









# **Assistant Construction Fitter**

QP Code: CON/Q1202

Version: 3.0

NSQF Level: 3

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## **CON/Q1202: Assistant Construction Fitter**

## **Brief Job Description**

An Assistant Construction Fitter provides assistance in fit-up activities by placing, positioning, fixing and marking different structural steel elements after conducting proper measurements. The individual works under supervision and also assists in the edge preparation activities.

## **Personal Attributes**

The individual should be physically fit and mentally alert and safety conscious to be able to work across various locations in varying environmental conditions. The person should be able to work in a team environment and as per the given instructions. The individual should have basic verbal and written communication skills.

## **Applicable National Occupational Standards (NOS)**

## **Compulsory NOS:**

- 1. CON/N1203: Assist in marking and fit-up of structural steel elements
- 2. <u>CON/N1204</u>: Use relevant tools and tackles to handle heavy materials used in fit-up of fabricated <u>components</u>
- 3. <u>CON/N1205</u>: Assist in preparatory activities, edge preparation and positioning of steel sections for fit-up
- 4. CON/N8001: Work effectively in a team to deliver desired results at the workplace
- 5. <u>CON/N9001</u>: Work according to personal health, safety and environment protocols at construction <u>site</u>
- 6. DGT/VSQ/N0101: Employability Skills (30 Hours)

## **Qualification Pack (QP) Parameters**

Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Fabrication
Country	India









NSQF Level	3
Credits	10
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7214.0800
Minimum Educational Qualification & Experience	10th Class OR 8th grade pass (with 2-year of (NTC/ NAC) after 8th) OR 9th grade pass with 1 Year of experience in the relevant field OR 8th grade pass with 2 Years of experience in the relevant field OR 5th grade pass with 5 Years of experience in the relevant field OR Previous relevant Qualification of NSQF Level (2) with 3 Years of experience in the relevant field OR Previous relevant Qualification of NSQF Level (2.5) with 1.5 Years of experience in the relevant field)
Minimum Level of Education for Training in School	10th Class
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	31/08/2026
NSQC Approval Date	31/08/2023
Version	3.0
Reference code on NQR	QG-03-CO-00789-2023-V2-CSDCI
NQR Version	1









## CON/N1203: Assist in marking and fit-up of structural steel elements

## **Description**

This unit is about marking structural steel elements and assisting in their fit-up

## Scope

The scope covers the following:

Measure and mark structural steel elements

#### **Elements and Performance Criteria**

#### Measure and mark structural steel elements

To be competent, the user/individual on the job must be able to:

- PC1. select the structural steel materials as per requirements and supervisor's instructions
- **PC2.** conduct linear measurements, such as length, width, diameter, using measuring tools, such as tapers, rulers, calipers, etc
- **PC3.** determine the fit up requirements by reading and interpreting the relevant hand sketches/ drawings with the supervisor's help
- **PC4.** place the sections, plates, pipes or tubes in the appropriate position as per the given instructions
- **PC5.** mark the position of bolts, plates or sections for fit-up as per the given instructions
- **PC6.** ensure the markings are as per the relevant hand sketches/ drawings
- **PC7.** identify and report any undulations or bends during measurements to the supervisor for appropriate corrective measures to be taken

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- **KU1.** the use of relevant marking and measurement tools and methods of measuring and marking
- **KU2.** the applicable housekeeping practices to be followed to keep the work area clean
- **KU3.** different types of sections, plates, etc
- **KU4.** how to interpret relevant hand sketches/ drawings
- **KU5.** how to handle heavy materials safely
- **KU6.** how to mitigate the safety hazards while working with heavy materials, e.g. use of appropriate Personal Protective Equipment (PPE)
- **KU7.** the use of relevant tools and equipment for the grinding operations
- **KU8.** different types of surface finish achievable by using different grinding tools
- **KU9.** the importance and use of relevant PPE
- **KU10.** the identification of different materials based on their shape, size and thickness









## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- **GS1.** maintain the appropriate data and records
- **GS2.** read the appropriate reports and literature concerning the field of work
- GS3. communicate professionally with all the stakeholders
- **GS4.** listen attentively to understand the information/ instructions being shared and take appropriate action
- **GS5.** coordinate with the co-workers to achieve the work objectives
- GS6. identify possible disruptions to work and take appropriate mitigation measures
- **GS7.** take prompt action to deal with workplace emergencies and accidents
- GS8. evaluate all possible solutions to work-related problems and select the best one
- **GS9.** follow the recommended practices for the timely completion of work and achievement of organizational objectives









