handler

***Mapped to Bridge Module***

**Terminal Outcomes:**

* Describe the basic structure and function of supply chain
* Detail the various functions of a cargo equipment handler

|  |  |
| --- | --- |
| Duration: *20:00* | Duration: *10:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Classify the components of supply chain and logistics sector
* Detail the various sub-sectors and the opportunities in them
* Detail activities in CFS and ICD
* Explain job roles in CFS and ICD
* Detail your job role as cargo equipment handler and it’s interface with other job roles
* Discuss the various functions to be performed by a cargo equipment handler
 | * Identify various activities in CFS and ICD
* Identify job roles in CFS and ICD
* Identify the various MHEs and equipment used in CFS/ICD
* Perform the job role of a cargo equipment Handler
 |
| **Classroom Aids** |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser |
| **Tools, Equipment and Other Requirements**  |
|  |

Module 2: Cargo Handling Operations

***Mapped to LSC/N3701, v1.0***

**Terminal Outcomes:**

* Detail the steps involved in cargo handling operations

|  |  |
| --- | --- |
| Duration: *20:00* | Duration: *60:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Describe different types of cargo and the corresponding MHE to load/unload
* Explain cargo movement route plan
* Discuss signaling standards
* List the various checks to performed for ensuring smooth functioning of MHE for loading/unloading
* Select the appropriate PPE to be used for cargo movement
* Explain MHE operation process
* Discuss MHE navigation techniques
* Discuss safe cargo movement and placement techniques
* Recognize maintenance needs of MHE
* Explain the appropriate procedure for preparing post-operative reports on cargo movement, maintenance requirements etc.
 | * Identify the appropriate MHE for different types of cargo
* Prepare cargo movement route plan
* Follow signalling standards
* Inspect preparedness of MHE for loading/unloading
* Use the appropriate PPE for cargo movement
* Operate MHE as per SOP
* Demonstrate MHE navigation techniques
* Demonstrate safe cargo movement and placement techniques
* Identify maintenance requirements of MHE
* Prepare post -operative reports on cargo movement, maintenance requirements etc.
 |
| **Classroom Aids** |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser |
| **Tools, Equipment and Other Requirements**  |
| Ropes, VHF radio, flags, wires, locks, master-links, winches, MHEs, PPEs, SOP |

##

## Module 3: First-line Preventive Maintenance of MHE

***Mapped to LSC/N3702, V1.0***

**Terminal Outcomes:**

* Detail the steps to be followed for first line preventive maintenance of MHE as per SOP

|  |  |
| --- | --- |
| Duration: *20:00* | Duration: *60:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Describe preventive maintenance checklist
* Demonstrate preventive maintenance inspection
* Inspect various controls in MHE
* Recognize irregularities and aberrances while using MHE
* Demonstrate basic repairs and upkeep of MHE like oiling, changing fuse etc.
* Describe repairs which require parts replacement or external technical support
* Describe the appropriate procedure for preparing maintenance reports
 | * Prepare preventive maintenance checklist
* Perform preventive maintenance inspection
* Inspect various controls in MHE
* Interpret irregularities and aberrances while using MHE
* Perform basic repairs and upkeep of MHE like oiling, changing fuse etc.
* Recognize repairs which require parts replacement or external support
* Prepare maintenance reports
 |
| **Classroom Aids** |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser |
| **Tools, Equipment and Other Requirements**  |
| MHEs, PPEs, SOP, tools and tackles, maintenance equipment, consummables used in MHE |

Module 4: 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
* Identify corrupt practices
* Comply to regulatory requirements
* Practice code of conduct and etiquettes
* Document 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
* 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**  |
|  |

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## Module 5: 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: *10:00* | 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, etc., barcode scanner, packing devices, packing material, markers and stationery, etc |

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# Module 6: 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 behaviour 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 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
* Detail the significance of analyzing different types and needs of customers
* Explain the significance of identifying customer needs and responding to them in a professional manner.
* Discuss the significance of maintaining hygiene and dressing appropriately
* Explain the significance of maintaining hygiene and confidence during an interview
* List the steps for searching and registering for apprenticeship opportunities
 | * Practice different environmentally sustainable practices.
* Exhibit 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.
* 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
* Utilize virtual collaboration tools to work effectively
* Devise a sample business plan, for the selected business opportunity
* Create a professional Curriculum Vitae (CV)
* Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
* Perform 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 |

