



# Model Curriculum

**QP Name: Rigger - Structural Erection**

**QP Code: CON/Q0702**

**Version: 3.0**

**NSQF Level: 3.5**

**Model Curriculum Version: 3.0**

Construction Skill Development Council of India | | Tower 4B, DLF Corporate Park, 201&, 202 4B, Mehrauli-Gurgaon Rd, DLF Phase 3, Gurugram, Haryana 122002



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## Training Parameters

<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure Construction
<b>Occupation</b>	Rigging
<b>Country</b>	India
<b>NSQF Level</b>	3.5
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/7214.0700
<b>Minimum Educational Qualification and Experience</b>	11th Grade pass OR Completed 1st year of 3-year diploma after 10 <sup>th</sup> OR 10th grade pass and pursuing continuous schooling OR 8th Grade pass with 3-year relevant experience OR Previous relevant Qualification of NSQF Level 2.5 with 3-year relevant experience OR Previous relevant Qualification of NSQF Level 3 with 1.5-year relevant experience
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	31/08/2023
<b>Next Review Date</b>	29/02/2024
<b>NSQC Approval Date</b>	31/08/2023
<b>QP Version</b>	3.0
<b>Model Curriculum Creation Date</b>	31/08/2023
<b>Model Curriculum Valid Up to Date</b>	29/02/2024
<b>Model Curriculum Version</b>	3.0
<b>Minimum Duration of the Course</b>	390 Hours
<b>Maximum Duration of the Course</b>	390 Hours



# Program Overview

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

## Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills to:

- Describe the process of shifting structural steel sections and assemblies using appropriate rigging gears.
- Demonstrate the preparatory checks carried out prior to the lifting operations.
- Demonstrate the process of preparing the base for lifting equipment and lifting load.
- Provide support in heavy lifting work of structural steel sections and assemblies.
- Demonstrate unloading of the structural steel assemblies at specified location.
- Demonstrate the positioning of structural steel members to the final positions within the specified tolerance limit.
- Demonstrate the positioning of heavy steel units using the appropriate tools.
- Demonstrate the erection of staging using heavy steel sections.
- Demonstrate the dismantling of staging and stack the materials appropriately and as per instructions.
- Demonstrate staging work using appropriate tools and rigging gears.
- Demonstrate effective communication with co-workers, superiors and sub-ordinates across different teams.
- Provide support to co-workers, superiors and sub-ordinates within the team and across interfacing teams to ensure effective execution of assigned task.
- Demonstrate prioritising of work activities in order to achieve the desired results.
- Demonstrate organising of resources prior to commencement of work.
- Plan and organize work to meet the expected outcomes
- Identify various hazards at construction site.
- Use the PPE relevant to rigging.
- Perform safe waste disposal at construction sites.

## 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
<b>CON/N0706: Provide support in heavy structural steel lifting works</b> <b>NOS Version- 3.0</b> <b>NSQF Level- 3.5</b>	35:00	25:00	30:00	00:00	90:00
Module 1: Introduction to the role of a Rigger Structural Erection	05:00	00:00	00:00	00:00	05:00



