Model Curriculum

Qualification Name: Lifting & Rigging Supervisor (Safety)

Qualification Code: SSD/Q0303

Qualification Version: 1.0

NSQF Level: 4.5

Model Curriculum Version: 1.0

Safety Skill Development Foundation
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Training Parameters

Sectors	Construction, Infrastructure, Real Estate & others.
Sub-Sector	-
Occupation	Lifting & Rigging Engineering & Management
Country	India
NSQF Level	4.5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7215.0100
Minimum Educational Qualification and Experience	Completed 12th or equivalent with 1.5 years of relevant experience or Completed 3-year diploma after 10th with 1.5 years of relevant experience or Previous NSQF level 4 with 1.5 years of relevant experience
Pre-Requisite License or Training	Nil
Minimum Job Entry Age	18 years
Last Reviewed On	22-10-2024
Next Review Date	22-10-2027
Version	1.0
NSQC Approval Date	22-10-2024
Model Curriculum Creation Date	22-10-2024
Model Curriculum Valid Up to Date	22-10-2027
Model Curriculum Version	1.0
Minimum Duration of the Course	540 Hours
Maximum Duration of the Course	540 Hours

Program Overview

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

Training Outcomes

After completing the program, the participant will be able to:-

- Understand and apply company safety policies, procedures, and emergency protocols, complying with national and international standards (e.g., ISO 45001, OSHA, LOLER).
- Plan safe lifting operations considering load characteristics and site conditions.
- Conduct thorough risk assessments for lifting operations.
- Recognize roles and responsibilities of personnel involved in lifting operations.
- Ensure effective teamwork and communication during pre-operation safety briefings.
- Identify common hazards associated with lifting operations and implement strategies to mitigate risks and ensure safe practices.
- Inspect and maintain lifting equipment according to manufacturer guidelines and industry standards.
- Document and report incidents (including near misses), conduct root-cause analysis to identify corrective actions and prevent recurrence.
- Formulate site-specific emergency response plans and communicate emergency protocols.
- Conduct regular safety drills to enhance preparedness.
- Identify and mitigate health hazards, applying safe lifting techniques and complying with industry standards and regulations.

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP

NOS and Module details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
SSD/N0319 v 1.0: Introduction to Lifting & Rigging Safety Protocols	30:00 Hours	20:00 Hours	10:00Hours	00:00Hours	60:00 Hours
Module 1: Introduction to Training Program,	04:00 Hours	00:00 Hours	00:00Hours	00:00Hours	04:00 Hours

Overview, assessments, role of Lifting & Rigging Supervisor (Safety), employment opportunities in Industries.					
Module 2: Hazard Identification and Safety Compliance Skills for Lifting and Rigging Operations.	26:00 Hours	20:00 Hours	10:00Hours	00:00Hours	56:00 Hours
SSD/N0320 v 1.0 : Safety, Legal and Regulatory Compliance for Lifting & Rigging Operations.	45:00 Hours	35:00 Hours	10:00Hours	00:00Hours	90:00 Hours
Module 3: Guidelines and Standards for Safe Practices, Legal Compliance, and Regulatory Frameworks in Heavy Lifting and Rigging Operations.	45:00 Hours	35:00 Hours	10:00Hours	00:00Hours	90:00 Hours
SSD/N0321 v 1.0 : Load Planning, Stability Control & Process requirements.	45:00 Hours	30:00 Hours	15:00 Hours	00:00 Hours	90:00 Hours

Module 4: Effective Load Planning, Stability Control & Process Requirements for Lifting Operations.	45:00 Hours	30:00 Hours	15:00Hours	00:00Hours	90:00 Hours
SSD/N0322 v 1.0 : Hazard Identification, Risk Assessment, Safety of Plant & Machinery in Lifting & Rigging Operations.	30:00 Hours	15:00 Hours	15:00 Hours	00:00 Hours	60:00 Hours
Module 5: Standards for Safety and Risk Management in Lifting and Rigging Operations.	30:00 Hours	15:00 Hours	15:00 Hours	00:00 Hours	60:00 Hours
SSD/N0323 v 1.0 : Lifting and Rigging Operations with Safety.	30:00 Hours	10:00 Hours	20:00 Hours	00:00 Hours	60:00 Hours
Module 6: Lifting and Rigging Operations with Safety.	30:00 Hours	10:00 Hours	20:00 Hours	00:00 Hours	60:00 Hours
SSD/N0324 v 1.0 : Inspection, Maintenance, and Certification of	15:00 Hours	5:00 Hours	10:00 Hours	00:00 Hours	30:00 Hours

