



# Automotive Welding Machine Lead Technician

QP Code: ASC/Q3104

Version: 3.0

NSQF Level: 4.5

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## Contents

ASC/Q3104: Automotive Welding Machine Lead Technician .....	3
<i>Brief Job Description</i> .....	3
Applicable National Occupational Standards (NOS) .....	3
<i>Compulsory NOS</i> .....	3
<i>Qualification Pack (QP) Parameters</i> .....	3
ASC/N9810: Manage work and resources (Manufacturing) .....	5
ASC/N9805: Interpret engineering drawing .....	11
ASC/N3115: Manage shop floor Welding operations and team .....	16
ASC/N3113: Perform welding and post-welding activities .....	23
DGT/VSQ/N0102: Employability Skills (60 Hours) .....	30
Assessment Guidelines and Weightage .....	37
<i>Assessment Guidelines</i> .....	37
<i>Assessment Weightage</i> .....	38
Acronyms .....	39
Glossary .....	40

## ASC/Q3104: Automotive Welding Machine Lead Technician

### Brief Job Description

The individual is primarily involved in all robotic and manual welding operations performed in automotive manufacturing. They supervise and support welding operators and technicians in performing various types of welding processes such as TIG, MIG, SMAW welding etc. and inspection of equipment condition, testing and inspection of welded work pieces.

### Personal Attributes

The person should be patient, organised, team-oriented and have the ability to work for long hours in adverse conditions. They should be keen observers and have an eye for detail and quality. The individual must also be able to communicate effectively and meet the deadlines for test results.

### Applicable National Occupational Standards (NOS)

#### Compulsory NOS:

1. [ASC/N9810: Manage work and resources \(Manufacturing\)](#)
2. [ASC/N9805: Interpret engineering drawing](#)
3. [ASC/N3115: Manage shop floor Welding operations and team](#)
4. [ASC/N3113: Perform welding and post-welding activities](#)
5. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

### Qualification Pack (QP) Parameters

<b>Sector</b>	Automotive
<b>Sub-Sector</b>	Manufacturing
<b>Occupation</b>	Metal Joining
<b>Country</b>	India
<b>NSQF Level</b>	4.5
<b>Credits</b>	17
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/3122.4702

<b>Minimum Educational Qualification &amp; Experience</b>	10th Class with 3 Years of experience OR Completed 3 year diploma after 10th OR 2-year Diploma after 12th grade (in any field) OR B.E./B.Tech (Pursuing 1st year) OR Certificate-NSQF (Automotive Welding Machine Technician Level 3) with 3 Years of experience as 8th class pass
<b>Minimum Level of Education for Training in School</b>	
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	20 Years
<b>Last Reviewed On</b>	NA
<b>Next Review Date</b>	NA
<b>NSQC Approval Date</b>	
<b>Version</b>	3.0

## ASC/N9810: Manage work and resources (Manufacturing)

### Description

This NOS unit is about implementing safety, planning work, adopting sustainable practices for optimising the use of resources.

### Scope

The scope covers the following :

- Maintain safe and secure working environment
- Maintain Health and Hygiene
- Effective waste management practices
- Material/energy conservation practices

### Elements and Performance Criteria

#### *Maintain safe and secure working environment*

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

- PC1.** identify hazardous activities and the possible causes of risks or accidents in the workplace
- PC2.** implement safe working practices for dealing with hazards to ensure safety of self and others
- PC3.** conduct regular checks of the machines with support of the maintenance team to identify potential hazards
- PC4.** ensure that all the tools/equipment/fasteners/spare parts are arranged as per specifications/utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/work instructions
- PC5.** organise safety drills or training sessions to create awareness amongst others on the identified risks and safety practices
- PC6.** fill daily check sheet to report improvements done and risks identified
- PC7.** ensure that relevant safety boards/signs are placed on the shop floor for the safety of self and others
- PC8.** report any identified breaches in health, safety and security policies and procedures to the designated person

#### *Maintain Health and Hygiene*

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

- PC9.** ensure workplace, equipment, restrooms etc. are sanitized regularly
- PC10.** ensure team is aware about hygiene and sanitation regulations and following them on the shop floor
- PC11.** ensure availability of running water, hand wash and alcohol-based sanitizers at the workplace
- PC12.** report advanced hygiene and sanitation issues to appropriate authority
- PC13.** follow stress and anxiety management techniques and support employees to cope with stress, anxiety etc
- PC14.** wear and dispose PPEs regularly and appropriately

#### *Effective waste management practices*

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

**PC15.** ensure recyclable, non-recyclable and hazardous wastes are segregated as per SOP

**PC16.** ensure proper mechanism is followed while collecting and disposing of non-recyclable, recyclable and reusable waste

*Material/energy conservation practices*

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

**PC17.** ensure malfunctioning (fumes/sparks/emission/vibration/noise) and lapse in maintenance of equipment are resolved effectively

**PC18.** prepare and analyze material and energy audit reports to decipher excessive consumption of material and water

**PC19.** identify possibilities of using renewable energy and environment friendly fuels

**PC20.** identify processes where material and energy/electricity utilization can be optimized

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

The individual on the job needs to know and understand:

**KU1.** organisation procedures for health, safety and security, individual role and responsibilities in this context

**KU2.** the organisation's emergency procedures for different emergency situations and the importance of following the same

**KU3.** evacuation procedures for workers and visitors

**KU4.** how and when to report hazards as well as the limits of responsibility for dealing with hazards

**KU5.** potential hazards, risks and threats based on the nature of work

**KU6.** various types of fire extinguisher

**KU7.** various types of safety signs and their meaning

**KU8.** appropriate first aid treatment relevant to different condition e.g. bleeding, minor burns, eye injuries etc.

**KU9.** relevant standards, procedures and policies related to 5S followed in the company

**KU10.** the various materials used and their storage norms

**KU11.** importance of efficient utilisation of material and water

**KU12.** basics of electricity and prevalent energy efficient devices

**KU13.** common practices of conserving electricity

**KU14.** common sources and ways to minimize pollution

**KU15.** categorisation of waste into dry, wet, recyclable, non-recyclable and items of single-use plastics

**KU16.** waste management techniques

**KU17.** significance of greening

## **Generic Skills (GS)**

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

- GS1.** read safety instructions/guidelines
- GS2.** modify work practices to improve them
- GS3.** work with supervisors/team members to carry out work related tasks
- GS4.** complete tasks efficiently and accurately within stipulated time
- GS5.** inform/report to concerned person in case of any problem
- GS6.** make timely decisions for efficient utilization of resources
- GS7.** write reports such as accident report, in at least English/regional language



## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Maintain safe and secure working environment</i>	<b>20</b>	<b>13</b>	-	<b>8</b>
<b>PC1.</b> identify hazardous activities and the possible causes of risks or accidents in the workplace	4	2	-	2
<b>PC2.</b> implement safe working practices for dealing with hazards to ensure safety of self and others	3	1	-	2
<b>PC3.</b> conduct regular checks of the machines with support of the maintenance team to identify potential hazards	2	2	-	1
<b>PC4.</b> ensure that all the tools/equipment/fasteners/spare parts are arranged as per specifications/utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/work instructions	3	2	-	1
<b>PC5.</b> organise safety drills or training sessions to create awareness amongst others on the identified risks and safety practices	2	-	-	-
<b>PC6.</b> fill daily check sheet to report improvements done and risks identified	2	2	-	-
<b>PC7.</b> ensure that relevant safety boards/signs are placed on the shop floor for the safety of self and others	2	2	-	1
<b>PC8.</b> report any identified breaches in health, safety and security policies and procedures to the designated person	2	2	-	1
<i>Maintain Health and Hygiene</i>	<b>13</b>	<b>7</b>	-	<b>5</b>
<b>PC9.</b> ensure workplace, equipment, restrooms etc. are sanitized regularly	3	2	-	1
<b>PC10.</b> ensure team is aware about hygiene and sanitation regulations and following them on the shop floor	2	1	-	-
<b>PC11.</b> ensure availability of running water, hand wash and alcohol-based sanitizers at the workplace	2	2	-	1
<b>PC12.</b> report advanced hygiene and sanitation issues to appropriate authority	1	1	-	1



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC13.</b> follow stress and anxiety management techniques and support employees to cope with stress, anxiety etc	2	1	-	1
<b>PC14.</b> wear and dispose PPEs regularly and appropriately	3	-	-	1
<i>Effective waste management practices</i>	<b>6</b>	<b>4</b>	-	<b>1</b>
<b>PC15.</b> ensure recyclable, non-recyclable and hazardous wastes are segregated as per SOP	3	2	-	-
<b>PC16.</b> ensure proper mechanism is followed while collecting and disposing of non-recyclable, recyclable and reusable waste	3	2	-	1
<i>Material/energy conservation practices</i>	<b>11</b>	<b>6</b>	-	<b>6</b>
<b>PC17.</b> ensure malfunctioning (fumes/sparks/emission/vibration/noise) and lapse in maintenance of equipment are resolved effectively	2	2	-	1
<b>PC18.</b> prepare and analyze material and energy audit reports to decipher excessive consumption of material and water	3	2	-	1
<b>PC19.</b> identify possibilities of using renewable energy and environment friendly fuels	3	1	-	2
<b>PC20.</b> identify processes where material and energy/electricity utilization can be optimized	3	1	-	2
<b>NOS Total</b>	<b>50</b>	<b>30</b>	-	<b>20</b>

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	ASC/N9810
<b>NOS Name</b>	Manage work and resources (Manufacturing)
<b>Sector</b>	Automotive
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Generic
<b>NSQF Level</b>	5
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/12/2021
<b>Next Review Date</b>	28/07/2025
<b>NSQC Clearance Date</b>	28/07/2022

## ASC/N9805: Interpret engineering drawing

### Description

This NOS unit is about reading and interpreting all concepts, symbols, methods, views, etc. of engineering drawing.