Module 2: Providing support in heavy structural steel lifting	30:00	25:00	30:00	00:00	85:00
<b>CON/N0707: Unload, position and align structural steel assemblies</b> <b>NOS Version- 3.0</b> <b>NSQF Level- 3.5</b>	<b>30:00</b>	<b>30:00</b>	<b>30:00</b>	<b>00:00</b>	<b>90:00</b>
Module 3: Unloading, positioning and alignment of structural steel assemblies	30:00	30:00	30:00	00:00	90:00
<b>CON/N0708: Erect and dismantle staging for heavy RCC/ steel structures</b> <b>NOS Version- 3.0</b> <b>NSQF Level- 3.5</b>	<b>40:00</b>	<b>50:00</b>	<b>00:00</b>	<b>00:00</b>	<b>90:00</b>
Module 4: Erecting and dismantling staging for heavy RCC/ steel structures	40:00	50:00	00:00	00:00	90:00
<b>CON/N8001: Work effectively in a team to deliver desired results at the workplace</b> <b>NOS Version- 12.0</b> <b>NSQF Level- 4</b>	<b>05:00</b>	<b>25:00</b>	<b>00:00</b>	<b>00:00</b>	<b>30:00</b>
Module 5: Work effectively in a team to deliver desired results at the workplace	05:00	25:00	00:00	00:00	30:00
<b>CON/N8002: Plan and organize work to meet expected outcomes</b> <b>NOS Version- 9.0</b> <b>NSQF Level- 4</b>	<b>05:00</b>	<b>25:00</b>	<b>00:00</b>	<b>00:00</b>	<b>30:00</b>
Module 6: Plan and organize work to meet expected outcomes	05:00	25:00	00:00	00:00	30:00
<b>CON/N9001: Work according to personal health, safety and environment protocols at construction site</b> <b>NOS Version- 10.0</b> <b>NSQF Level- 4</b>	<b>05:00</b>	<b>25:00</b>	<b>00:00</b>	<b>00:00</b>	<b>30:00</b>



Module 8: Follow safety norms as defined by organization, adopt healthy and safe work practices	05:00	25:00	00:00	00:00	30:00
<b>DGT/VSQ/N0101: Employability Skills NOS Version- 1.0 NSQF Level- 2</b>	<b>30:00</b>	<b>00:00</b>	<b>0:00</b>	<b>00:00</b>	<b>30:00</b>
Module 9: Employability Skills	30:00	00:00	0:00	00:00	30:00
<b>Total Duration</b>	<b>150:00</b>	<b>180:00</b>	<b>60:00</b>	<b>00:00</b>	<b>390:00</b>



# Module Details

## Module 1: Introduction to the role of a Rigger Structural Erection

Mapped to CON/N0706 v3.0

### Terminal Outcomes:

- Discuss the job role of a Rigger Structural Erection.

<b>Duration: 05:00</b>	<b>Duration: 0:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"><li>• Describe the size and scope of the Construction industry and its sub-sectors.</li><li>• Discuss the role, responsibilities and personal attributes of a Rigger Structural Erection.</li><li>• Identify the employment and career progression opportunities for a Rigger Structural Erection.</li><li>• Recall the basic terms used in rigging.</li></ul>	
<b>Classroom Aids</b>	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
<b>Tools, Equipment and Other Requirements</b>	
NA	



## Module 2: Providing support in heavy structural steel lifting

Mapped to CON/N0706 v3.0

### Terminal Outcomes:

- Demonstrate how to shift structural steel sections and assemblies using appropriate rigging gears.
- Demonstrate the preparatory checks carried out before the lifting operations.
- Prepare the base for lifting equipment and load.
- Provide support in heavy lifting work of structural steel sections and assemblies.

<b>Duration: 30:00</b>	<b>Duration: 25:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>● Describe the working mechanism of load lifting equipment, such as cranes, winches, etc.</li> <li>● Explain the criteria for selecting appropriate rigging gear for heavy material.</li> <li>● Explain the basic principles of measurement, geometry and arithmetic calculations relevant for rigging work.</li> <li>● Elaborate on the method of conversion of units of linear measurements.</li> <li>● Explain the nature of base level and compaction required for equipment during lifting.</li> <li>● Discuss the technique of guiding suspended object using tag lines to the location of erection.</li> <li>● Explain the specification of lifting tools and tackles as per the load lifting requirement.</li> <li>● Elaborate on different gestures/signals used by the signaller during load lifting.</li> <li>● Explain the units of measurement and conversion of linear units.</li> <li>● Explain the appropriate safety measures to be taken during lifting operations, e.g. maintaining lifting equipment and steel components at a safe distance from power/ service lines.</li> <li>● Discuss the common defects found in</li> </ul>	<ul style="list-style-type: none"> <li>● Demonstrate the use of appropriate hand tools and rigging gear for shifting and lifting structural steel section and assemblies.</li> <li>● Show how to anchor structural steel components/ units to the appropriate location using slings, shackles, ropes or lifting hooks.</li> <li>● Demonstrate how to stabilize the load by tying down the structural steel assembly units to the transporting vehicle using chains, binders, belts etc.</li> <li>● Show how to unload steel components/assemblies.</li> <li>● Demonstrate the appropriate checks to be performed on rigging gear to ensure it is safe for use.</li> <li>● Show how to prepare the base for the movement of lifting equipment.</li> <li>● Demonstrate how to attach a load to the lifting equipment using appropriate tools and rigging gears.</li> <li>● Demonstrate how to control the position of a suspended load during lifting operation.</li> <li>● Demonstrate the unloading of load from equipment safely.</li> </ul>