## **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Measure and mark structural steel elements	30	60	-	10
<b>PC1.</b> select the structural steel materials as per requirements and supervisor's instructions	-	-	-	-
<b>PC2.</b> conduct linear measurements, such as length, width, diameter, using measuring tools, such as tapers, rulers, calipers, etc	-	-	-	-
PC3. determine the fit up requirements by reading and interpreting the relevant hand sketches/ drawings with the supervisor's help	-	-	-	-
<b>PC4.</b> place the sections, plates, pipes or tubes in the appropriate position as per the given instructions	-	-	-	-
<b>PC5.</b> mark the position of bolts, plates or sections for fit-up as per the given instructions	-	-	-	-
<b>PC6.</b> ensure the markings are as per the relevant hand sketches/ drawings	-	-	-	-
<b>PC7.</b> identify and report any undulations or bends during measurements to the supervisor for appropriate corrective measures to be taken	-	-	-	-
NOS Total	30	60	-	10









# **National Occupational Standards (NOS) Parameters**

NOS Code	CON/N1203
NOS Name	Assist in marking and fit-up of structural steel elements
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Fabrication
NSQF Level	3.0
Credits	3
Version	4.0
Last Reviewed Date	31/08/2023
Next Review Date	31/08/2026
NSQC Clearance Date	31/08/2023









# CON/N1204: Use relevant tools and tackles to handle heavy materials used in fit-up of fabricated components

## **Description**

This unit is about using various tools, tackles and handling heavy materials used in fit-up of fabricated components

## Scope

The scope covers the following:

- Follow health and safety practices
- Use appropriate tools and tackles in fit-up
- Shift structural steel sections

### **Elements and Performance Criteria**

## Follow health and safety practices

To be competent, the user/individual on the job must be able to:

- **PC1.** identify potential hazard in the work area and report them to the relevant authority
- **PC2.** follow appropriate safety measures while undertaking hazardous activities
- PC3. use the appropriate Personal Protective Equipment (PPE) as per the supervisor's instructions
- **PC4.** collect and dispose of waste and unwanted materials in an environment-friendly manner
- **PC5.** ensure self-preparedness for emergencies by participating in safety drills

#### Use appropriate tools and tackles in fit-up

To be competent, the user/individual on the job must be able to:

- **PC6.** use correct tools and tackles for marking, liner and angular measurements, e.g. scriber, divider, punch, steel ruler, measuring tape, angle gauge, etc
- **PC7.** hold and tighten metal pieces using the appropriate tools and tackles, such as wrenches, vices, clamps etc
- **PC8.** cut and strike metal using correct tools, such as file, chisel, hammer, etc
- **PC9.** use different types of lifting and shifting arrangements such as chain pulley blocks, trolleys, etc
- **PC10.** perform basic maintenance of tools and tackles

## Shift structural steel sections

To be competent, the user/individual on the job must be able to:

- **PC11.** determine the type of structural steel sections to be shifted
- PC12. check the access route, and report any obstructions to the supervisor
- **PC13.** perform visual checks on lifting tools and accessories, e.g. sling, rope, clamp, hook, etc., to ensure they are in usable condition
- **PC14.** anchor the structural members in their right position during lifting to avoid accidents and overturning of lifting equipment









- **PC15.** control the position of suspended objects during shifting by using tagline, mobile hydraulic lifting equipment, etc
- PC16. stack heavy objects appropriately as per the supervisor's instructions

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- **KU1.** different hand and power tools available in market for fabrication activity
- **KU2.** the use of common fabrication hand and power tools
- **KU3.** the selection and correct use of different tools and tackles as per the work requirement
- **KU4.** how to use the tools in optimized manner
- **KU5.** how to carry out basic maintenance of different hand and power tools
- **KU6.** the tolerance limits and range of operation for common hand and power tools
- **KU7.** the application of relevant ergonomic principles in carrying loads
- **KU8.** tools and tackles to be used in basic rigging work
- **KU9.** standard practices regarding heavy material lifting and shifting
- **KU10.** safety measures to be taken while object to be shifted is in motion
- **KU11.** correct posture of lifting equipment during lifting and shifting an object
- **KU12.** the importance of adhering to load lifting capacity of lifting equipment
- **KU13.** different hazards associated with fabrication work
- **KU14.** safety guidelines for fabrication work

## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- **GS1.** maintain the appropriate data and records
- **GS2.** read the appropriate reports and literature concerning the field of work
- **GS3.** communicate professionally with all the stakeholders
- **GS4.** listen attentively to understand the information/ instructions being shared and take appropriate action
- **GS5.** coordinate with the co-workers to achieve the work objectives
- **GS6.** identify possible disruptions to work and take appropriate mitigation measures
- **GS7.** take prompt action to deal with workplace emergencies and accidents
- **GS8.** evaluate all possible solutions to work-related problems and select the best one
- **GS9.** follow the recommended practices for the timely completion of work and achievement of organizational objectives