Lifting Equipments.					
Module 7: Inspections, Maintenance, and Compliance for Lifting Operations.	15:00 Hours	5:00 Hours	10:00 Hours	00:00 Hours	30:00 Hours
SSD/N0325 v 1.0 : Plan, Organise, Communication & Emergency Protocols in Lifting & Rigging.	30:00 Hours	20:00 Hours	10:00 Hours	00:00 Hours	60:00 Hours
Module 8: Emergency Preparedness and Compliance in Lifting Operations.	30:00 Hours	20:00 Hours	10:00 Hours	00:00 Hours	60:00 Hours
SSD/N0326 v 1.0 : Health, Hygiene, Environmental, and Psychological Health Protocols (Lifting & Rigging).	15:00 Hours	15:00 Hours	00:00 Hours	00:00 Hours	30:00 Hours
Module 9: Framework for safeguarding the well-being of personnel involved in lifting and rigging operations.	15:00 Hours	15:00 Hours	00:00 Hours	00:00 Hours	30:00 Hours

DGT/VSQ/N0102: Employability Skills	30:00 Hours	30:00 Hours	00:00 Hours	00:00 Hours	60:00 Hours
Module 10: Understand scope in employment, financial dealing, digital literacy and communication with employer or customer.	30:00 Hours	30:00 Hours	00:00 Hours	00:00 Hours	60:00 Hours
Total Duration	270:00 Hours	180:00 Hours	90:00 Hours	00:00 Hours	540:00 Hours

Module Details

Module 1: Introduction to Training Program, Overview, assessments, role of Lifting & Rigging Supervisor (Safety), employment opportunities in Industries.

Mapped to SSD/N0319, v1.0

Terminal Outcomes:

- Discuss role of Lifting & Rigging Supervisor (Safety) role, sectors & industries.
- Employment opportunities, career development & International opportunities.
- Course approach, duration, training & assessment processes.

Duration: 04:00	Duration: 00:00
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• Role & responsibilities of Lifting & Rigging Supervisor (Safety). • Career progression in the occupation. • Employment & international opportunities. • Training approach & methodology. • Assessment process & Certification. • The assistance provided by AB/TP/LMIS in employment.	
Classroom Aids:	
Black/White Board, Computer, Projection Equipment, Power Point Presentation and software, Facilitator's Guide, Participant's Handbook.	

Tools, Equipment and Other Requirements
Nil

Module 2: Hazard Identification and Safety Compliance Skills for Lifting and Rigging Operations.

Mapped to SSD/N0319, v 1.0

Terminal Outcomes:

- Demonstrate knowledge of safety principles, practices, and regulations in lifting and rigging.
- Identify worksite hazards and risks, and develop mitigation strategies.
- Apply national and international safety standards (e.g., ISO 45001, OSHA, LOLER).
- Select, use, and maintain correct PPE to prevent injuries.
- Implement effective teamwork and communication strategies for safe lifting operations.

Duration: 26 Hours	Duration: 20 Hours
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• Recognition of potential hazards related to lifting and rigging operations at worksites. • Assessment of safety risks related to lifting and rigging operations and reporting procedures. • Environmental factors that may increase risks (e.g., high winds or uneven surfaces). • Lifting plans and safety procedures. • Briefing on safety protocols before starting operations. • Monitoring & compliances with safety regulations during operation. • Selection and use of appropriate PPE in lifting & rigging operations. • Procedure & processes of correct use PPE by all team members before the start of operation. • Maintenance of PPE equipment in good working condition. • National and international safety laws applicable in the lifting & rigging process. (e.g., ISO 45001, OSHA). • Organizational health and safety policies, formulation & review.	• Identify potential hazards in lifting and rigging operations. • Evaluate safety risks and effectively report findings to management. • Recognize environmental factors (like high winds or uneven surfaces) that can increase operational risks. • Interpret and apply lifting plans and safety protocols. • Conduct safety briefings before operations commence. • Monitor and ensure team adherence to safety regulations during operations. • Inspect, select, and properly use PPE for specific lifting tasks. • Demonstrate correct PPE usage to teams. • Maintain and inspect PPE equipment. • Identify and follow national and international safety laws (e.g., ISO 45001, OSHA). • Comply with organizational health and safety policies. • Document and report any incidents of non-compliance to supervisors for corrective measures.

• Documentation and reporting processes of deviations or non-compliance and corrective actions.	
Classroom Aids:	
Black/White Board, Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Slings, Shackles, Hooks, Eyebolts, Turnbuckles, Blocks and Pulleys, Cranes and Rigging Equipment, Hoist, Lifting Beams and Spreaders, Load Binders, Load Cells and Dynamometers:, Personal Protective Equipment (PPE), Inspection Tools, Fall arrest systems, Safety nets, Load Monitoring Systems:, Mock Loads, Training towers, Repair Kits for Slings and Rigging Equipment, Toolboxes with Basic Tools.	

Module 3: Guidelines and Standards for Safe Practices, Legal Compliance, and Regulatory Frameworks in Heavy Lifting and Rigging Operations.