structural steel assemblies or components, e.g. damage, distortion, breaking of joints, etc.	
<b>Classroom Aids</b>	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
<b>Tools, Equipment and Other Requirements</b>	
Spud Wrenches, Open-End Wrenches, Crescent Wrenches, Hammer, Nibbler, Pliers, Impact Wrench, Drilling Machine With Bits, Electric Screw Gun, Electric Hexa Saw, Measuring Tape, Plumb Bob, Spirit Level, Chalks Line, Try Square, Water Level, Tower Crane, Mobile Crane, Forklift, Scissor Lift, Hydraulic Jacks, Electric Wire Rope Hoist, Electrical Winch, Electrical Chain Hoist, Slings, Wire Ropes, Shackles, Spreader Board, Chain, Link, Eye Hook, Eye Bolts, Bull Dog Grips, Clamp, Socket, Safety Helmet, Safety Goggles, Safety Shoes, Safety Belt, Cotton Gloves, Ear Plugs, Reflective Jackets, Dust Mask, Fire Prevention Kit, Barricade Tape, Safety Tags, Face Shield, Overalls, Knee Pads, Safety Harness, Fire Extinguisher, First Aid Box, Safety Notice Board	



## Module 3: Unloading, positioning and alignment of structural steel assemblies

*Mapped to CON/N0707 v3.0*

### Terminal Outcomes:

- Demonstrate the unloading of structural steel assemblies at the specified location.
- Demonstrate the positioning of structural steel members and heavy steel units using appropriate tools.

<b>Duration: 20:00</b>	<b>Duration: 40:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>● Elaborate on the checks to be performed for preparatory works for safe unloading and erection of structural steel units.</li> <li>● Explain the process of unloading and positioning structural steel assemblies.</li> <li>● Explain the process of aligning structural steel assemblies.</li> <li>● Describe the technique of guiding suspended object through tag lines to location of erection.</li> <li>● Elaborate on the appropriate safety measures to be taken while working near suspended heavy loads.</li> <li>● Elaborate on different gestures/signals used by the signaller during unloading and positioning of structural steel assemblies.</li> </ul>	<ul style="list-style-type: none"> <li>● Show how to unload steel units at an appropriate location.</li> <li>● Show the use of appropriate tools, such as turnbuckles, crowbars, and jacks to adjust the structural-steel members into the final position.</li> <li>● Demonstrate the positioning of steel sections, assemblies or equipment to be erected within the specified tolerance limit.</li> <li>● Demonstrate the use of different types of hand tools required to carry out structural steel erection activity.</li> <li>● Demonstrate torque tightening of bolts in structural steel using appropriate hand tools.</li> <li>● Demonstrate the use of appropriate measuring instruments to take linear measurements to check the alignment of erected section or assemblies.</li> <li>● Practice housekeeping and cleaning at workplace.</li> </ul>
<b>Classroom Aids</b>	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
<b>Tools, Equipment and Other Requirements</b>	
Spud Wrenches, Open-End Wrenches, Crescent Wrenches, Hammer, Nibbler, Pliers, Impact Wrench, Drilling Machine With Bits, Electric Screw Gun, Electric Hexa Saw, Measuring Tape, Plumb Bob, Spirit Level, Chalks Line, Try Square, Water Level, Tower Crane, Mobile Crane, Forklift, Scissor Lift, Hydraulic Jacks, Electric Wire Rope Hoist, Electrical Winch, Electrical Chain Hoist, Slings, Wire Ropes, Shackles, Spreader Board, Chain, Link, Eye Hook, Eye Bolts, Bull Dog Grips, Clamp, Socket, Safety Helmet, Safety Goggles, Safety Shoes, Safety Belt, Cotton Gloves, Ear Plugs,	



Reflective Jackets, Dust Mask, Fire Prevention Kit, Barricade Tape, Safety Tags, Face Shield, Overalls, Knee Pads, Safety Harness, Fire Extinguisher, First Aid Box, Safety Notice Board

## Module 4: Erecting and dismantling staging for heavy RCC/ steel structures

Mapped to CON/N0708 v3.0

### Terminal Outcomes:

- Demonstrate the erection of staging using heavy steel sections.
- Demonstrate the dismantling of staging and stacking of staging materials.
- Demonstrate the use of appropriate tools and rigging gear in staging.

<b>Duration: 40:00</b>	<b>Duration: 50:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• List different types of hand tools required to erect and dismantle staging.</li> <li>• List the material components required for staging.</li> <li>• Describe the sequential erection of different staging components according to schematics.</li> <li>• Explain the nature of base level and compaction required for equipment during lifting.</li> <li>• Explain the need of additional support in staging and the use of relevant components for the purpose.</li> <li>• Explain the use of tools, such as lever, hook, chisel, sledgehammer, measuring tape, bending pipe, etc.</li> <li>• Explain the use of relevant power tools for cutting, threading and bending of rebar.</li> <li>• Explain how to calculate unit weight of steel.</li> <li>• Describe the tagging procedures for rebar basis shape, size and location.</li> <li>• Explain how to carry out simple measurements using metric and imperial systems.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate the checks to be performed on base for appropriate compaction and levelling before staging.</li> <li>• Demonstrate the checks performed to verify physical condition of staging components.</li> <li>• Show the use of rigging tool and tackles for lifting staging components.</li> <li>• Demonstrate the bolting of staging components using the appropriate tools.</li> <li>• Show how to erect vertical and horizontal staging components as per the schematics.</li> <li>• Demonstrate the process of checking the alignment of erected staging using the appropriate measuring tools.</li> <li>• Show the use of clamps, props and other accessories to provide bracing/ support to the erected staging to ensure its stability.</li> <li>• Demonstrate the process of checking the tightness of staging components and taking appropriate corrective measures, as required.</li> <li>• Demonstrate the installation of foot rail, mid rail, top rail, working platforms/ walkways and safety net on the erected staging.</li> <li>• Show how to dismantle staging components safely, using the appropriate tools and stack them.</li> <li>• Demonstrate the use of relevant</li> </ul>



	Personal Protective Equipment (PPE) in erecting and dismantling staging.
<b>Classroom Aids</b>	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
<b>Tools, Equipment and Other Requirements</b>	
Spud Wrenches, Open-End Wrenches, Crescent Wrenches, Hammer, Nibbler, Pliers, Impact Wrench, Drilling Machine With Bits, Electric Screw Gun, Electric Hexa Saw, Measuring Tape, Plumb Bob, Spirit Level, Chalks Line, Try Square, Water Level, Tower Crane, Mobile Crane, Forklift, Scissor Lift, Hydraulic Jacks, Electric Wire Rope Hoist, Electrical Winch, Electrical Chain Hoist, Slings, Wire Ropes, Shackles, Spreader Board, Chain, Link, Eye Hook, Eye Bolts, Bull Dog Grips, Clamp, Socket, Safety Helmet, Safety Goggles, Safety Shoes, Safety Belt, Cotton Gloves, Ear Plugs, Reflective Jackets, Dust Mask, Fire Prevention Kit, Barricade Tape, Safety Tags, Face Shield, Overalls, Knee Pads, Safety Harness, Fire Extinguisher, First Aid Box, Safety Notice Board	