## **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Follow health and safety practices	11	15	-	3
<b>PC1.</b> identify potential hazard in the work area and report them to the relevant authority	-	-	-	-
<b>PC2.</b> follow appropriate safety measures while undertaking hazardous activities	-	-	-	-
<b>PC3.</b> use the appropriate Personal Protective Equipment (PPE) as per the supervisor's instructions	-	-	-	-
<b>PC4.</b> collect and dispose of waste and unwanted materials in an environment-friendly manner	-	-	-	-
<b>PC5.</b> ensure self-preparedness for emergencies by participating in safety drills	-	-	-	-
Use appropriate tools and tackles in fit-up	10	20	-	3
<b>PC6.</b> use correct tools and tackles for marking, liner and angular measurements, e.g. scriber, divider, punch, steel ruler, measuring tape, angle gauge, etc	-	-	-	-
<b>PC7.</b> hold and tighten metal pieces using the appropriate tools and tackles, such as wrenches, vices, clamps etc	-	-	-	-
<b>PC8.</b> cut and strike metal using correct tools, such as file, chisel, hammer, etc	-	-	-	-
<b>PC9.</b> use different types of lifting and shifting arrangements such as chain pulley blocks, trolleys, etc	-	-	-	-
<b>PC10.</b> perform basic maintenance of tools and tackles	-	-	-	-
Shift structural steel sections	9	25	-	4
<b>PC11.</b> determine the type of structural steel sections to be shifted	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> check the access route, and report any obstructions to the supervisor	-	-	-	-
<b>PC13.</b> perform visual checks on lifting tools and accessories, e.g. sling, rope, clamp, hook, etc., to ensure they are in usable condition	-	-	-	-
<b>PC14.</b> anchor the structural members in their right position during lifting to avoid accidents and overturning of lifting equipment	-	-	-	-
<b>PC15.</b> control the position of suspended objects during shifting by using tagline, mobile hydraulic lifting equipment, etc	-	-	-	-
<b>PC16.</b> stack heavy objects appropriately as per the supervisor's instructions	-	-	-	-
NOS Total	30	60	-	10









# **National Occupational Standards (NOS) Parameters**

NOS Code	CON/N1204
NOS Name	Use relevant tools and tackles to handle heavy materials used in fit-up of fabricated components
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Fabrication
NSQF Level	3
Credits	2
Version	4.0
Last Reviewed Date	31/08/2023
Next Review Date	31/08/2026
NSQC Clearance Date	31/08/2023









# CON/N1205: Assist in preparatory activities, edge preparation and positioning of steel sections for fit-up

## **Description**

This unit is about assisting in preparatory activities, edge preparation and positioning of steel sections for fit-up

## Scope

The scope covers the following:

- Prepare fabrication platform for fit-up operations
- Prepare the edges of the components of assemblies
- Position and fix structural elements

## **Elements and Performance Criteria**

### Prepare fabrication platform for fit-up operations

To be competent, the user/individual on the job must be able to:

- **PC1.** clean the platform to remove any scrap metal and dispose it of as per given instructions
- **PC2.** dismantle the previously installed temporary anchors and supports
- **PC3.** check all the tools and tackles for holding, tightening, striking for their usability
- **PC4.** rearrange all jacks, clamps as per requirement
- **PC5.** clean the surface of the structural sections or components and the fabrication platform before welding, to ensure there is no obstruction in shifting of components
- **PC6.** position the components/ sections on the fabrication platform as per the supervisor's instructions

#### Prepare the edges of the components of assemblies

To be competent, the user/individual on the job must be able to:

- **PC7.** determine the edge preparation requirements by interpreting hand sketches and consulting the supervisor
- **PC8.** mark the positions of the edges to be prepared as per the hand sketches and given instructions
- **PC9.** determine the orientation of bevel and scallop from the supervisor
- **PC10.** carry out scalloping and beveling by operating the bevelling machine as required, following the relevant safety measures
- **PC11.** assist in checking that the bevel and scallop profile is as per the applicable requirements
- **PC12.** assist in identifying any undulations or other faults in the section
- **PC13.** carry out jacking or striking operations to rectify minor defects as per the supervisor's instructions

#### Position and fix structural elements

To be competent, the user/individual on the job must be able to:









- **PC14.** position the structural components on the fabrication platform as per the given instructions, ensuring their correct position and orientation
- **PC15.** assist in checking and ensuring that markings on the section are clearly visible before fixing the section
- **PC16.** check that material has been scalloped, and edge preparation has been done as per the hand sketches or given instructions
- **PC17.** place and tighten the clamps at the required positions to restrict the movement of section
- **PC18.** place other components post dimensional checking on the fixed section as per the requirement and tighten the required clamps
- **PC19.** adjust the fit-up correctly using striking, jacking or other methods as per the supervisor's instruction
- **PC20.** mark the locations for tack welds as per the given instructions
- **PC21.** check the dimensions of the assembly after tack welding
- PC22. remove the fitted section/ assembly by loosening the clamps, vices etc
- PC23. lift and shift materials using ropes, belts or other appropriate accessories as instructed

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- **KU1.** how to identify the scrap metal on the fabrication platform according to section and dimensions
- **KU2.** how to dispose of the scrap metal
- **KU3.** the importance of housekeeping in fabrication activities
- **KU4.** the terminology relevant to fabrication activities
- **KU5.** how to install temporary supports and clamps for securing the workpiece and restricting its movement
- **KU6.** the importance of clamps and its functions in fit-up work
- **KU7.** the steps involved in removing the workpiece from the platform after fit-up
- **KU8.** the working principle of jacks (hydraulic and pneumatic) and their uses
- **KU9.** the process of checking the workability of tools and tackles according to the applicable acceptance criteria
- **KU10.** how to read and interpret hand sketches and fabrication drawings
- **KU11.** the importance of maintaining proper orientation of the workpiece
- **KU12.** the steps to be taken to carry out surface finishing before fitting
- **KU13.** how to check the dimensions of the workpiece during fit-up
- KU14. the importance of accurate fit-up
- **KU15.** the meaning, causes and effects of welding shrinkage
- **KU16.** the distortion control techniques and their areas of applications

## **Generic Skills (GS)**

User/individual on the job needs to know how to:









- **GS1.** maintain the appropriate data and records
- **GS2.** read the appropriate reports and literature concerning the field of work
- **GS3.** communicate professionally with all the stakeholders
- **GS4.** listen attentively to understand the information/ instructions being shared and take appropriate action
- **GS5.** coordinate with the co-workers to achieve the work objectives
- GS6. identify possible disruptions to work and take appropriate mitigation measures
- **GS7.** take prompt action to deal with workplace emergencies and accidents
- GS8. evaluate all possible solutions to work-related problems and select the best one
- **GS9.** follow the recommended practices for the timely completion of work and achievement of organizational objectives









## **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Prepare fabrication platform for fit-up operations	10	20	-	3
<b>PC1.</b> clean the platform to remove any scrap metal and dispose it of as per given instructions	-	-	-	-
<b>PC2.</b> dismantle the previously installed temporary anchors and supports	-	-	-	-
<b>PC3.</b> check all the tools and tackles for holding, tightening, striking for their usability	-	-	-	-
<b>PC4.</b> rearrange all jacks, clamps as per requirement	-	-	-	-
<b>PC5.</b> clean the surface of the structural sections or components and the fabrication platform before welding, to ensure there is no obstruction in shifting of components	-	-	-	-
<b>PC6.</b> position the components/ sections on the fabrication platform as per the supervisor's instructions	-	-	-	-
Prepare the edges of the components of assemblies	11	15	-	3
<b>PC7.</b> determine the edge preparation requirements by interpreting hand sketches and consulting the supervisor	-	-	-	-
<b>PC8.</b> mark the positions of the edges to be prepared as per the hand sketches and given instructions	-	-	-	-
<b>PC9.</b> determine the orientation of bevel and scallop from the supervisor	-	-	-	-
<b>PC10.</b> carry out scalloping and beveling by operating the bevelling machine as required, following the relevant safety measures	-	-	-	-
<b>PC11.</b> assist in checking that the bevel and scallop profile is as per the applicable requirements	-	-	-	-
<b>PC12.</b> assist in identifying any undulations or other faults in the section	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC13.</b> carry out jacking or striking operations to rectify minor defects as per the supervisor's instructions	-	-	-	-
Position and fix structural elements	9	25	-	4
<b>PC14.</b> position the structural components on the fabrication platform as per the given instructions, ensuring their correct position and orientation	-	-	-	-
<b>PC15.</b> assist in checking and ensuring that markings on the section are clearly visible before fixing the section	-	-	-	-
<b>PC16.</b> check that material has been scalloped, and edge preparation has been done as per the hand sketches or given instructions	-	-	-	-
<b>PC17.</b> place and tighten the clamps at the required positions to restrict the movement of section	-	-	-	-
<b>PC18.</b> place other components post dimensional checking on the fixed section as per the requirement and tighten the required clamps	-	-	-	-
<b>PC19.</b> adjust the fit-up correctly using striking, jacking or other methods as per the supervisor's instruction	-	-	-	-
<b>PC20.</b> mark the locations for tack welds as per the given instructions	-	-	-	-
<b>PC21.</b> check the dimensions of the assembly after tack welding	-	-	-	-
PC22. remove the fitted section/ assembly by loosening the clamps, vices etc	-	-	-	-
<b>PC23.</b> lift and shift materials using ropes, belts or other appropriate accessories as instructed	-	-	-	-
NOS Total	30	60	-	10