Mapped to SSD/N0320, v 1.0

Terminal Outcomes:

- Understand national and international legal frameworks for lifting operations.
- Ensure compliance with safety regulations, including OSHA, ISO standards, and LOLER.
- Monitor adherence to organizational safety policies and procedures.
- Effectively report incidents and non-compliance, implementing corrective actions.
- Prepare for and manage regulatory audits and inspections with a focus on compliance.

Duration: 45 Hours	Duration: 35 Hours
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• Recognition of relevant national and international regulations (e.g., OSHA, LOLER, ISO 45001) for lifting operations. • Alignment of lifting operations with applicable legal standards. • Monitoring compliance with statutory requirements in lifting operations • Compliance of operational procedures with organizational safety policies. • Identification of non - compliance issues through audits. • Alignment of policies and procedures with regulatory changes. • Documentation of incidents and violations of legal standards for accountability.	• Conduct a thorough review of national and international regulations for lifting operations. (e.g., OSHA, LOLER, ISO 45001). • Evaluate lifting operations for compliance with legal standards and organizational safety policies. • Monitor team performance to ensure adherence to statutory requirements during operations. • Perform regular audits to identify and document non-compliance issues, recommending corrective actions. • Update policies and procedures based on regulatory changes and audit findings. • Accurately document incidents or violations and report them to relevant authorities and management.

• Reporting of non-compliance to relevant authorities and management. • Measures to prevent the recurrence of violations. • Maintenance of accurate records for inspections, certifications, and incident reports. • Coordination with auditors and inspectors during audits. • Interpretation of audit findings and prompt corrective actions.	• Implement corrective actions to prevent future compliance violations. • Maintain organized records of inspections, certifications, and incident reports for audits. • Coordinate with auditors and inspectors to ensure effective communication and compliance. • Respond promptly to audit findings by implementing corrective measures.
Classroom Aids:	
Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Slings, Shackles, Hooks, Eyebolts, Turnbuckles, Blocks and Pulleys, Cranes and Rigging Equipment, Hoist, Lifting Beams and Spreaders, Load Binders, Load Cells and Dynamometers:, Personal Protective Equipment (PPE), Inspection Tools, Fall arrest systems, Safety nets, Load Monitoring Systems:, Mock Loads, Training towers, Repair Kits for Slings and Rigging Equipment, Toolboxes with Basic Tools.	

Module 4: Effective Load Planning, Stability Control & Process Requirements for Lifting Operations

Mapped to SSD/N0321, v 1.0

Terminal Outcomes:

- Effectively plan and balance loads for safe lifting operations.
- Calculate load weights, sling angles, and monitor stability.
- Identify and evaluate overload and operational risks.
- Choose appropriate lifting equipment based on load characteristics.
- Develop plans considering load, site conditions, and project timelines.
- Apply techniques to calculate and manage load capacity.
- Recognize environmental factors affecting operations.
- Ensure adherence to safety protocols and regulations.

Duration: 45 Hours	Duration: 30 Hours
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• Assessment of load characteristics for effective plan lifting operations. • Determination of center of gravity for proper load distribution and stability during lifting.	• Assess weight, size, shape, and center of gravity for effective planning. • Choose and verify lifting equipment based on load characteristics and safety standards.

• Selection of appropriate lifting equipment based on the load's characteristics. • Calculation of load weight to ensure it is within the capacity of the chosen lifting equipment. • Correct Sling Angles for Safe Lifting Practices. • Utilization of load charts and formulas for accurate weight and capacity calculations. • Monitoring of load stability during lifting operations to prevent accidents. • Adjustment of equipment setup in response to load instability. • Load capacity limitations for lifting equipment. • Monitoring of load indicators to prevent overload conditions and ensure safety. • Selection of appropriate lifting tools and equipment based on load type and weight. • Compliance with Lifting Equipment with Safety and Operational Standards • Certification, maintenance, and readiness of equipment for use prior to operations. • Development of lifting plans by assessing load characteristics and operational requirements. • Calculation of load limits and equipment capacity to ensure safe lifting operations. • Assessment of environmental factors and site-specific hazards impacting lifting operations. • Compliance with relevant national and international standards (e.g., LOLER, OSHA, ISO 45001). • Organizational policies and guidelines to promote safe lifting operations. • Documentation and reporting process of lifting plans and any deviations from safety standards for corrective action.	• Calculate load weight and determine correct sling angles accurately. • Monitor and adjust load stability to prevent accidents during operations. • Ensure loads do not exceed equipment capacity and check load indicators for overload. • Create lifting plans that account for operational requirements and environmental factors. • Identify site-specific hazards and adapt lifting plans as needed. • Adhere to safety standards and organizational policies during operations. Are these points good as practical key learning Outcomes. • Document lifting plans and report deviations or incidents to supervisors.
Classroom Aids:	
Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Slings, Shackles, Hooks, Eyebolts, Turnbuckles, Blocks and Pulleys, Cranes and Rigging Equipment, Hoist, Lifting Beams and Spreaders, Load Binders, Load Cells and Dynamometers:, Personal Protective	

Equipment (PPE), Inspection Tools, Fall arrest systems, Safety nets, Load Monitoring Systems:, Mock Loads, Training towers, Repair Kits for Slings and Rigging Equipment, Toolboxes with Basic Tools.