## Module 5: Work effectively in a team to deliver desired results at the workplace

Mapped to CON/N8001 v12.0

### Terminal Outcomes:

- Explain the importance of interacting and communicating in an effective manner.
- Elucidate ways to support co-workers to execute the project requirements.
- Elucidate ways to practice inclusion at workplace.

Duration: 05:00	Duration: 25:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>● Elucidate own roles and responsibilities.</li> <li>● Explain the importance of effective communication.</li> <li>● Elucidate the consequence of poor teamwork on project outcomes, timelines, safety at the construction site, etc.</li> <li>● Explain different modes of communication used at workplace.</li> <li>● Explain the importance of creating healthy and cooperative work environment among the gangs of workers.</li> <li>● Elucidate applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co-workers might need as per the requirement.</li> <li>● Explain the importance of proper and effective communication and the expected adverse effects in case of failure relating to quality, timeliness, safety, risks at the construction project site.</li> <li>● Explain the importance and need of supporting co-workers facing problems for the smooth functioning of work.</li> <li>● Discuss the fundamental concept of gender equality.</li> <li>● Explain how to recognise and be sensitive to issues of disability, culture and gender.</li> </ul>	<ul style="list-style-type: none"> <li>● Demonstrate how to pass on work related information/ requirement clearly to the team members.</li> <li>● Show how to report any unresolved problem to the supervisor immediately.</li> <li>● Demonstrate ways to hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams.</li> <li>● Demonstrate ways to work together with co-workers in a synchronized manner.</li> <li>● Demonstrate effective implementation of gender neutral practices at workplace.</li> <li>● Demonstrate ways to address discriminatory and offensive behaviour in a professional manner as per organizational policy.</li> </ul>



<ul style="list-style-type: none"><li>● Discuss legislation, policies, and procedures relating to gender sensitivity and cultural diversity including their impact on the area of operation.</li></ul>	
<b>Classroom Aids</b>	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
NA	



## Module 6: Plan and organize work to meet expected outcomes

Mapped to CON/N8002 v9.0

### Terminal Outcomes:

- Demonstrate prioritizing of work activities to achieve the desired productivity.
- Demonstrate organizing of resources as per work plan prior to commencement of work.

Duration: 05:00	Duration: 25:00
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>● Explain methods to upkeep, store and stack tools, materials used for domain specific works.</li> <li>● Explain the process of planning of the given tasks and activities relevant to the trade/job role within defined scope and duration.</li> <li>● Explain the procedure adopted for prioritizing an activity and sequencing of activities.</li> <li>● Explain the work plan and flow of activities in sequence for the assigned work.</li> <li>● Explain basic concept of labour productivity and work productivity.</li> <li>● Explain requisition of resources, reporting for requirement of resources orally and in written to concerned authority.</li> <li>● Explain how to minimise wastage of resources.</li> <li>● Explain the plan for waste collection and disposal after task.</li> </ul>	<ul style="list-style-type: none"> <li>● Identify the work target and plan activities to achieve the desired productivity.</li> <li>● Demonstrate requisition of resource citing an example.</li> <li>● Demonstrate the planning for various activities relevant to task as per the scope and schedule.</li> <li>● Demonstrate how to organise the required tool, manpower and material resources for the assigned task.</li> <li>● Select required quantity of materials, tools or devices for defined work activities.</li> <li>● Demonstrate how to prioritize all works/ activities to maximise output.</li> <li>● Demonstrate optimum use of resources while performing domain specific work activities.</li> <li>● Demonstrate waste collection and disposal as per organisational norms.</li> <li>● Demonstrate completion of work within stipulated time and plan.</li> </ul>
<b>Classroom Aids</b>	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
<b>Tools, Equipment and Other Requirements</b>	
NA	



## Module 7: Work according to personal health, safety and environment protocols at construction site

*Mapped to NOS CON/N9001 v10.0*

### Terminal Outcomes:

- Explain the importance of following safety norms as defined by organization.
- Explain the need to adopt healthy & safe work practices.
- Describe the process of implementing good housekeeping and environment protection process and activities.
- Explain the importance of following infection control guidelines as per applicability.