### Scope

The scope covers the following :

- Interpret information from various views, projection, 2D and 3D shapes
- Identify drawing standards and symbols
- Modification and storage of drawing

### Elements and Performance Criteria

#### *Interpret information from various views, projection, 2D and 3D shapes*

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

- PC1.** interpret engineering drawing's uniqueness, dimensions and important features in 2D and 3D shapes
- PC2.** identify the difference between 2D and 3D shapes
- PC3.** explain difference between first angle projection and third angle projection in mechanical engineering drawing
- PC4.** interpret all the 3 axes (x, y and z axis) and geometrical shapes (cones, cylinder, sphere, cuboid, etc) on to a 2D and 3D projection
- PC5.** identify details of the machine component which are not clearly visible by interpreting section views

#### *Identify drawing standards and symbols*

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

- PC6.** interpret Geometric Dimensioning and Tolerancing (GD&T) symbols in the drawings
- PC7.** interpret symbols of Radius, controlled radius, spherical radius, diameter, spherical diameter, square, counterbore, spotface, depth, countersink, "by", maximum dimension, minimum dimension, reference, dimension origin etc
- PC8.** identify the sequence of operations which enables the selection and prioritization of the datums
- PC9.** read and interpret information from Tolerance Zone boundaries for part features in terms of shape and size

#### *Modification and storage of drawing*

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

- PC10.** observe any modification, changes required in the drawing and communicate the same to the concerned team in the organization
- PC11.** store the drawings in an easily accessible place, avoiding damage from moisture, chemicals and fire

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** relevant organisational standards such as work standard, Standard Operating Procedure, quality process, maintenance standards etc. followed in the company
- KU2.** importance of cycle-time and required output as per work order and work instructions
- KU3.** drawing standards used by the company
- KU4.** use of drawing tools such as scales, compass, types of pencils, CAD and CAM software etc.
- KU5.** the basics of engineering drawing, orthographic projection, isometric projection, GD&T etc.
- KU6.** importance of various projections, views, symbols and dimensions of drawing
- KU7.** use of geometric shapes like lines, angles, circles, etc for interpreting the drawing

### **Generic Skills (GS)**

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

- GS1.** read and interpret workplace related drawing
- GS2.** communicate the changes and requirements to supervisor by using relevant drawing terms and nomenclature
- GS3.** attentively listen and comprehend the information given by the supervisor/team members
- GS4.** write in English/regional language
- GS5.** recognise problem in drawing and take suitable action
- GS6.** analyse and apply the information gathered from observation, experience, reasoning or communication to act efficiently

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Interpret information from various views, projection, 2D and 3D shapes</i>	<b>21</b>	<b>11</b>	-	<b>10</b>
<b>PC1.</b> interpret engineering drawing's uniqueness, dimensions and important features in 2D and 3D shapes	5	3	-	2
<b>PC2.</b> identify the difference between 2D and 3D shapes	4	2	-	2
<b>PC3.</b> explain difference between first angle projection and third angle projection in mechanical engineering drawing	4	-	-	2
<b>PC4.</b> interpret all the 3 axes (x, y and z axis) and geometrical shapes (cones, cylinder, sphere, cuboid, etc) on to a 2D and 3D projection	5	3	-	2
<b>PC5.</b> identify details of the machine component which are not clearly visible by interpreting section views	3	3	-	2
<i>Identify drawing standards and symbols</i>	<b>23</b>	<b>15</b>	-	<b>8</b>
<b>PC6.</b> interpret Geometric Dimensioning and Tolerancing (GD&T) symbols in the drawings	6	4	-	2
<b>PC7.</b> interpret symbols of Radius, controlled radius, spherical radius, diameter, spherical diameter, square, counterbore, spotface, depth, countersink, "by", maximum dimension, minimum dimension, reference, dimension origin etc	6	4	-	2
<b>PC8.</b> identify the sequence of operations which enables the selection and prioritization of the datums	5	3	-	2
<b>PC9.</b> read and interpret information from Tolerance Zone boundaries for part features in terms of shape and size	6	4	-	2
<i>Modification and storage of drawing</i>	<b>6</b>	<b>4</b>	-	<b>2</b>
<b>PC10.</b> observe any modification, changes required in the drawing and communicate the same to the concerned team in the organization	3	2	-	1

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> store the drawings in an easily accessible place, avoiding damage from moisture, chemicals and fire	3	2	-	1
<b>NOS Total</b>	<b>50</b>	<b>30</b>	<b>-</b>	<b>20</b>

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	ASC/N9805
<b>NOS Name</b>	Interpret engineering drawing
<b>Sector</b>	Automotive
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Generic
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	25/11/2021
<b>Next Review Date</b>	24/06/2026
<b>NSQC Clearance Date</b>	24/06/2021



## **ASC/N3115: Manage shop floor Welding operations and team**

### **Description**

This NOS is about managing manpower and availability of material on shop floor for a shift/line. It is also about supervising production operations and implementing process and team improvement practices for achieving the targets.

### **Scope**

The scope covers the following :

- Manage manpower and material for the shift/line
- Supervise Production Operations
- Implement process improvement techniques
- Implement team improvement practices

### **Elements and Performance Criteria**

#### *Manage manpower and material for the shift/line*

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

- PC1.** allocate requisite manpower based on skill matrix to achieve production targets
- PC2.** support Shift In Charge/Process head/Shop head in finalizing the shift rosters for the week and month based on the production plan
- PC3.** maintain the information on leaves/in-out time and shift/line overtime of the team and share the information with the concerned authorities as per the organisational procedures
- PC4.** send inventory requirements to stores and purchase department and follow up with them to ensure the timely receipt of materials (Spares, Consumables, etc.)
- PC5.** maintain the movement of material and work pieces on the shop floor according to the TAKT time prescribed in the SOP/Work Plans
- PC6.** ensure that the operators and helpers have the required tools and equipment at the start of production process
- PC7.** ensure optimal resource utilization (man, machine and material) and streamlining of activities within the shift

#### *Supervise Production Operations*

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

- PC8.** co-ordinate with other departments like stores, paint shop, assembly line, quality, safety, production planning etc. regarding resolution of inter-related problems and achieving required production target and quality standards
- PC9.** implement corrective actions to reduce losses and wastages during shift operation and minimum rejection of components
- PC10.** prepare daily and monthly production MIS reports to analyse the actual performance with the production target and report the same to production incharge
- PC11.** verify the production and material movement related data entries in the system (manual/ERP) for the line/shift and ensure correctness of the data
- PC12.** support the maintenance team in finalizing and executing the preventive maintenance schedule for the shop/line

**PC13.** support the incharge/Engineer/Shop Head in analysing the various data sheets and reports related to production, maintenance, manpower deployment etc.

*Implement process improvement techniques*

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

**PC14.** analyse possible areas of improvements in production line and identify corrective measures to address the gaps

**PC15.** carry out audit of production process for capability of each operation and prepare reports on the non-compliances for the regulatory authorities by following organizational procedures

**PC16.** implement various process improvement techniques like Kaizen, 5S, Poka Yoke, TQM etc. on the production line to rectify the failure and gaps in the production process

**PC17.** analyse machine breakdown trends and current maintenance process to identify areas of improvement and corrective actions for improving the same

**PC18.** monitor and review the effectiveness of process improvement techniques and corrective actions on production and prepare reports for the regulatory authorities on the same

*Implement team improvement practices*

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

**PC19.** encourage team members/operators to suggest quality improvement measures through suggestion schemes, evaluate feasibility of the ideas and discuss their implementation with seniors

**PC20.** conduct daily floor meeting/morning meetings/staff meetings to communicate the information such as production targets, new guidelines, new processes etc. to team

**PC21.** organise training sessions for the operators and technicians to improve their skills and knowledge on new techniques and methods

**PC22.** resolve grievances within the team or escalate them to the concerned authorities if they are beyond the scope

**PC23.** counsel employees for any work related issues or any personal problems highlighted by the employee

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

The individual on the job needs to know and understand:

**KU1.** relevant manufacturing, quality and maintenance standards and procedures followed in the organisation

**KU2.** functional processes like Procurement, Store management, inventory management, quality management and key contact points for query resolution

**KU3.** requirement of raw materials, tools and equipment on the shift/line

**KU4.** how to prepare shift roster and maintain performance information of the team

**KU5.** use of ERP system for maintaining and updating production line data

**KU6.** documents and reports related to production process

**KU7.** various process improvement techniques like Kaizen, 5S, Poka Yoke, TQM etc

**KU8.** how to audit gaps and issues in production process and their analysis

**KU9.** various employee engagement and development practices

**KU10.** how to handle and solve employee grievances

## **Generic Skills (GS)**

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

- GS1.** read and interpret work instructions, reports and process documents
- GS2.** communicate the production requirements and issues to the seniors and other departments
- GS3.** attentively listen and comprehend the information given by the master technician/team members
- GS4.** write reports related to production process in English/regional language
- GS5.** recognise a workplace problem and take suitable action
- GS6.** analyse and apply the information gathered from observation, experience, reasoning or communication to act efficiently
- GS7.** plan and organise work according to the work requirements
- GS8.** report to the supervisor or deal with a colleague individually, depending on the type of concern
- GS9.** complete the assigned tasks with minimum supervision
- GS10.** explore new approach of doing things to resolve issues
- GS11.** suggest improvements (if any) in current ways of working

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Manage manpower and material for the shift/line</i>	<b>9</b>	<b>17</b>	-	<b>6</b>
<b>PC1.</b> allocate requisite manpower based on skill matrix to achieve production targets	2	3	-	1
<b>PC2.</b> support Shift In Charge/Process head/Shop head in finalizing the shift rosters for the week and month based on the production plan	1	3	-	1
<b>PC3.</b> maintain the information on leaves/in-out time and shift/line overtime of the team and share the information with the concerned authorities as per the organisational procedures	2	3	-	1
<b>PC4.</b> send inventory requirements to stores and purchase department and follow up with them to ensure the timely receipt of materials (Spares, Consumables, etc.)	1	2	-	1
<b>PC5.</b> maintain the movement of material and work pieces on the shop floor according to the TAKT time prescribed in the SOP/Work Plans	1	2	-	1
<b>PC6.</b> ensure that the operators and helpers have the required tools and equipment at the start of production process	1	2	-	-
<b>PC7.</b> ensure optimal resource utilization (man, machine and material) and streamlining of activities within the shift	1	2	-	1
<i>Supervise Production Operations</i>	<b>8</b>	<b>11</b>	-	<b>5</b>
<b>PC8.</b> co-ordinate with other departments like stores, paint shop, assembly line, quality, safety, production planning etc. regarding resolution of inter-related problems and achieving required production target and quality standards	1	1	-	1
<b>PC9.</b> implement corrective actions to reduce losses and wastages during shift operation and minimum rejection of components	2	3	-	1
<b>PC10.</b> prepare daily and monthly production MIS reports to analyse the actual performance with the production target and report the same to production incharge	1	3	-	1

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> verify the production and material movement related data entries in the system (manual/ERP) for the line/shift and ensure correctness of the data	1	2	-	1
<b>PC12.</b> support the maintenance team in finalizing and executing the preventive maintenance schedule for the shop/line	1	1	-	-
<b>PC13.</b> support the incharge/Engineer/Shop Head in analysing the various data sheets and reports related to production, maintenance, manpower deployment etc.	2	1	-	1
<i>Implement process improvement techniques</i>	<b>8</b>	<b>12</b>	-	<b>7</b>
<b>PC14.</b> analyse possible areas of improvements in production line and identify corrective measures to address the gaps	2	1	-	1
<b>PC15.</b> carry out audit of production process for capability of each operation and prepare reports on the non-compliances for the regulatory authorities by following organizational procedures	1	2	-	1
<b>PC16.</b> implement various process improvement techniques like Kaizen, 5S, Poka Yoke, TQM etc. on the production line to rectify the failure and gaps in the production process	2	5	-	2
<b>PC17.</b> analyse machine breakdown trends and current maintenance process to identify areas of improvement and corrective actions for improving the same	2	2	-	1
<b>PC18.</b> monitor and review the effectiveness of process improvement techniques and corrective actions on production and prepare reports for the regulatory authorities on the same	1	2	-	2
<i>Implement team improvement practices</i>	<b>5</b>	<b>10</b>	-	<b>2</b>
<b>PC19.</b> encourage team members/operators to suggest quality improvement measures through suggestion schemes, evaluate feasibility of the ideas and discuss their implementation with seniors	1	2	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC20.</b> conduct daily floor meeting/morning meetings/staff meetings to communicate the information such as production targets, new guidelines, new processes etc. to team	1	2	-	1
<b>PC21.</b> organise training sessions for the operators and technicians to improve their skills and knowledge on new techniques and methods	1	2	-	-
<b>PC22.</b> resolve grievances within the team or escalate them to the concerned authorities if they are beyond the scope	1	2	-	1
<b>PC23.</b> counsel employees for any work related issues or any personal problems highlighted by the employee	1	2	-	-
<b>NOS Total</b>	<b>30</b>	<b>50</b>	<b>-</b>	<b>20</b>

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	ASC/N3115
<b>NOS Name</b>	Manage shop floor Welding operations and team
<b>Sector</b>	Automotive
<b>Sub-Sector</b>	Manufacturing
<b>Occupation</b>	Metal Joining
<b>NSQF Level</b>	5
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	29/07/2021
<b>Next Review Date</b>	29/07/2026
<b>NSQC Clearance Date</b>	29/07/2021



## **ASC/N3113: Perform welding and post-welding activities**

### **Description**

This NOS is about performing end to end welding operations to ensure that the final products manufactured is as per the quality, cost and production norms set by the organization

### **Scope**

The scope covers the following :

- Prepare for the welding operations
- Perform welding activities
- Manage post-welding activities

### **Elements and Performance Criteria**

#### *Prepare for the welding operations*

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

- PC1.** identify the final output product based on the engineering drawing, Welding Procedure Specification (WPS), job orders etc. and take inputs from the master welding technician for production planning
- PC2.** prepare plan and schedule to meet the production target and give instructions to the welding operators and technicians about the processes required to be performed for achieving the same
- PC3.** ensure that all the tools, measuring instruments and input materials required for the job are in stock, functioning properly and are available on the shop floor
- PC4.** ensure that input materials are as per the control plan/check sheet and meet required quality standards
- PC5.** fill CLRI (Clean, Lubricate, Retighten & Inspection) check sheet and report to the supervisor about any abnormalities identified and action taken to resolve them
- PC6.** ensure that welding operators and technicians are using calibrated and cleaned tools, measuring instruments and equipment
- PC7.** check that welding apparatus is set for operation, workpieces and fixtures are installed on apparatus and aligned with the electrodes properly as per the job requirements
- PC8.** guide the welding operators and technicians in setting of the welding parameters as per the work instructions
- PC9.** ensure that electrodes distance, contact area, pressure, application etc. are maintained as specified in Work Instructions (WI)

#### *Perform welding activities*

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

- PC10.** weld the first component and inspect it for conformance to required specifications by using precision gauges
- PC11.** check the output for quality, fill run chart and correct the welding machine settings to meet the required quality output
- PC12.** supervise the welding operations and mass production process of component to ensure delivery as per plan

- PC13.** support the welding operators and technicians in performing welding process (SMAW/MIG/MAG/TIG/Robotic welding) as per SOP
- PC14.** ensure that welding operators and technicians are following the do's and don'ts of the manufacturing process as defined in SOPs/WI
- PC15.** take appropriate action in case of any irregularities e.g. power failure, rejection, tool breakage etc.
- PC16.** ensure the welding process parameters (air pressure, electrode force, electrode distance, gas flow, etc.) are within standards by reading the various gauges and correct them if not within standards
- PC17.** observe the machine operations for any malfunctions/defects in the component and immediately inform the supervisor/maintenance team for correction
- PC18.** record the data related to the loss time in case of machine stops and breakdown and report the same to the supervisors and maintenance team
- PC19.** support the operators and technicians in comparing the dimensions of the final welded piece as prescribed in the workorder and engineering drawing

#### *Manage post-welding activities*

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

- PC20.** conduct random sampling and quality checks on the finished products and report the same to the relevant authorities or take action for its improvement
- PC21.** ensure that the welding operators and technicians are segregating and storing the welded components properly by following organisational procedures
- PC22.** support the welding operators and technicians in minor maintenance activities such as oiling or cleaning of machine and its components as per the checklist
- PC23.** check the machine operation for proper working after maintenance activities
- PC24.** prepare and maintain records related to welding and maintenance conducted

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

The individual on the job needs to know and understand:

- KU1.** the basic principle of welding process
- KU2.** various types of welding such as SMAW, MIG, MAG, TIG, Resistance Welding (Seam Welding, Projection Welding), Robotic Welding etc. and their process flow
- KU3.** various types of welding joints
- KU4.** how to read and interpret welding drawings and symbols
- KU5.** SOP recommended by the manufacturer for using tools, measuring instruments, accessories etc. during the welding processes
- KU6.** ISO colour codes for welding apparatus such as gas cylinder, hoses, electric cables, etc.
- KU7.** different cleaning methods for electrodes, metal surfaces etc.
- KU8.** impact of various welding parameters like voltage, current, gas flow rate, speed, pressure, torch angle, cycle time, electrode distance etc. on the quality and quantity of welding
- KU9.** SOP recommended by the organisation for operating welding machine and its accessories
- KU10.** SOP recommended by the organisation for checking irregularities in the product/work piece
- KU11.** safety requirements during the welding work
- KU12.** the post welding processes like inspection, cleaning, maintenance etc.

- KU13.** various types of weld defects such as spatter, blow-hole, burn through, etc. and their remedies
- KU14.** how to check the first component produced for required specifications
- KU15.** about the various testing techniques like visual, destructive and non-destructive

### **Generic Skills (GS)**

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

- GS1.** read and interpret work instructions, engineering drawings, reports and process documents
- GS2.** communicate the welding requirements to the seniors and other departments
- GS3.** communicate issues to the supervisor that occur during welding process
- GS4.** attentively listen and comprehend the information given by the master technician/team members
- GS5.** write reports related to production process in English/regional language
- GS6.** recognise a workplace problem and take suitable action
- GS7.** analyse and apply the information gathered from observation, experience, reasoning or communication to act efficiently
- GS8.** plan and organise work according to the work requirements
- GS9.** report to the supervisor or deal with a colleague individually, depending on the type of concern
- GS10.** complete the assigned tasks with minimum supervision
- GS11.** suggest improvements (if any) in current ways of working

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare for the welding operations</i>	<b>14</b>	<b>18</b>	-	<b>8</b>
<b>PC1.</b> identify the final output product based on the engineering drawing, Welding Procedure Specification (WPS), job orders etc. and take inputs from the master welding technician for production planning	1	2	-	-
<b>PC2.</b> prepare plan and schedule to meet the production target and give instructions to the welding operators and technicians about the processes required to be performed for achieving the same	1	2	-	1
<b>PC3.</b> ensure that all the tools, measuring instruments and input materials required for the job are in stock, functioning properly and are available on the shop floor	3	2	-	2
<b>PC4.</b> ensure that input materials are as per the control plan/check sheet and meet required quality standards	1	2	-	1
<b>PC5.</b> fill CLRI (Clean, Lubricate, Retighten & Inspection) check sheet and report to the supervisor about any abnormalities identified and action taken to resolve them	1	2	-	-
<b>PC6.</b> ensure that welding operators and technicians are using calibrated and cleaned tools, measuring instruments and equipment	1	2	-	1
<b>PC7.</b> check that welding apparatus is set for operation, workpieces and fixtures are installed on apparatus and aligned with the electrodes properly as per the job requirements	2	2	-	2
<b>PC8.</b> guide the welding operators and technicians in setting of the welding parameters as per the work instructions	2	2	-	1
<b>PC9.</b> ensure that electrodes distance, contact area, pressure, application etc. are maintained as specified in Work Instructions (WI)	2	2	-	-
<i>Perform welding activities</i>	<b>11</b>	<b>22</b>	-	<b>8</b>

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> weld the first component and inspect it for conformance to required specifications by using precision gauges	2	2	-	1
<b>PC11.</b> check the output for quality, fill run chart and correct the welding machine settings to meet the required quality output	1	2	-	1
<b>PC12.</b> supervise the welding operations and mass production process of component to ensure delivery as per plan	1	2	-	-
<b>PC13.</b> support the welding operators and technicians in performing welding process (SMAW/MIG/MAG/TIG/Robotic welding) as per SOP	1	3	-	2
<b>PC14.</b> ensure that welding operators and technicians are following the do's and don'ts of the manufacturing process as defined in SOPs/WI	1	2	-	1
<b>PC15.</b> take appropriate action in case of any irregularities e.g. power failure, rejection, tool breakage etc.	1	2	-	1
<b>PC16.</b> ensure the welding process parameters (air pressure, electrode force, electrode distance, gas flow, etc.) are within standards by reading the various gauges and correct them if not within standards	1	2	-	-
<b>PC17.</b> observe the machine operations for any malfunctions/defects in the component and immediately inform the supervisor/maintenance team for correction	1	2	-	1
<b>PC18.</b> record the data related to the loss time in case of machine stops and breakdown and report the same to the supervisors and maintenance team	1	3	-	-
<b>PC19.</b> support the operators and technicians in comparing the dimensions of the final welded piece as prescribed in the workorder and engineering drawing	1	2	-	1
<i>Manage post-welding activities</i>	<b>5</b>	<b>10</b>	-	<b>4</b>

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC20.</b> conduct random sampling and quality checks on the finished products and report the same to the relevant authorities or take action for its improvement	1	2	-	1
<b>PC21.</b> ensure that the welding operators and technicians are segregating and storing the welded components properly by following organisational procedures	1	2	-	1
<b>PC22.</b> support the welding operators and technicians in minor maintenance activities such as oiling or cleaning of machine and its components as per the checklist	1	2	-	1
<b>PC23.</b> check the machine operation for proper working after maintenance activities	1	2	-	-
<b>PC24.</b> prepare and maintain records related to welding and maintenance conducted	1	2	-	1
<b>NOS Total</b>	<b>30</b>	<b>50</b>	<b>-</b>	<b>20</b>

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	ASC/N3113
<b>NOS Name</b>	Perform welding and post-welding activities
<b>Sector</b>	Automotive
<b>Sub-Sector</b>	Manufacturing
<b>Occupation</b>	Metal Joining
<b>NSQF Level</b>	5
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	29/07/2026
<b>NSQC Clearance Date</b>	29/07/2021



## DGT/VSQ/N0102: Employability Skills (60 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
- Career Development & Goal Setting
- 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.** identify employability skills required for jobs in various industries
- PC2.** identify and explore learning and employability portals

#### *Constitutional values – Citizenship*

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

- PC3.** recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.
- PC4.** follow environmentally sustainable practices

#### *Becoming a Professional in the 21st Century*

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

- PC5.** recognize the significance of 21st Century Skills for employment
- PC6.** practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life

#### *Basic English Skills*

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

- PC7.** use basic English for everyday conversation in different contexts, in person and over the telephone
- PC8.** read and understand routine information, notes, instructions, mails, letters etc. written in English
- PC9.** write short messages, notes, letters, e-mails etc. in English

#### *Career Development & Goal Setting*

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

- PC10.** understand the difference between job and career
- PC11.** prepare a career development plan with short- and long-term goals, based on aptitude

#### *Communication Skills*

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

- PC12.** follow verbal and non-verbal communication etiquette and active listening techniques in various settings
- PC13.** work collaboratively with others in a team

#### *Diversity & Inclusion*

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

- PC14.** communicate and behave appropriately with all genders and PwD
- PC15.** escalate any issues related to sexual harassment at workplace according to POSH Act

#### *Financial and Legal Literacy*

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

- PC16.** select financial institutions, products and services as per requirement
- PC17.** carry out offline and online financial transactions, safely and securely
- PC18.** identify common components of salary and compute income, expenses, taxes, investments etc
- PC19.** identify relevant rights and laws and use legal aids to fight against legal exploitation

#### *Essential Digital Skills*

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

- PC20.** operate digital devices and carry out basic internet operations securely and safely
- PC21.** use e- mail and social media platforms and virtual collaboration tools to work effectively
- PC22.** use basic features of word processor, spreadsheets, and presentations

#### *Entrepreneurship*

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

- PC23.** identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research
- PC24.** develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion
- PC25.** identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity

#### *Customer Service*

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

- PC26.** identify different types of customers
- PC27.** identify and respond to customer requests and needs in a professional manner.
- PC28.** follow appropriate hygiene and grooming standards

### *Getting ready for apprenticeship & Jobs*

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

- PC29.** create a professional Curriculum vitae (Résumé)
- PC30.** search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively
- PC31.** apply to identified job openings using offline /online methods as per requirement
- PC32.** answer questions politely, with clarity and confidence, during recruitment and selection
- PC33.** identify apprenticeship opportunities and register for it as per guidelines and requirements

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

The individual on the job needs to know and understand:

- KU1.** need for employability skills and different learning and employability related portals
- 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 English language for effective verbal (face to face and telephonic) and written communication in formal and informal set up
- KU6.** importance of career development and setting long- and short-term goals
- KU7.** about effective communication
- KU8.** POSH Act
- KU9.** Gender sensitivity and inclusivity
- KU10.** different types of financial institutes, products, and services
- KU11.** how to compute income and expenditure
- KU12.** importance of maintaining safety and security in offline and online financial transactions
- KU13.** different legal rights and laws
- KU14.** different types of digital devices and the procedure to operate them safely and securely
- KU15.** how to create and operate an e- mail account and use applications such as word processors, spreadsheets etc.
- KU16.** how to identify business opportunities
- KU17.** types and needs of customers
- KU18.** how to apply for a job and prepare for an interview
- KU19.** apprenticeship scheme and the process of registering on apprenticeship portal

### **Generic Skills (GS)**

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

- GS1.** read and write different types of documents/instructions/correspondence
- GS2.** communicate effectively using appropriate language in formal and informal settings
- GS3.** behave politely and appropriately with all
- GS4.** how to work in a virtual mode

- GS5.** perform calculations efficiently
- GS6.** solve problems effectively
- GS7.** pay attention to details
- GS8.** manage time efficiently
- GS9.** maintain hygiene and sanitization to avoid infection

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	<b>1</b>	<b>1</b>	-	-
<b>PC1.</b> identify employability skills required for jobs in various industries	-	-	-	-
<b>PC2.</b> identify and explore learning and employability portals	-	-	-	-
<i>Constitutional values – Citizenship</i>	<b>1</b>	<b>1</b>	-	-
<b>PC3.</b> recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
<b>PC4.</b> follow environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	<b>2</b>	<b>4</b>	-	-
<b>PC5.</b> recognize the significance of 21st Century Skills for employment	-	-	-	-
<b>PC6.</b> practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
<i>Basic English Skills</i>	<b>2</b>	<b>3</b>	-	-
<b>PC7.</b> use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
<b>PC8.</b> read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
<b>PC9.</b> write short messages, notes, letters, e-mails etc. in English	-	-	-	-
<i>Career Development &amp; Goal Setting</i>	<b>1</b>	<b>2</b>	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> understand the difference between job and career	-	-	-	-
<b>PC11.</b> prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
<i>Communication Skills</i>	<b>2</b>	<b>2</b>	-	-
<b>PC12.</b> follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
<b>PC13.</b> work collaboratively with others in a team	-	-	-	-
<i>Diversity &amp; Inclusion</i>	<b>1</b>	<b>2</b>	-	-
<b>PC14.</b> communicate and behave appropriately with all genders and PwD	-	-	-	-
<b>PC15.</b> escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
<i>Financial and Legal Literacy</i>	<b>2</b>	<b>3</b>	-	-
<b>PC16.</b> select financial institutions, products and services as per requirement	-	-	-	-
<b>PC17.</b> carry out offline and online financial transactions, safely and securely	-	-	-	-
<b>PC18.</b> identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
<b>PC19.</b> identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
<i>Essential Digital Skills</i>	<b>3</b>	<b>4</b>	-	-
<b>PC20.</b> operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
<b>PC21.</b> use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
<b>PC22.</b> use basic features of word processor, spreadsheets, and presentations	-	-	-	-
<i>Entrepreneurship</i>	<b>2</b>	<b>3</b>	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC23.</b> identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
<b>PC24.</b> develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
<b>PC25.</b> identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
<i>Customer Service</i>	<b>1</b>	<b>2</b>	-	-
<b>PC26.</b> identify different types of customers	-	-	-	-
<b>PC27.</b> identify and respond to customer requests and needs in a professional manner.	-	-	-	-
<b>PC28.</b> follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship &amp; Jobs</i>	<b>2</b>	<b>3</b>	-	-
<b>PC29.</b> create a professional Curriculum vitae (Résumé)	-	-	-	-
<b>PC30.</b> search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
<b>PC31.</b> apply to identified job openings using offline /online methods as per requirement	-	-	-	-
<b>PC32.</b> answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
<b>PC33.</b> identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
<b>NOS Total</b>	<b>20</b>	<b>30</b>	-	-



## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	DGT/VSQ/N0102
<b>NOS Name</b>	Employability Skills (60 Hours)
<b>Sector</b>	Cross Sectoral
<b>Sub-Sector</b>	Professional Skills
<b>Occupation</b>	Employability
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	31/08/2023
<b>Next Review Date</b>	31/08/2026
<b>NSQC Clearance Date</b>	31/08/2023

## 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 the proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on the knowledge bank of questions created by the SSC.
3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for the theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

### Minimum Aggregate Passing % at QP Level : 70

(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
ASC/N9810.Manage work and resources (Manufacturing)	50	30	-	20	100	10
ASC/N9805.Interpret engineering drawing	50	30	-	20	100	20
ASC/N3115.Manage shop floor Welding operations and team	30	50	-	20	100	25
ASC/N3113.Perform welding and post-welding activities	30	50	-	20	100	35
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	10
<b>Total</b>	<b>180</b>	<b>190</b>	<b>-</b>	<b>80</b>	<b>450</b>	<b>100</b>

### Acronyms

<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualifications Pack
<b>TVET</b>	Technical and Vocational Education and Training
<b>SOP</b>	Standard Operating Procedure
<b>GD&amp;T</b>	Geometric Dimensioning & Tolerancing
<b>CAD</b>	Computer-Aided Drafting
<b>CAM</b>	Computer-Aided Manufacturing

## Glossary

<b>Sector</b>	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.
<b>Sub-sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
<b>Occupational Standards (OS)</b>	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.
<b>Performance Criteria (PC)</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standards (NOS)</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualifications Pack (QP)</b>	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.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	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.
<b>Scope</b>	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.
<b>Knowledge and Understanding (KU)</b>	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.

<b>Organisational Context</b>	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.
<b>Technical Knowledge</b>	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
<b>Core Skills/ Generic Skills (GS)</b>	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.
<b>Electives</b>	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.
<b>Options</b>	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.