Module 5: Standards for Safety and Risk Management in Lifting and Rigging Operations.

Mapped to SSD/N0322, v 1.0

Terminal Outcomes:

- Identify potential hazards in lifting and rigging operations.
- Assess potential risks and determine their impact.
- Ensure safety and reliability of plant and machinery.
- Understand and apply relevant legal and regulatory standards.
- Develop and implement effective control measures to mitigate risks.
- Promote and maintain safety standards at the worksite.
- Document incidents and conduct investigations.
- Utilize technological tools to enhance safety and efficiency.

Duration: 30 Hours	**Duration: 15 Hours**
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• Recognition of physical, environmental, and operational hazards during lifting operations. • Assessment of equipment-related hazards, such as wear and tear or faulty machinery. • Risk assessments for evaluating the likelihood and impact of potential hazards. • Preventive measures to mitigate identified risks. • Documentation of incidents, near-misses, and safety violations promptly. • Reporting procedures for incidents to management and relevant authorities as per company policies. • Application of root cause analysis to identify the underlying reasons for incidents. • Maintenance detailed records of hazards, risk assessments, and incident reports. • Assessment of machinery and vehicle conditions for compliance with safety standards. • Functionality of operational components (e.g., brakes, steering, safety devices).	• Recognize physical, environmental, and operational hazards in lifting operations. • Evaluate equipment-related hazards and assess the likelihood and impact of potential risks. • Implement effective preventive measures to address identified hazards. • Promptly document incidents, near-misses, and safety violations in accordance with company policies. • Conduct thorough root-cause analyses to understand the reasons behind incidents. • Perform pre-operation inspections to ensure machinery and vehicles meet safety standards. • Adhere to standard operating procedures while using machinery and vehicles to maintain safety. • Identify and implement corrective actions for potential hazards during operations. • Ensure adherence to national and international safety standards and organizational policies.

• Documentation of any maintenance or repairs needed and communication to relevant personnel. • Standard operating procedures to be followed while using machinery and vehicles. • Operation of equipment within the specified limits to avoid overloading or malfunctions. • Monitoring of site conditions and adjustment in operations to ensure safety and efficiency. • Potential hazards related to machinery and vehicle operations (e.g., blind spots, unstable loads). • Corrective actions to mitigate identified hazards. • Reporting procedure for hazards or near-miss incidents to supervisors for further action. • National and international safety standards (e.g., OSHA, ISO) during operations. • Compliance with traffic management protocols and safety signage on-site. • Coordination with site personnel to prevent accidents and maintain smooth operations.	• Coordinate effectively with site personnel to ensure compliance with traffic management protocols and maintain safe operations.
Classroom Aids:	
Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Slings, Shackles, Hooks, Eyebolts, Turnbuckles, Blocks and Pulleys, Cranes and Rigging Equipment, Hoist, Lifting Beams and Spreaders, Load Binders, Load Cells and Dynamometers:, Personal Protective Equipment (PPE), Inspection Tools, Fall arrest systems, Safety nets, Load Monitoring Systems:, Mock Loads, Training towers, Repair Kits for Slings and Rigging Equipment, Toolboxes with Basic Tools.	

Module 6: Lifting and Rigging Operations with Safety

Mapped to SSD/N0323, v 1.0

Terminal Outcomes:

- Health hazards identification for workers at workplaces.
- Measures to ensure health, hygiene, & cleanliness at work site.
- Psychological health of workers & working environment

Duration: 30 Hours	Duration: 10 Hours
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**

• Lifting plans and procedures. • Readiness and functionality of all lifting equipment. • Securing load balance before beginning operations. • Operation of lifting devices within designated limits. • Monitoring load stability during operations to prevent hazards. • Use of hand signals and communication tools for team coordination. • Recognition and address hazards like load imbalance or environmental risks. • Immediate corrective actions when hazards are identified. • Reporting procedure for incidents or near-misses promptly to supervisors. • Compliance with safety standards and protocols. • Correct use of PPE during the operation. • Post-operation inspections and reporting procedure any equipment issues.	• Verify and execute lifting plans and operational procedures. • Inspect and prepare lifting equipment for operation. • Secure and balance loads before lifting. • Operate lifting devices within specified limits. • Monitor load stability and prevent hazards. • Coordinate team activities using hand signals and communication tools. • Identify operational hazards (e.g., load imbalance, environmental risks). • Implement corrective actions to mitigate identified hazards. • Report incidents or near-misses to supervisors. • Ensure team compliance with safety standards and protocols. • Use Personal Protective Equipment (PPE) correctly. • Conduct post-operation inspections and report equipment issues.
Classroom Aids:	
Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Slings, Shackles, Hooks, Eyebolts, Turnbuckles, Blocks and Pulleys, Cranes and Rigging Equipment, Hoist, Lifting Beams and Spreaders, Load Binders, Load Cells and Dynamometers:, Personal Protective Equipment (PPE), Inspection Tools, Fall arrest systems, Safety nets, Load Monitoring Systems:, Mock Loads, Training towers, Repair Kits for Slings and Rigging Equipment, Toolboxes with Basic Tools.	