## Module 7 : Rail Mounted Quay Crane Operations

***Mapped to LSC/N3703, v1.0***

**Terminal Outcomes:**

* Detail the steps to be followed for effective Rail Mounted Quay Crane operations

|  |  |
| --- | --- |
| Duration: *30:00* | Duration: *30:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * List all the checks to be performed for readiness of operation of the RMQ crane
* Select the appropriate lifting equipment, slings, ropes, eye bolts, shackles spreaders and others
* Compute Safe Working Load (SWL) and Working Load Limit (WLL) based on cargo
* Detail the safety requirements to be undertaken while operating RMQ crane
* Operate RMQ crane and its component equipment for safe loading/unloading of cargo
* Understand the information on RMQ control screen
* Detail the procedure for checking RMQ crane for defects and malfunctioning
* Discuss the appropriate procedure for preparing reports on cargo movement, maintenance requirements etc.
 | * Perform appropriate checks for readiness of operation of the RMQ crane
* Choose the appropriate lifting equipments, slings, ropes, eyebolts, shackles, spreaders and others
* Calculate Safe Working Load (SWL) and Working Load Limit (WLL) based on cargo
* Follow the safety precautions while operating RMQC
* Operate RMQ crane and its component equipment for safe loading/unloading of cargo
* Interpret the information on RMQ control screen
* Inspect RMQ crane for defects and malfunctioning
* Prepare reports on cargo movement, maintenance requirements etc.
 |
| **Classroom Aids** |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser |
| **Tools, Equipment and Other Requirements**  |
| RMQ Crane, Ropes, VHF radio, flags, wires, locks, master-links, winches, PPEs, SOP |

##

## Module 8: Grab Ship Unloader Quay Crane Operations

***Mapped to LSC/N3704, v1.0***

**Terminal Outcomes:**

* Detail the steps to be followed for effective Grab Ship Unloader Quay Crane operations

|  |  |
| --- | --- |
| Duration: *30:00* | Duration: *30:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * List all checks to be performed to ensure readiness of operation of GSU crane
* Select the appropriate lifting equipment, bucket slings, ropes, eye bolts, shackles, and others based on cargo
* Compute Safe Working Load (SWL) and Working Load Limit (WLL) based on cargo
* Detail the safety requirements to be undertaken while operating GSU crane
* Operate GSU crane and its component equipment for safe loading/unloading of cargo
* Understand the information on GSU control screen
* Detail the procedure for checking RMQ crane for defects and malfunctioning
* Discuss the appropriate procedure for preparing reports on cargo movement, maintenance requirements etc.
 | * Inspect GSU crane for readiness of operation
* Choose the appropriate lifting equipment, bucket slings, ropes, eye bolts, shackles and other based on cargo
* Calculate safe working load (SWL) and working load limit (WLL) based on cargo
* Follow safety precautions while operating GSU crane
* Operate GSU crane and it’s component equipment for safe loading/unloading for cargo
* Interpret the information on GSU control screen
* Inspect GSU crane for defects and malfunctioning
* Prepare reports on cargo movement, maintenance requirements etc.
 |
| **Classroom Aids** |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser |
| **Tools, Equipment and Other Requirements**  |
| GSU Crane, Ropes, VHF radio, flags, wires, locks, master-links, winches, PPEs, SOP |

**Module 9: Rubber Tyre Gantry Quay Crane Operations**

***Mapped to LSC/N3705, V1.0***

**Terminal Outcomes:**

* Detail the steps to be followed for effective Rubber Tyre Gantry Quay operations

|  |  |
| --- | --- |
| Duration: *30:00* | Duration: *30:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * List all checks to be performed to ensure readiness of operation of RTG crane
* Select the appropriate lifting equipment, bucket slings, ropes, eye bolts, shackles, and others based on cargo
* Compute Safe Working Load (SWL) and Working Load Limit (WLL) based on cargo
* Detail the safety requirements to be undertaken while operating RTG crane
* Operate RTG crane and its component equipment for safe loading/unloading of cargo
* Construe the information on RTG control screen
* Detail the procedure for checking RTG crane for defects and malfunctioning
* Discuss the appropriate procedure for preparing reports on cargo movement, maintenance requirements etc.
 | * Inspect RTG crane for readiness of operation
* Choose the appropriate lifting equipment, bucket slings, ropes, eye bolts, shackles and other based on cargo
* Calculate safe working load (SWL) and working load limit (WLL) based on cargo
* Follow safety precautions while operating RTG crane
* Operate RTG crane and it’s component equipment for safe loading/unloading for cargo
* Interpret the information on RTG control screen
* Inspect RTG crane for defects and malfunctioning
* Prepare reports on cargo movement, maintenance requirements etc.
 |
| **Classroom Aids** |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser |
| **Tools, Equipment and Other Requirements**  |
| RTG Crane, Ropes, VHF radio, flags, wires, locks, master-links, winches, PPEs, SOP |

**Module 10: Reach Stacker Operations**

***Mapped to LSC/N3706, V1.0***

**Terminal Outcomes:**

* Detail the steps to be followed for effective Reach Stacker (RS) operations

|  |  |
| --- | --- |
| Duration: *30:00* | Duration: *30:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * List all checks to be performed to ensure readiness of operation of reach Stacker
* Select the appropriate lifting equipment, bucket slings, ropes, eye bolts, shackles, and others based on cargo
* Compute Safe Working Load (SWL) and Working Load Limit (WLL) based on cargo
* Detail the safety requirements to be undertaken while operating Reach Stacker
* Operate Reach Stacker and its component equipment for safe loading/unloading of cargo
* Understand the information on Reach Stacker control screen
* Detail the procedure for checking Reach Stacker for defects and malfunctioning
* Discuss the appropriate procedure for preparing reports on cargo movement, maintenance requirements etc.
 | * Inspect Reach Stacker for readiness of operation
* Choose the appropriate lifting equipment, bucket slings, ropes, eye bolts, shackles and other based on cargo
* Calculate safe working load (SWL) and working load limit (WLL) based on cargo
* Follow safety precautions while operating Reach Stacker
* Operate Reach Stacker and it’s component equipment for safe loading/unloading for cargo
* Interpret the information on Reach Stacker control screen
* Inspect Reach Stacker crane for defects and malfunctioning
* Prepare reports on cargo movement, maintenance requirements etc.
 |
| **Classroom Aids** |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser |
| **Tools, Equipment and Other Requirements**  |
| Reach stacker, Ropes, VHF radio, flags, wires, locks, master-links, winches, PPEs, SOP |

**Module 11: Yard Planning and Cargo Handling Operations**

***Mapped to LSC/N3502, V1.0***

**Terminal Outcomes:**

* Detail the steps to be followed for effective cargo handling and yard planning

|  |  |
| --- | --- |
| Duration: *30:00* | Duration: *30:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Explain the process of analyzing usage of yard space
* Compute storage space based on container category
* Explain ageing analysis of containers in yard
* Devise cargo movement plan
* List the operational metrics to be measured for cargo movement activities
* Document cargo movement transactions, metrics, damages, plan vs performance, accidents, ageing etc.
* Demonstrate usage of IT tools for documentation
 | * Analyse yard space usage
* Allocate storage space based on container category
* Perform ageing analysis of containers in yard
* Develop cargo movement plan
* Measure operational metrics for cargo movement activities
* Record cargo movement transactions
* Report cargo movement metrics, damages, plan vs performance, accidents, ageing etc.
* Use IT tools for documentation
 |
| **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, budgeting and forecasting softwares  |

#

# Annexure

## Trainer Requirements

|  |
| --- |
| Trainer Prerequisites |
| Minimum Educational Qualification | **Specialization** | **Relevant Industry Experience**  | **Training Experience** | **Remarks**  |
| ***Years*** | ***Specialization*** | ***Years*** | ***Specialization*** |  |
| 12th Pass |  | 4 | CFS, ICD | 1 | CFS, ICD |  |

|  |
| --- |
| Trainer Certification |
| Domain Certification | **Platform Certification** |
| Certified for Job Role: “Cargo Equipment Handler” mapped to QP: “LSC/Q3701, 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*** |  |
| 12th Pass |  | 2 | CFS, ICD | 1 | CFS, ICD |  |

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| Assessor Certification |
| Domain Certification | **Platform Certification** |
| Certified for Job Role: “Cargo Equipment Handler ” mapped to QP: “LSC/Q3701, 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 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.

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 log book 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

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

## Acronyms and Abbreviations

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