# **National Occupational Standards (NOS) Parameters**

NOS Code	CON/N1205
NOS Name	Assist in preparatory activities, edge preparation and positioning of steel sections for fit-up
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Fabrication
NSQF Level	3
Credits	2
Version	4.0
Last Reviewed Date	31/08/2023
Next Review Date	31/08/2026
NSQC Clearance Date	31/08/2023









# CON/N8001: Work effectively in a team to deliver desired results at the workplace

## **Description**

This unit describes the skills and knowledge required to work effectively within a team to achieve the desired results

## Scope

The scope covers the following:

- Interact and communicate in an effective manner
- Support co-workers to execute the project requirements
- Practice inclusion

### **Elements and Performance Criteria**

#### Interact and communicate in an effective manner

To be competent, the user/individual on the job must be able to:

- PC1. pass on work related information/ requirement clearly to the team members
- **PC2.** inform co-workers and superiors about any kind of deviations from work
- **PC3.** report any unresolved problem to the supervisor immediately
- **PC4.** obtain instructions from superiors and respond on the same
- **PC5.** communicate to team members/subordinates for appropriate work technique and method
- **PC6.** seek clarification and advice as per the requirement

#### Support co-workers to execute the project requirements

To be competent, the user/individual on the job must be able to:

- **PC7.** hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams
- **PC8.** work together with co-workers in a synchronized manner

#### Practice inclusion

To be competent, the user/individual on the job must be able to:

- **PC9.** maintain cultural inclusivity at work place
- **PC10.** maintain disability friendly work practices
- PC11. follow gender neutral practices at workplace
- **PC12.** address discriminatory and offensive behaviour in a professional manner as per organizational policy

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

KU1. own roles and responsibilities









- **KU2.** importance of effective communication
- **KU3.** the consequence of poor teamwork on project outcomes, timelines, safety at the construction site, etc.
- **KU4.** different modes of communication used at workplace
- **KU5.** importance of creating healthy and cooperative work environment among the gangs of workers
- **KU6.** different activities within the work area where interaction with other workers is required
- **KU7.** applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co-workers might need as per the requirement
- **KU8.** 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
- **KU9.** importance and need of supporting co-workers facing problems for the smooth functioning of work
- **KU10.** the fundamental concept of gender equality
- KU11. how to recognise and be sensitive to issues of disability, culture and gender
- **KU12.** legislation, policies, and procedures relating to gender sensitivity and cultural diversity including their impact on the area of operation

## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- **GS1.** write in at least one language, preferably in the local language of the site
- **GS2.** read the communication regarding work completion, materials used, tools and tackles used, the resource required, etc,
- **GS3.** speak in one or more languages, preferably in one of the local language of the site
- **GS4.** listen and follow instructions / communication shared by superiors/ co-workers regarding team requirements or interfaces during work processes
- **GS5.** communicate orally and effectively with co-workers considering their educational and social background
- **GS6.** decide on what information is to be shared with co-workers within the team or to the interfacing gang of workers
- **GS7.** plan work and organize the required resources in coordination with team members
- **GS8.** complete all assigned task in coordination with team members
- **GS9.** take initiative in resolving issues among co-workers or report the same to superiors
- **GS10.** ensure best ways of coordination among team members
- **GS11.** evaluate the complexity of task and determine if any guidance is required from superiors









## **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Interact and communicate in an effective manner	18	42	-	-
PC1. pass on work related information/ requirement clearly to the team members	-	-	-	-
<b>PC2.</b> inform co-workers and superiors about any kind of deviations from work	-	-	-	-
<b>PC3.</b> report any unresolved problem to the supervisor immediately	-	-	-	-
<b>PC4.</b> obtain instructions from superiors and respond on the same	-	-	-	-
<b>PC5.</b> communicate to team members/subordinates for appropriate work technique and method	-	-	-	-
<b>PC6.</b> seek clarification and advice as per the requirement	-	-	-	-
Support co-workers to execute the project requirements	6	14	-	-
<b>PC7.</b> hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams	-	-	-	-
<b>PC8.</b> work together with co-workers in a synchronized manner	-	-	-	-
Practice inclusion	6	14	-	-
PC9. maintain cultural inclusivity at work place	-	-	-	-
PC10. maintain disability friendly work practices	-	-	-	-
<b>PC11.</b> follow gender neutral practices at workplace	-	-	-	-
<b>PC12.</b> address discriminatory and offensive behaviour in a professional manner as per organizational policy	-	-	-	-
NOS Total	30	70	-	-