Module 7: Inspections, Maintenance, and Compliance for Lifting Operations.

Mapped to SSD/N0324, v 1.0

Terminal Outcomes:

- Understand types of inspections and procedures for lifting equipment to ensure safety and compliance.
- Learn preventive and corrective maintenance strategies to enhance the reliability of lifting equipment.
- Comprehend the importance of certification and re-certification processes for lifting equipment.
- Gain insights into risk assessments and emergency procedures to manage safety effectively.
- Explore technology integration, including digital systems for inspection and non-destructive testing (NDT) techniques.
- Understand the importance of incident investigation, audits, and reviews for continuous improvement in safety practices.

Duration: 15 Hours	**Duration: 5 Hours**
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• Pre-use inspections of equipment, including slings, chains, hooks, and cranes. • Identification of defects, wear and tear, or other signs of equipment malfunction. • Documentation of inspection findings and informing relevant personnel of any issues. • Carrying out scheduled maintenance according to manufacturer's guidelines. • Minor repairs and adjustments for equipment safety. • Coordination with specialized technicians for major repairs. • Certification and compliance of equipment with national and international standards. (e.g., LOLER, OSHA). • Maintenance of records of equipment certifications and inspection reports. • Reporting procedure of non-compliance issues to management for corrective action. • Maintenance of detailed records of all inspections, repairs, and maintenance activities. • Maintenance of up-to-date records for audits and certifications • Preparation of equipment status reports and recommendations for management.	• Conduct pre-use inspections of lifting equipment, including slings, chains, hooks, and cranes, to ensure they are safe for operation. • Identify and document defects, wear and tear, or other signs of equipment malfunction during inspections to prevent accidents. • Effectively communicate inspection findings to relevant personnel, ensuring prompt action is taken on identified issues. • Carry out scheduled maintenance tasks on lifting equipment according to manufacturer guidelines to maintain operational efficiency. • Perform minor repairs and adjustments on lifting equipment to ensure safety and functionality. • Coordinate with specialized technicians for major repairs, ensuring proper procedures are followed for complex maintenance needs. • Verify that all lifting equipment is certified and complies with national and international standards, such as LOLER and OSHA. • Maintain accurate and organized records of equipment certifications and inspection reports for accountability and traceability.

	• Report any non-compliance issues regarding equipment to management, facilitating timely corrective actions. • Maintain detailed and up-to-date records of all inspections, repairs, and maintenance activities for transparency and compliance. • Ensure that inspection and maintenance records are easily accessible for audits and certifications, streamlining the review process. • Prepare and present comprehensive reports on equipment status to management, providing recommendations for necessary actions or improvements.
Classroom Aids:	
Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Slings, Shackles, Hooks, Eyebolts, Turnbuckles, Blocks and Pulleys, Cranes and Rigging Equipment, Hoist, Lifting Beams and Spreaders, Load Binders, Load Cells and Dynamometers:, Personal Protective Equipment (PPE), Inspection Tools, Fall arrest systems, Safety nets, Load Monitoring Systems:, Mock Loads, Training towers, Repair Kits for Slings and Rigging Equipment, Toolboxes with Basic Tools.	

Module 8: Emergency Preparedness and Compliance in Lifting Operations.

Mapped to SSD/N0325, v 1.0

Terminal Outcomes:

- Assess requirements, perform risk assessments, and prepare method statements and equipment inspections.
- Define roles and responsibilities, allocate resources, and manage operational logistics effectively.
- Implement communication protocols, conduct pre-lift briefings, and ensure accurate documentation and reporting.
- Develop emergency response plans, conduct training and drills, and implement incident reporting and investigation processes.
- Adhere to all relevant laws and regulations governing lifting operations.

Duration: 30 Hours	Duration: 20 Hours
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• Identification of potential emergencies in lifting and rigging (e.g., equipment failure, load instability).	• Identify potential emergencies in real-world lifting and rigging operations effectively.