<b>Duration: 05:00</b>	<b>Duration: 25:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>● Describe the reporting procedures in cases of breaches or hazards for site safety, accidents, and emergency situations as per guidelines.</li> <li>● Explain different types of safety hazards at construction sites.</li> <li>● Discuss basic ergonomic principles as per applicability.</li> <li>● Describe the procedure for responding to accidents and other emergencies at site.</li> <li>● Explain the importance of handling tools, equipment, and materials as per applicable norms.</li> <li>● Explain the effect of construction material on health and environments as per applicability.</li> <li>● Describe various environmental protection methods as per applicability.</li> <li>● Explain the storage requirement of waste including non-combustible scrap material and debris, combustible scrap material and debris, general construction waste and trash (non-toxic, non-hazardous), any other hazardous wastes and any other flammable wastes at the appropriate location.</li> <li>● Explain how to use hazardous material in a safe and appropriate manner as per applicability.</li> </ul>	<ul style="list-style-type: none"> <li>● Demonstrate how to follow emergency and evacuation procedures in case of accidents, fires, natural calamities.</li> <li>● Show how to operate different types of fire extinguishers corresponding to various types of fires as per EHS guideline.</li> <li>● Demonstrate the use of appropriate Personal Protective Equipment (PPE) as per work requirements for: Head Protection, Ear protection, Fall Protection, Foot Protection, Face and Eye Protection, Hand and Body Protection, and Respiratory Protection (if required).</li> <li>● Demonstrate how to check and install all safety equipment as per standard guidelines.</li> <li>● Show how to collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature.</li> <li>● Show how to clean and disinfect all materials, tools and supplies before and after use.</li> </ul>

<ul style="list-style-type: none"> <li>● Explain types of fire.</li> <li>● Describe the procedure of operating different types of fire extinguishers.</li> <li>● State safety relevant to tools, tackles, and equipment as per applicability.</li> <li>● List housekeeping activities relevant to task.</li> <li>● Elucidate ways of transmission of infection</li> <li>● Describe different ways to manage infectious risks at the workplace.</li> <li>● Describe different methods of cleaning, disinfection, sterilization, and sanitization.</li> <li>● List the symptoms of infection like fever, cough, redness, swelling, and inflammation.</li> </ul>	
<b>Classroom Aids:</b>	
Black/White board, marker, Projector/LED Monitor, Computer, Trade specific charts, Safety tags, Safety Notice board, registers and other teaching aids	
<b>Tools, Equipment and Other Requirements</b>	
Leather Hand Gloves, Jump suit, Wire brush, Hand and Leg guard leather, Safety goggles, Nose mask, Ear protection, Fire extinguishers, Sand buckets Flashback arrestors, Welding helmet, Welding glass, Fire Extinguisher, Fire prevention kit, First Aid box, Safety tags, Safety Notice board	



## Module 8: Employability Skills

Mapped to NOS DGT/VSQ/N0101 v1.0

**Duration: 30:00**

### Key Learning Outcomes

#### **Introduction to Employability Skills Duration: 1 Hour**

After completing this programme, participants will be able to:

1. Discuss the importance of Employability Skills in meeting the job requirements

#### **Constitutional values - Citizenship Duration: 1 Hour**

2. Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen.

3. Show how to practice different environmentally sustainable practices

#### **Becoming a Professional in the 21st Century Duration: 1 Hours**

4. Discuss 21st century skills.

5. Display positive attitude, self -motivation, problem solving, time management skills and continuous learning mindset in different situations.

#### **Basic English Skills Duration: 2 Hours**

6. Use appropriate basic English sentences/phrases while speaking

#### **Communication Skills Duration: 4 Hour**

7. Demonstrate how to communicate in a well -mannered way with others.

8. Demonstrate working with others in a team

#### **Diversity & Inclusion Duration: 1 Hour**

9. Show how to conduct oneself appropriately with all genders and PwD

10. Discuss the significance of reporting sexual harassment issues in time

#### **Financial and Legal Literacy Duration: 4 Hours**

11. Discuss the significance of using financial products and services safely and securely.

12. Explain the importance of managing expenses, income, and savings.

13. Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws

#### **Essential Digital Skills Duration: 3 Hours**

14. Show how to operate digital devices and use the associated applications and features, safely and securely

15. Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely

#### **Entrepreneurship Duration: 7 Hours**

16. Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges

#### **Customer Service Duration: 4 Hours**

17. Differentiate between types of customers

18. Explain the significance of identifying customer needs and addressing them

19. Discuss the significance of maintaining hygiene and dressing appropriately

#### **Getting ready for apprenticeship & Jobs Duration: 2 Hours**

20. Create a biodata

21. Use various sources to search and apply for jobs

22. Discuss the significance of dressing up neatly and maintaining hygiene for an interview

23. Discuss how to search and register for apprenticeship opportunities



## Module 9: On-the-Job Training

### Mapped to Rigger - Structural Erection

Mandatory Duration: 60:00	Recommended Duration: 00:00
Location: On-Site	
<b>Terminal Outcomes</b> <ul style="list-style-type: none"><li>● Use appropriate rigging gear for heavy material shifting of structural steel assemblies/ components.</li><li>● Unload steel components/ units/ assemblies safely at the specified location.</li><li>● Prepare the base for lifting equipment and load to be lifted as per the requirement.</li><li>● Align structural steel assemblies and provide bracing support, using appropriate tools, such as turnbuckles, crowbars, jacks, etc.</li><li>● Undertake linear measurements to check the alignment of erected section or assemblies using appropriate measuring instruments.</li><li>● Carry out bolting at the steel connections using appropriate hand tools.</li><li>● Erect staging using appropriate heavy steel sections.</li><li>● Dismantle staging using appropriate tools and stack the materials at the specified location.</li><li>● Interpret hand signals given by the signalperson and act accordingly during rigging operations.</li><li>● Use the appropriate PPE to ensure personal safety during rigging operations.</li></ul>	



## Annexure

### Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialisation	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
B. Tech	Civil/Mechanical/ Electrical	2	Rigging	0	-	
Diploma	Civil/Mechanical/ Electrical	3	Rigging	0	-	
ITI	Civil/Mechanical/ Electrical	6	Rigging	0	-	
General BA/BSc./ EX-Army/ 12th	Civil/Mechanical/ Electrical	6	Rigging	0	-	

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role “Rigger – Structural Erection”, mapped to QP: “CON/Q0702, v3.0”, Minimum accepted score is 80%	Recommended that the Trainer is certified for the Job Role: “Trainer (Vet and Skills)”, mapped to the Qualification Pack: “MEP/Q2601, v2.0”. The minimum accepted score as per MEPSC guidelines is 80%.

## Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
B. Tech	Civil/Mechanical/ Electrical	2	Rigging	0	-	
Diploma	Civil/Mechanical/ Electrical	5	Rigging	0	-	
ITI	Civil/Mechanical/ Electrical	7	Rigging	0	-	

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role “Rigger – Structural Erection”, mapped to QP: “CON/Q0702 v3.0”, Minimum accepted score is 80%	Recommended that the Assessor is certified for the Job Role: “Assessor (Vet and Skills)”, mapped to the Qualification Pack: “MEP/Q2701, v2.0”, with a minimum score of 80%.





## Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

### 1. Assessment System Overview:

- Batches assigned to the assessment agencies for conducting the assessment on SIP
- The batch allocation Matrix prepared for each month based on previous months' performance of AAs, which determines the quantum of Assessment which can be allocated to each AA for a month
- Post allocation of assessment, Assessment agencies send the assessment confirmation to SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process.

### 2. Testing Environment:

- A combination of Theory and practical/demonstration test is deployed to assess knowledge and Skill respectively of Learners.
- Assessment is conducted at Training center in in-person/offline mode
- For Skill assessment, environment is simulated to create a realistic Working Environment that should replicate the key features of the workplace. In job roles, where it is difficult to replicate the same, the OJT assessment is implemented.
- During the practical task, trainees are assessed on their workmanship, quality of finished product, time management, etc., based on the performance criteria (PC), knowledge and understanding and their professional and soft skills as specified in the qualification pack.
- Knowledge assessment is done through closed ended questions up to level 4 and from level 5 onwards, it is mixture of open ended and closed ended questions

### 3. Assessment Quality Assurance levels/Framework

- Assessment criteria is developed for each QP which acts as a guide for developing question set/banks
- Sample questions aligned with Assessment criteria for each QP are developed by SSC and validated by industry
- Taking reference of Assessment criteria and Sample Questions, AAs create the question bank which is further validated by SSC
- Questions are mapped to the specified assessment criteria
- It is mandatory that Assessor and Trainer must be ToA certified & ToT Certified respectively
- Continuous Monitoring through virtual and In-person mode are conducted to ensure the assessment is conducted as per stipulated process
- Process and Technical audit of assessment batches by quality team are conducted to avoid the errors in assessment process



- A well -defined comprehensive framework of NON-COMPLIANCE MATRIX is defined and implemented to identify the non-compliance made by assessor and AA and punitive actions are taken correspondingly.
- The capacity building sessions are conducted regularly for assessors and assessment agencies to update them about best practices in assessment

#### 4. Types of evidence or evidence-gathering protocol:

- Post Assessment, the evidences are uploaded by Assessor to assessment agency and further assessment agency to SSC as per stipulated TAT
- Evidences are broadly the photographic and video graphic in nature
- Assessment agencies upload the evidence on SIP and detailed evidence on SSC digital platform (ZoHO)
- Evidences are; NOS wise-Geotagged photographs and videos of Theory Test & Practical Tasks, Attendance sheet, result summary sheet, group photographs.

#### 5. Method of verification or validation:

- The process and technical audit of assessment batches are done by SSC
- Attendance of each candidate is verified and it is ensured that only those candidates are assessed by assessors who are meeting the stipulated minimum percentage of attendance
- The result of each candidate is verified, it is verified that that result on SIP are matching with respect to summary sheet submitted by AAs
- Under detailed technical audit for sample of batches, the knowledge and skill assessment results for each candidate is checked in technical aspect.
- All the evidences of batches are preserved on server of SSC digital platform

#### On the Job:

- On job training (OJT), candidates undergo training and leaning at actual workplace for a fixed period of time and a certain weightage of assessment is allocated out of total skill weightage of Qualification Pack for undergoing OJT as stipulated by CSDCI. This OJT score and assessors' end point score are combined to arrive at final Marking/grading of trainees' skill test. The OJT score is determined by Supervisor of company under which candidates undergo on job training.



## References

## Glossary

Term	Description
<b>Declarative Knowledge</b>	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.
<b>Key Learning Outcome</b>	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).
<b>OJT (M)</b>	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
<b>OJT (R)</b>	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
<b>Procedural Knowledge</b>	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.
<b>Training Outcome</b>	Training outcome is a statement of what a learner will know, understand and be able to do it upon the completion of the training.
<b>Terminal Outcome</b>	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
CSDCI	Construction Skill development Council of India
MCQ	Multiple Choice Question
EHS	Environment Health and Safety
IPS	Indian Patent Stone
VDF	Vacuum Dewatering Flooring