# **National Occupational Standards (NOS) Parameters**

NOS Code	CON/N8001
NOS Name	Work effectively in a team to deliver desired results at the workplace
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Generic 2
NSQF Level	4
Credits	1
Version	12.0
Last Reviewed Date	31/08/2023
Next Review Date	31/08/2026
NSQC Clearance Date	31/08/2023









# CON/N9001: Work according to personal health, safety and environment protocols at construction site

## **Description**

This NOS covers the skill and knowledge required for an individual to work according to personal health, safety and environmental protocols at construction site

## Scope

The scope covers the following:

- Follow safety norms as defined by organization
- Adopt healthy & safe work practices
- Implement good housekeeping and environment protection process and activities
- Follow infection control guidelines as per applicability

#### **Elements and Performance Criteria**

#### Follow safety norms as defined by the organization

To be competent, the user/individual on the job must be able to:

- **PC1.** identify and report any hazards, risks or breaches in site safety to the appropriate authority
- PC2. follow emergency and evacuation procedures in case of accidents, fires, natural calamities
- **PC3.** follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable
- **PC4.** follow all the protocols and safety techniques conveyed during safety awareness programs like Tool Box Talks, safety demonstrations and mock drills conducted at the site
- **PC5.** select and operate different types of fire extinguishers corresponding to various types of fires as per EHS guideline
- **PC6.** identify near miss, unsafe condition and unsafe act

### Adopt healthy & safe work practices

To be competent, the user/individual on the job must be able to:

- **PC7.** use 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)
- **PC8.** handle all required tools, tackles, materials and equipment safely
- **PC9.** follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines
- PC10. check and install all safety equipment as per standard guidelines
- PC11. follow safety protocols and practices as laid down by site EHS department
- PC12. obtain "height pass" clearance for working at heights

## Implement good housekeeping practices

To be competent, the user/individual on the job must be able to:

**PC13.** collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature









## PC14. apply ergonomic principles wherever required

#### Follow infection control guidelines as per applicability

To be competent, the user/individual on the job must be able to:

- PC15. follow recommended personal hygiene, workplace hygiene and sanitization practices
- **PC16.** clean and disinfect all materials, tools and supplies before and after use
- **PC17.** report immediately to concerned authorities regarding signs and symptoms of illness of self and others

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- **KU1.** reporting procedures in cases of breaches or hazards for site safety, accidents, and emergency situations as per guidelines
- **KU2.** types of safety hazards at construction sites
- **KU3.** basic ergonomic principles as per applicability
- **KU4.** the procedure for responding to accidents and other emergencies at site
- **KU5.** use of appropriate personal protective equipment based on various working conditions
- **KU6.** importance of handling tools, equipment, and materials as per applicable norms
- **KU7.** effect of construction material on health and environments as per applicability
- **KU8.** various environmental protection methods as per applicability
- **KU9.** storage 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
- **KU10.** how to keep the workplace neat and tidy so as to be safe
- **KU11.** how to use hazardous material in a safe and appropriate manner as per applicability
- **KU12.** types of fire
- **KU13.** procedure of operating different types of fire extinguishers
- **KU14.** safety relevant to tools, tackles, and equipment as per applicability
- **KU15.** housekeeping activities relevant to task
- KU16. ways of transmission of infection
- **KU17.** ways to manage infectious risks at the workplace
- **KU18.** different methods of cleaning, disinfection, sterilization, and sanitization
- **KU19.** symptoms of infection like fever, cough, redness, swelling, and inflammation

## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- **GS1.** write in at least one language, preferably in the local language of the site
- **GS2.** fill safety formats for near miss, unsafe conditions and safety suggestions
- **GS3.** read in one or more language, preferably in the local language of the site









- **GS4.** speak in one or more language, preferably in one of the local language of the site
- **GS5.** listen to instructions/communication shared by site EHS and superiors regarding site safety, and conducting the toolbox talk
- **GS6.** identify potential safety risks and report to the appropriate authority
- **GS7.** assess and analyze areas which may affect health, safety and environment protocol on the site