• Development of site-specific emergency response plans for various scenarios. • Awareness of emergency protocol to team. • Knowledge of risk assessments to identify vulnerabilities in lifting operations. • Organization of safety drills for emergency preparedness. • Evaluation of outcomes of drills and suggestion of updates in emergency plans accordingly. • Communication with emergency services (e.g., fire brigade, medical personnel). • Coordination with site personnel for managing evacuations and other emergency responses. • Correct placement and state of emergency equipment (e.g., fire extinguishers, first aid kits) to ensure accessibility and functionality. • Maintenance of records of emergency drills and response evaluations. • Documentation of any incidents or accidents and reporting procedure. • Using root-cause analysis to identify corrective actions for preventing future occurrences of incidents or accidents. • Delivery of training sessions on emergency protocols and equipment handling. • Specific roles of workers during an emergency. • Principles of teamwork and coordination required to handle emergencies efficiently.	• Develop and implement site-specific emergency response plans based on assessed risks. • Conduct briefings to ensure all team members are familiar with emergency protocols and their roles. • Perform regular risk assessments to identify vulnerabilities in lifting operations actively. • Organize and execute safety drills, evaluating team preparedness during emergency scenarios. • Establish and maintain clear communication with emergency services during drills and actual emergencies. • Coordinate with site personnel to manage evacuations and other emergency responses effectively. • Check and maintain emergency equipment to ensure it is accessible and functional before operations. • Maintain thorough records of emergency drills, incident reports, and evaluations for compliance and review. • Conduct hands-on training sessions on emergency protocols and equipment handling for team members. • Ensure that workers practice their specific roles during emergency drills and understand their responsibilities. • Participate in teamwork exercises to enhance coordination and efficiency during emergency responses.
Classroom Aids:	
Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Slings, Shackles, Hooks, Eyebolts, Turnbuckles, Blocks and Pulleys, Cranes and Rigging Equipment, Hoist, Lifting Beams and Spreaders, Load Binders, Load Cells and Dynamometers:, Personal Protective Equipment (PPE), Inspection Tools, Fall arrest systems, Safety nets, Load Monitoring Systems:, Mock Loads, Training towers, Repair Kits for Slings and Rigging Equipment, Toolboxes with Basic Tools.	

Module 9: Framework for safeguarding the well-being of personnel involved in lifting and rigging operations.

Mapped to DGT/VSQ/N0326, v1.0

Terminal Outcomes:

- Promote personal hygiene and workplace cleanliness.
- Ensure environmental safety and minimize operational impact.
- Support personnel's psychological health and well-being.
- Address ergonomic risks to enhance safe work practices.
- Comply with occupational health, safety, and environmental standards.

Duration: *15 Hours*	**Duration: *15 Hours***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Correct body mechanics (e.g., lift with legs) to prevent musculoskeletal injuries. • Ergonomic design of workstations and equipment to minimize strain. • Use of PPE such as gloves, masks, and protective clothing to prevent exposure to hazardous substances. • Personal hygiene, especially when handling chemicals or hazardous materials. • Use of energy-efficient lifting equipment to reduce carbon emissions. • Storing and handling hazardous materials safely to prevent spills and leaks. • Job Safety Analysis (JSA) or risk assessment before each lifting operation. • Training and certification requirements for workers in lifting, rigging, and safety procedures. • Emergency response protocols, including evacuation plans and first aid access.	• Practice using correct body mechanics to lift safely and prevent injuries. • Apply ergonomic principles to set up workstations and select equipment that minimize strain on workers. • Demonstrate the proper use of PPE and ensure compliance with hygiene protocols in the workplace. • Practice maintaining personal hygiene standards when handling hazardous materials or chemicals. • Identify and utilize energy-efficient lifting equipment in operational practices. • Demonstrate safe procedures for storing and handling chemicals, ensuring proper containment and spill prevention measures. • Perform a Job Safety Analysis (JSA) for lifting operations, identifying hazards and implementing mitigation strategies. • Engage in hands-on training for lifting and rigging techniques, safety procedures, and emergency response. • Execute emergency response protocols, including conducting drills for evacuation and using first aid kits and spill control equipment effectively.
Classroom Aids:	
Black/White Board, Computer, Projection Equipment, PowerPoint Presentation and software,	

Facilitator's Guide, Participant's Handbook.
Tools, Equipment and Other Requirements
Slings, Shackles, Hooks, Eyebolts, Turnbuckles, Blocks and Pulleys, Cranes and Rigging Equipment, Hoist, Lifting Beams and Spreaders, Load Binders, Load Cells and Dynamometers:, Personal Protective Equipment (PPE), Inspection Tools, Fall arrest systems, Safety nets, Load Monitoring Systems:, Mock Loads, Training towers, Repair Kits for Slings and Rigging Equipment, Toolboxes with Basic Tools.

Module 10: Understand scope in employment, financial dealing, digital literacy and communication with employer or customer.

Mapped to DGT/VSQ/N0102, v1.0

Terminal Outcomes:

- Describe the traits of an individual at the workplace.
- Demonstrate apply employability and entrepreneurship skills at workplace.

Duration: *30:00*	**Duration: *30:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the importance of Employability Skills in meeting the job requirements. • Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen. • Discuss 21st century skills. • Display positive attitude, self -motivation, problem solving, time management skills and continuous learning mindset in different situations. • Discuss the significance of reporting sexual harassment issues in time. • Discuss the significance of using financial products and services safely and securely. • Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws. • Explain the importance of managing expenses, income, and savings. • Discuss the significance of using the internet for browsing and accessing social	• Show how to practice different environmentally sustainable practices. • Use appropriate basic English sentences/phrases while speaking. • Demonstrate how to communicate in a well -mannered way with others. • Demonstrate working with others in a team. • Show how to conduct oneself appropriately with all genders and PW. • Show how to operate digital devices and use the associated applications and features, safely and securely. • Create biodata. • Use various sources to search and apply for jobs.

media platforms, safely and securely. • Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges. • Differentiate between types of customers. • Explain the significance of identifying customer needs and addressing them. • Discuss the significance of maintaining hygiene and dressing appropriately. • Discuss the significance of dressing up neatly and maintaining hygiene for an interview. • Discuss how to search and register for apprenticeship opportunities.	
Classroom Aids:	
Black/White Board, Computer, Projection Equipment, Power Point Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Laptop/computer, internet, mobile	

On the Job Training Plan: Lifting & Rigging Supervisor (Safety)

SSD/N0319 - Introduction to Lifting & Rigging and Safety Protocols : 10 Hours
Key Learning Outcomes
• Identify and document potential hazards related to lifting and rigging operations. • Assess safety risks and environmental factors that may impact safety for lifting operation and prepare a report. • Review the lifting plan & bring out missing safety procedures. • Conduct a safety briefing before the lifting operation • Observe the team during the operation, providing feedback on their compliance with safety regulations. • Identify & use PPE for the lifting operation to ensure proper use by team members before starting. • Ensure relevant safety regulations are followed • Document any observed non-compliance incidents along with potential corrective actions.
SSD/N0320 - Safety, Legal and Regulatory Compliance for Lifting & Rigging Operations : 10 Hours
Key Learning Outcomes
• Identify and ensure regulations for lifting operations (e.g., OSHA, LOLER, ISO 45001) are complied with. • Brief team members about national & international statutory requirements in the lifting and rigging operation. • Observe operational procedures in the light of the company's safety policies and identify discrepancies. • Participate in a scheduled audit of lifting and rigging operations, document non-compliance findings and recommend corrective actions. • Engage in reporting of a non-compliance incident and the steps to escalation process. • Study records of inspections, certifications, and incident reports for audit purposes and bring your observations.
SSD/N0321 - Load Planning, Stability Control & Process requirements : 15 Hours
Key Learning Outcomes
• Study load characteristics (e.g.: weight, size, shape, and center of gravity), select appropriate equipment and plan the lifting operation. • Calculate the load's weight and confirm it is within the equipment's capacity. • Calculate load limits and equipment capacity to ensure safe operation, and develop lifting plans based on operational requirements and timelines. • Select suitable lifting tools and equipment based on the load type and weight, ensures they meet safety and operational standards.

- Determine the correct sling angles for safe lifting and prepare load charts and formulas for accurate calculations.
- Monitor stability of load, check load indicators and ensure it does not exceed the capacity, and remains stable.
- Check all equipment, including cranes, slings, ropes, and pulleys, that they are certified, well-maintained, and ready to use.
- Assess and identify site-specific environmental factors and hazards to adjust the lifting plan accordingly.
- Ensure compliance of standards and organizational policies.

SSD/N0322 - Hazard Identification, Risk Assessment, Safety of Plant & Machinery in Lifting & Rigging Operations : 15 Hours

Key Learning Outcomes

- Identify physical, environmental, operational hazards during lifting operations and equipment-related hazards.
- Perform risk assessments to evaluate the likelihood and impact of potential hazards and implement preventive measures to mitigate identified risks.
- Document incidents, near-misses, and safety violations promptly, reporting them to management and relevant authorities according to company policies.
- Conduct root-cause analysis to identify underlying reasons for incidents and maintain detailed records of hazards, risk assessments, and incident reports.
- Conduct pre-operation inspections to check machinery and vehicle conditions, verifying that all operational components, such as brakes and safety devices, are functional.
- Document any maintenance or repairs needed and inform relevant personnel to ensure all equipment meets safety requirements.
- Follow standard operating procedures while using machinery and vehicles, ensuring equipment is operated within specified limits to prevent overloads or malfunctions.
- Monitor site conditions and adjust operations as necessary to maintain safety and efficiency.
- Identify potential hazards related to machinery and vehicle operations, such as blind spots and unstable loads, implementing immediate corrective actions as needed.

SSD/N0323 - Lifting and Rigging Operations with Safety : 20 Hours

Key Learning Outcomes

- Review the lifting plan and operational procedures, ensure all lifting equipment is operational and that the load is properly secured and balanced before starting.
- Operate lifting within specified limits, ensure load stability during operations, and use appropriate hand signals and communication tools for team coordination.
- Complete lifting operation with all arrangements in place.
- Make sure safety of all personnel, equipments, vehicles, are complied with as per company policies, statutory requirements & guidelines.

- Monitor team for compliance with safety standards and the correct use of PPE during operations and conduct post-operation inspections to report equipment issues.

SSD/N0324 - Inspection, Maintenance, and Certification of Lifting Equipments : 10 Hours

Key Learning Outcomes

- Conduct pre-use inspections of lifting equipment, identifying defects and documenting findings.
- Participate in equipment maintenance, perform minor repairs according to manufacturer's guidelines.
- Coordinate major repairs with specialized technicians.
- Verify that all lifting and rigging equipment is certified and comply with national and international standards.
- Maintain up-to-date records, and report any non-compliance issues.
- Participate in the maintenance and records of inspections, repairs, and maintenance activities,
- Ensure accessibility for audits and preparing status reports with recommendations for management.

SSD/N0325 - Plan, Organise, Communication & Emergency Protocols in Lifting & Rigging : 10 Hours

Key Learning Outcomes

- Identify potential emergencies and develop site-specific emergency response plans addressing them.
- Conduct team briefing about emergency protocols, roles at the time of emergency.
- Conduct Risk assessment to identify flaws in lifting operations.
- Participate in safety drills to simulate emergencies, followed by evaluation of its result and suggest updates to emergency plans.
- Review the communication lines with local services.
- Brief site personnel on management of evacuation and emergency responses.
- Observe the placement and functionality of emergency equipment.
- Inspect detailed records of all emergency drills and evaluations, and incidents.
- Conduct root-cause analysis to identify corrective actions that prevent recurrence and enhance overall safety.

Total Duration of OJT – 90 Hours (2 weeks)

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
ITI/12th Pass	Any domain	10	Relevant Domain	0	-	
Graduate in any discipline / Diploma in Engineering	Graduate in Civil, Mechanical , Automobile, Electrical Engineering. Graduate with Science.	5	Relevant Domain	0	-	
M. Tech/ B. Tech	Graduate in Civil, Mechanical, Automobile, Electrical Engineering. Graduate with Science.	2	Relevant Domain	0	-	

Trainer Certification	
Domain Certification	**Platform Certification**
Certified as Trainer for the Qualification "SSD/Q0303: Lifting & Rigging Supervisor (Safety)" or higher qualification as per career progression by SSDF.	Recommended that the Trainer is certified for the Job Role: "Trainer (VET and Skills)", mapped to the Qualification Pack: "MEP/Q2601 v2.0". The minimum score of 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
ITI/12th Pass	Any domain	10	Relevant Domain	0	-	
Graduate in any discipline / Diploma in Engineering	Graduate in Civil, Mechanical, Automobile, Electrical Engineering. Graduate with Science.	5	Relevant Domain	0	-	
M. Tech/ B. Tech	Graduate in Civil, Mechanical, Automobile, Electrical Engineering, Graduate with Science.	2	Relevant Domain	0	-	

Assessor Certification	
Domain Certification	**Platform Certification**
Certified as assessor for the Qualification "SSD/Q0303: Lifting & Rigging Supervisor (Safety) "or higher qualification as per career progression.	Recommended that the Assessor is certified for the Job Role: "Assessor (VET and Skills)," mapped to the Qualification Pack: "MEP/Q2701 v2.0". The minimum accepted score is 80%.

Assessment Strategy

The assessment will be based on the concept of third-party assessments through certified assessors with empaneled Assessment Agencies of NCVET. The certification of each assessor will be done by SSDF through a process of selection, training, assessment & certification through training of assessor's program.

The assessments will include both formative & summative. The progressive assessments will be through the trainer during the progress of the training. The summative assessments will be carried by an assessor through assessment agencies.

The assessment process will find whether the candidate or professional is competent or not to perform the job as per expected performance criteria. The assessment plan contains the following information:

a) Assessment elements – Competencies based on performance criteria of each NOS.
b) Methods of assessment – Written test (online/offline), viva and practical/ field exercises.
c) Time of assessment – The assessment will be done both formative and summative (post orientation/training) of candidates.
d) Place i.e., context of the assessment - The assessment will be conducted through theory, viva voice and practical/ field exercises, on simulators and will be both online and offline modes.
e) The criteria for decision making– It will be based on assessment criteria & guidelines as given in the qualification pack.
f) Questions – The written questions, viva & practical questions will be set to cover all aspect of performance criteria and would have been validated from experts in the subject matter.

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to Be known and/or understood to accomplish 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 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 psycho motor 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 Standard
AB	Awarding Body
AA	Assessment Agency
TP	Training Partner