## **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Follow safety norms as defined by the organization	6	14	-	-
<b>PC1.</b> identify and report any hazards, risks or breaches in site safety to the appropriate authority	-	-	-	-
<b>PC2.</b> follow emergency and evacuation procedures in case of accidents, fires, natural calamities	-	-	-	-
<b>PC3.</b> follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable	-	-	-	-
<b>PC4.</b> follow all the protocols and safety techniques conveyed during safety awareness programs like Tool Box Talks, safety demonstrations and mock drills conducted at the site	-	-	-	-
<b>PC5.</b> select and operate different types of fire extinguishers corresponding to various types of fires as per EHS guideline	-	-	-	-
<b>PC6.</b> identify near miss, unsafe condition and unsafe act	-	-	-	-
Adopt healthy & safe work practices	15	35	-	-
PC7. use 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)	-	-	-	-
<b>PC8.</b> handle all required tools, tackles, materials and equipment safely	-	-	-	-
<b>PC9.</b> follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines	-	-	-	-
<b>PC10.</b> check and install all safety equipment as per standard guidelines	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> follow safety protocols and practices as laid down by site EHS department	-	-	-	-
PC12. obtain "height pass" clearance for working at heights	-	-	-	-
Implement good housekeeping practices	6	14	-	-
<b>PC13.</b> collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature	-	-	-	-
<b>PC14.</b> apply ergonomic principles wherever required	-	-	-	-
Follow infection control guidelines as per applicability	3	7	-	-
<b>PC15.</b> follow recommended personal hygiene, workplace hygiene and sanitization practices	-	-	-	-
<b>PC16.</b> clean and disinfect all materials, tools and supplies before and after use	-	-	-	-
<b>PC17.</b> report immediately to concerned authorities regarding signs and symptoms of illness of self and others	-	-	-	-
NOS Total	30	70	-	-









# **National Occupational Standards (NOS) Parameters**

NOS Code	CON/N9001
NOS Name	Work according to personal health, safety and environment protocols at construction site
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Generic Safety
NSQF Level	4
Credits	1
Version	10.0
Last Reviewed Date	31/08/2023
Next Review Date	31/08/2026
NSQC Clearance Date	31/08/2023









## **DGT/VSQ/N0101: Employability Skills (30 Hours)**

## **Description**

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

## Scope

The scope covers the following:

- Introduction to Employability Skills
- Constitutional values Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

## **Elements and Performance Criteria**

#### Introduction to Employability Skills

To be competent, the user/individual on the job must be able to:

PC1. understand the significance of employability skills in meeting the job requirements

#### Constitutional values - Citizenship

To be competent, the user/individual on the job must be able to:

**PC2.** identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices

## Becoming a Professional in the 21st Century

To be competent, the user/individual on the job must be able to:

**PC3.** explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.

#### Basic English Skills

To be competent, the user/individual on the job must be able to:

**PC4.** speak with others using some basic English phrases or sentences

#### Communication Skills

To be competent, the user/individual on the job must be able to:

**PC5.** follow good manners while communicating with others

**PC6.** work with others in a team









## **Diversity & Inclusion**

To be competent, the user/individual on the job must be able to:

- **PC7.** communicate and behave appropriately with all genders and PwD
- PC8. report any issues related to sexual harassment

#### Financial and Legal Literacy

To be competent, the user/individual on the job must be able to:

- **PC9.** use various financial products and services safely and securely
- **PC10.** calculate income, expenses, savings etc.
- **PC11.** approach the concerned authorities for any exploitation as per legal rights and laws

## Essential Digital Skills

To be competent, the user/individual on the job must be able to:

- PC12. operate digital devices and use its features and applications securely and safely
- **PC13.** use internet and social media platforms securely and safely

### Entrepreneurship

To be competent, the user/individual on the job must be able to:

- PC14. identify and assess opportunities for potential business
- PC15. identify sources for arranging money and associated financial and legal challenges

#### **Customer Service**

To be competent, the user/individual on the job must be able to:

- **PC16.** identify different types of customers
- **PC17.** identify customer needs and address them appropriately
- **PC18.** follow appropriate hygiene and grooming standards

## Getting ready for apprenticeship & Jobs

To be competent, the user/individual on the job must be able to:

- PC19. create a basic biodata
- **PC20.** search for suitable jobs and apply
- PC21. identify and register apprenticeship opportunities as per requirement

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- **KU1.** need for employability skills
- **KU2.** various constitutional and personal values
- **KU3.** different environmentally sustainable practices and their importance
- **KU4.** Twenty first (21st) century skills and their importance
- **KU5.** how to use basic spoken English language
- **KU6.** Do and dont of effective communication
- **KU7.** inclusivity and its importance
- KU8. different types of disabilities and appropriate communication and behaviour towards PwD
- **KU9.** different types of financial products and services









- **KU10.** how to compute income and expenses
- KU11. importance of maintaining safety and security in financial transactions
- **KU12.** different legal rights and laws
- **KU13.** how to operate digital devices and applications safely and securely
- KU14. ways to identify business opportunities
- KU15. types of customers and their needs
- **KU16.** how to apply for a job and prepare for an interview
- **KU17.** apprenticeship scheme and the process of registering on apprenticeship portal

## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- **GS1.** communicate effectively using appropriate language
- GS2. behave politely and appropriately with all
- **GS3.** perform basic calculations
- **GS4.** solve problems effectively
- **GS5.** be careful and attentive at work
- **GS6.** use time effectively
- **GS7.** maintain hygiene and sanitisation to avoid infection









## **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Introduction to Employability Skills	1	1	-	-
<b>PC1.</b> understand the significance of employability skills in meeting the job requirements	-	-	-	-
Constitutional values - Citizenship	1	1	-	-
<b>PC2.</b> identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
Becoming a Professional in the 21st Century	1	3	-	-
<b>PC3.</b> explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
Basic English Skills	2	3	-	-
<b>PC4.</b> speak with others using some basic English phrases or sentences	-	-	-	-
Communication Skills	1	1	-	-
<b>PC5.</b> follow good manners while communicating with others	-	-	-	-
PC6. work with others in a team	-	-	-	-
Diversity & Inclusion	1	1	-	-
<b>PC7.</b> communicate and behave appropriately with all genders and PwD	-	-	-	-
PC8. report any issues related to sexual harassment	-	-	-	-
Financial and Legal Literacy	3	4	-	-
<b>PC9.</b> use various financial products and services safely and securely	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. calculate income, expenses, savings etc.	-	-	-	-
<b>PC11.</b> approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
Essential Digital Skills	4	6	-	-
<b>PC12.</b> operate digital devices and use its features and applications securely and safely	-	-	-	-
<b>PC13.</b> use internet and social media platforms securely and safely	-	-	-	-
Entrepreneurship	3	5	-	-
<b>PC14.</b> identify and assess opportunities for potential business	-	-	-	-
<b>PC15.</b> identify sources for arranging money and associated financial and legal challenges	-	-	-	-
Customer Service	2	2	-	-
PC16. identify different types of customers	-	-	-	-
<b>PC17.</b> identify customer needs and address them appropriately	-	-	-	-
<b>PC18.</b> follow appropriate hygiene and grooming standards	-	-	-	-
Getting ready for apprenticeship & Jobs	1	3	-	-
PC19. create a basic biodata	-	-	-	-
PC20. search for suitable jobs and apply	-	-	-	-
<b>PC21.</b> identify and register apprenticeship opportunities as per requirement	-	-	-	-
NOS Total	20	30	-	-









## **National Occupational Standards (NOS) Parameters**

NOS Code	DGT/VSQ/N0101
NOS Name	Employability Skills (30 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	2
Credits	1
Version	1.0
Last Reviewed Date	27/01/2022
Next Review Date	26/01/2025
NSQC Clearance Date	27/01/2022

## Assessment Guidelines and Assessment Weightage

## **Assessment Guidelines**

- 1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
- 2. The assessment for the knowledge part will be based on knowledge bank of questions created by Assessment Bodies subject to approval by SSC.
- 3. Individual assessment agencies will create unique question papers for knowledge/theory part for assessment of candidates as per assessment criteria given below.
- 4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on assessment criteria.
- 5. The passing percentage for each QP will be 50%. To pass the Qualification Pack, every trainee should score a minimum of 50% individually in each NOS.
- 6. The Assessor shall check the final outcome of the practices while evaluating the steps performed to achieve the final outcome.









- 7. The trainee shall be provided with a chance to repeat the test to correct his procedures in case of improper performance, with a deduction of marks for each iteration.
- 8. After the certain number of iterations as decided by SSC the trainee is marked as fail, scoring zero marks for the procedure for the practical activity.
- 9. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack within the specified timeframe set by SSC.
- 10. Minimum duration of Assessment of each QP shall be of 4hrs/trainee.

Minimum Aggregate Passing % at QP Level: 50

(**Please note**: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

## **Assessment Weightage**

## Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N1203.Assist in marking and fit-up of structural steel elements	30	60	0	10	100	20
CON/N1204.Use relevant tools and tackles to handle heavy materials used in fit-up of fabricated components	30	60	0	10	100	20
CON/N1205.Assist in preparatory activities, edge preparation and positioning of steel sections for fit-up	30	60	0	10	100	30
CON/N8001.Work effectively in a team to deliver desired results at the workplace	30	70	0	0	100	10
CON/N9001.Work according to personal health, safety and environment protocols at construction site	30	70	0	0	100	10
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	10









National Occupational	Theory	Practical	Project	Viva	Total	Weightage
Standards	Marks	Marks	Marks	Marks	Marks	
Total	170	350	0	30	550	100









## **Acronyms**

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
ОЈТ	On the Job Training









## **Glossary**

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.









Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.
National Occupational Standard	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf