



Qualification Pack



MANAGER (OSHE)

QP Code: SSD/VSQ/Q0106

Version: 1.0

NSQF Level: 6

Safety Skill Development Foundation || Safety Skill Development Foundation D-507, Light House,
Town Square 1 Sector 82A
Gurugram || email:anand.ssdf@gmail.com



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SSD/VSQ/Q0106: MANAGER (OSHE)

Brief Job Description

Manager (OSHE) is responsible for the implementation of health and safety policy, ensure organization's health and safety compliance as per the local/national/global legislative requirements identify and mitigate workplace hazards, suggest actionable controls, and advise the management for the steps to be taken in maintaining safe working conditions in the organization and promote positive safety culture.

Personal Attributes

The professional should be mentally and professionally fit to take responsibility for compliances of health and safety standards, rules and meet the health and safety standards at the workplace with his/her integrity, objectivity, independence, knowledge of law, expression, and code of ethics.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- [SSD/VSQ/N0132: Occupational Safety, Health, and Environment \(OSHE\) Management.](#)
- [SSD/VSQ/N0133: Hazard Identification & Risk Analysis.](#)
- [SSD/VSQ/N0121: Fire Safety and Emergency Management Plan](#)
- [SSD/VSQ/N0122: Hazard Mitigation Methodologies](#)
- [SSD/VSQ/N0123: Hazards and Risk Perception.](#)
- [SSD/VSQ/N0134: Statutes & Legislative requirements in Health & Safety](#)
- [SSD/VSQ/N0124: Statutes and Legislative requirements in OSHE \(International\).](#)
- [SSD/VSQ/N0125: Safety Auditing and Inspection](#)
- [SSD/VSQ/N0112: Pollution & Environment Management, Global warming, and sustainability.](#)
- [SSD/VSQ/N0104: Plan, Organize and Emergency protocols](#)
- [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Cross Sectoral
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Sub-Sector	Hydrocarbon, Iron & steel, Mining, Power, Automotive, Construction, Chemicals & Petrochemicals, and others.
Occupation	Occupational Safety Health & Environment (OSHE) Engineering & Management
Country	India
NSQF Level	6
Credits	27
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3257.0600 : Health, Safety & Environment Officer.
Minimum Educational Qualification & Experience	Completed 4 year UG program (in relevant field) with 3-5 Years of experience (3.5 Years) OR Completed 3 year UG degree (in relevant field) with 8 Years of experience OR Previous relevant Qualification of NSQF Level (5.5) with 1-2 Years of experience (1.5 Years) OR Previous relevant Qualification of NSQF Level (5) with 3 Years of experience
Minimum Level of Education for Training in School	12th Class
Pre-Requisite License or Training	Nil
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	31/01/2027
NSQC Approval Date	31/01/2024
Version	1.0
Reference code on NQR	QC-06-CO-02086-2024-V1-SSDF
NQR Version	1.0

Remarks:

NA



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SSD/VSQ/N0132: Occupational Safety, Health, and Environment (OSHE) Management.

Description

The NOS describes the knowledge & skills required by the professional to understand occupational health & safety, identifying the loopholes and gaps in the system, fire hazard at workplace, firefighting methods, and systematic approach in identifying and correcting probable hazards including fire accidents.

Scope

The scope covers the following :

- Understand health & safety requirements, financial losses of an organization because of an accident.
- Understand safety policy formulation and health & safety objectives.
- Identify fire hazards at the workplace.
- Understand different classes of fire, evacuations, fire drills, use of PPEs.
- Onboard and manage contractors to comply with statutory requirements in occupational OSHE.

Elements and Performance Criteria

Health & Safety at workplace

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

- PC1.** Understand the concept of Health, Safety and Environment management at the workplace, its importance and the moral, financial and legal reasons for health and safety at the workplace.
- PC2.** Understand “Accident Cost- Iceberg” theory of direct and indirect cost incurred from an incident.
- PC3.** Understand the employer responsibilities in providing safe working conditions and the employee rights & responsibilities at a workplace, safety culture, its indicators and role of International Labour Organisation in health & safety.
- PC4.** Understand safety Policy, the general statement of intent in a safety policy, its aim, objectives and “SMART” concept of goal setting.

PDCA Cycle & Safety training

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

- PC5.** Understand the requirement of Plan-Do-Check-Act (PDCA) Cycle in safety management system; understand and analyze “Plan” & “Do” stages and “Check” and “Act” stages of PDCA cycle.
- PC6.** Understand the need of training, the contents of induction training & competent persons at the workplace, carry out “Toolbox talk” and “Induction training”.
- PC7.** Learn gas testing using - LEL sensor, O2 sensor, H2S sensor, Co-Sensor.

Understanding Fire Accidents

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



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- PC8.** Understand basic definitions- Flammable liquids, Combustible matter/liquids, Combustible gases, combustion, oxygen percentage in air, exothermic and endothermic reactions, radiation, understand the Fire triangle and classification fire. Understand the common reason for fire accidents.
- PC9.** Understand types of fire-fighting equipment, its principle of operation, components in different fire extinguishers, PASS technique & operation of fire hydrants.
- PC10.** Understand the use of smoke detectors, fire alarm, emergency lighting, flashing light, sprinklers, and pressure requirements in fire hydrants, PPE's, SCBA (Self-contained breathing apparatus) and use of SCBA.
- PC11.** Understand the requirements of emergency evacuation - Escape route as per IS1644, emergency door, assembly point, evacuation, evacuation of differently abled, evacuation procedure, fire drills on emergency evacuation.

Role of Hierarchy in Ensuring Process Safety

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

- PC12.** Understand the role of management in an organization, role of safety supervisor, safety executive, safety officer, safety engineer, and safety manager.
- PC13.** Understand fundamentals of process safety, OSHA standards. QRA, LOPA, SIL, FERA, EERA.
- PC14.** Understand the role of occupier, controller of premise, role & need of contractors in the organization & work permit to contractors, role of safety committee.
- PC15.** Understand the selection prerequisites of a contractor, management of contractors, review meetings, safety committee meetings, method statements, accident reporting, training programs, statutory inspections, permit to work, gaps in contractor safety implementation of contractor safety.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** Health, Safety and Environment management, Accident Cost- Iceberg theory of direct and indirect cost incurred from an incident.
- KU2.** Safety Policy and the general statement of intent in the safety policy.
- KU3.** Role of management and hierarchy in the organizations, roles of safety team.
- KU4.** PDCA cycles in health and safety management.
- KU5.** Definitions in fire & fire terminologies, fire triangle, fire classification & common reasons for fire.
- KU6.** Fire spread & control by fuel source, control of ignition source and control of oxygen.
- KU7.** Fire extinguishers, water hydrant system & operation of water hydrant system.
- KU8.** New technological interventions safety and firefighting.
- KU9.** PPEs like SCBA, Hard hats, Safety shoes etc...
- KU10.** Evacuation route and emergency signages, emergency preparedness by training and mock drills.

Generic Skills (GS)

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



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- GS1.** Effectively read, write and comprehend diverse languages.
- GS2.** Effectively communicate in the local language.
- GS3.** Apply Basic mathematics operations and ,methods of operating mathematical tools.
- GS4.** Plan and organize resource optimization.
- GS5.** Efficiently manage administrative tasks, make decisions, and resolve conflicts.
- GS6.** Understand & adhere to instructions related to safety protocols.
- GS7.** Use of personal protective equipment.



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Health & Safety at workplace</i>	18	12	-	-
PC1. Understand the concept of Health, Safety and Environment management at the workplace, its importance and the moral, financial and legal reasons for health and safety at the workplace.	5	3	-	-
PC2. Understand “Accident Cost- Iceberg” theory of direct and indirect cost incurred from an incident.	5	3	-	-
PC3. Understand the employer responsibilities in providing safe working conditions and the employee rights & responsibilities at a workplace, safety culture, its indicators and role of International Labour Organisation in health & safety.	5	3	-	-
PC4. Understand safety Policy, the general statement of intent in a safety policy, its aim, objectives and “SMART” concept of goal setting.	3	3	-	-
<i>PDCA Cycle & Safety training</i>	12	8	-	-
PC5. Understand the requirement of Plan-Do-Check-Act (PDCA) Cycle in safety management system; understand and analyze “Plan” & “Do” stages and “Check” and “Act” stages of PDCA cycle.	5	3	-	-
PC6. Understand the need of training, the contents of induction training & competent persons at the workplace, carry out “Toolbox talk” and “Induction training”.	4	2	-	-
PC7. Learn gas testing using - LEL sensor, O2 sensor, H2S sensor, Co-Sensor.	3	3	-	-
<i>Understanding Fire Accidents</i>	14	10	-	-
PC8. Understand basic definitions- Flammable liquids, Combustible matter/liquids, Combustible gases, combustion, oxygen percentage in air, exothermic and endothermic reactions, radiation, understand the Fire triangle and classification fire. Understand the common reason for fire accidents.	5	3	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC9. Understand types of fire-fighting equipment, its principle of operation, components in different fire extinguishers, PASS technique & operation of fire hydrants.	4	2	-	-
PC10. Understand the use of smoke detectors, fire alarm, emergency lighting, flashing light, sprinklers, and pressure requirements in fire hydrants, PPE's, SCBA (Self-contained breathing apparatus) and use of SCBA.	3	3	-	-
PC11. Understand the requirements of emergency evacuation – Escape route as per IS1644, emergency door, assembly point, evacuation, evacuation of differently abled, evacuation procedure, fire drills on emergency evacuation.	2	2	-	-
<i>Role of Hierarchy in Ensuring Process Safety</i>	16	10	-	-
PC12. Understand the role of management in an organization, role of safety supervisor, safety executive, safety officer, safety engineer, and safety manager.	3	2	-	-
PC13. Understand fundamentals of process safety, OSHA standards. QRA, LOPA, SIL, FERA, EERA.	5	4	-	-
PC14. Understand the role of occupier, controller of premise, role & need of contractors in the organization & work permit to contractors, role of safety committee.	4	2	-	-
PC15. Understand the selection prerequisites of a contractor, management of contractors, review meetings, safety committee meetings, method statements, accident reporting, training programs, statutory inspections, permit to work, gaps in contractor safety implementation of contractor safety.	4	2	-	-
NOS Total	60	40	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	SSD/VSQ/N0132
NOS Name	Occupational Safety, Health, and Environment (OSHE) Management.
Sector	Cross Sectoral
Sub-Sector	
Occupation	Occupational Safety Health & Environment (OSHE) Engineering & Management
NSQF Level	6
Credits	4
Version	1.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2027
NSQC Clearance Date	31/01/2024



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SSD/VSQ/N0133: Hazard Identification & Risk Analysis.

Description

The NOS describes the knowledge and skills required by the professional to identify hazards at the workplace, severity of hazards, risk rating analysis, prevent accidents and mishaps at a workplace by implementing accident prevention theories.

Scope

The scope covers the following :

- Identify hazards, analyze categories of the hazards and perform Hazard and Operability Analysis (HAZOP).
- Fault Tree analysis & Event Tree Analysis, failure modes and effect analysis.
- Perform Hazard Identification and Risk Assessment (HIRA).
- Job Safety Analysis.
- Implement Hierarchy of control in improvement methodologies.
- Understand hidden risk in improved methodologies.

Elements and Performance Criteria

Hazard Identification & Control

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

- PC1.** Understand hazards, unsafe conditions & acts, incidents & accidents, fatal, non-fatal, near miss incidents & accidents, lost time injury & first aid injury.
- PC2.** Understand hazard categories, controls, hierarchy of controls.
- PC3.** Understand hazards from electricity, fire, workplace hazard - work at height, confined space, working in an excavation, lone working, slips & trips, lifting and Rigging hazards.
- PC4.** Understand different hazard categories & control: Hazardous substances, Musculoskeletal disorders, manual handling, and load handling equipment, noise, vibration, radiation, mental ill- health, violence at work, abuse at workplace.

Accident Analysis Theories

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

- PC5.** Understand basic definitions- incident, accident, Injury, lost time injury, unsafe condition, unsafe Acts, dangerous occurrences, hazards, error, near miss.
- PC6.** Understand theories of accident causation- "Heinrich's Domino theory", "Heinrich 300-29-1 model", "Ferrell's Human Factor Model", "Petersen's Accident/Incident Model" and "Reason's Swiss Cheese Model".
- PC7.** Calculate "Frequency rate & Incident rate". Calculate "Lost time case rate".
- PC8.** Calculate "DART rate". Calculate "Severity rate".

Accident Prevention Techniques & Theory of Hierarchical needs.

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

- PC9.** Understand "Fault tree analysis" and "Event tree analysis", "HAZOP- Hazard, "Operability analysis" and "Job safety analysis".



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- PC10.** Understand “Hazard Identification and risk assessment”.
- PC11.** Learn the hierarchy of controls, Importance of hierarchy of control & steps in hierarchy of control.
- PC12.** Understand Maslow’s theory of Hierarchical Needs, Hertzberg’s two-factor theory and McClelland’s theory of needs, Vroom’s Theory of Expectancy, McGregor’s theory X and theory Y and Alderfer’s ERG theory.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** Incident related definitions & incident terminologies.
- KU2.** Theories of accident causation i.e., Heinrich, domino, Farrell, Petersen etc.
- KU3.** Frequency rate & lost time case rate.
- KU4.** Dart & severity rate, fault tree & event tree analysis.
- KU5.** HAZOP, HIRA & JSA.
- KU6.** Hierarchy of Control and how it controls hazards at every level.
- KU7.** Motivational theories in health and safety like Maslow, Hertzberg etc.
- KU8.** Risks & hazards at work places, safety & health requirements at work places, PCDA safety audit cycles.
- KU9.** Safety & health measures against risks & hazards at work site.
- KU10.** Government safety legislation, rules and compliances.

Generic Skills (GS)

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

- GS1.** Effectively read, write and comprehend diverse languages.
- GS2.** Effectively communicate in the local language.
- GS3.** Apply Basic mathematics operations and ,methods of operating mathematical tools.
- GS4.** Plan and organize resource optimization.
- GS5.** Efficiently manage administrative tasks, make decisions, and resolve conflicts.
- GS6.** Understand & adhere to instructions related to safety protocols.
- GS7.** Use of personal protective equipment.



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Hazard Identification & Control</i>	24	16	-	-
PC1. Understand hazards, unsafe conditions & acts, incidents & accidents, fatal, non-fatal, near miss incidents & accidents, lost time injury & first aid injury.	6	4	-	-
PC2. Understand hazard categories, controls, hierarchy of controls.	6	4	-	-
PC3. Understand hazards from electricity, fire, workplace hazard - work at height, confined space, working in an excavation, lone working, slips & trips, lifting and Rigging hazards.	6	4	-	-
PC4. Understand different hazard categories & control: Hazardous substances, Musculoskeletal disorders, manual handling, and load handling equipment, noise, vibration, radiation, mental ill-health, violence at work, abuse at workplace.	6	4	-	-
<i>Accident Analysis Theories</i>	12	8	-	-
PC5. Understand basic definitions- incident, accident, Injury, lost time injury, unsafe condition, unsafe Acts, dangerous occurrences, hazards, error, near miss.	4	2	-	-
PC6. Understand theories of accident causation- "Heinrich's Domino theory", "Heinrich 300-29-1 model", "Ferrell's Human Factor Model", "Petersen's Accident/Incident Model" and "Reason's Swiss Cheese Model".	4	2	-	-
PC7. Calculate "Frequency rate & Incident rate". Calculate "Lost time case rate".	2	2	-	-
PC8. Calculate "DART rate". Calculate "Severity rate".	2	2	-	-
<i>Accident Prevention Techniques & Theory of Hierarchical needs.</i>	24	16	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC9. Understand “Fault tree analysis” and “Event tree analysis”, “HAZOP- Hazard, "Operability analysis” and “Job safety analysis”.	6	4	-	-
PC10. Understand “Hazard Identification and risk assessment”.	6	4	-	-
PC11. Learn the hierarchy of controls, Importance of hierarchy of control & steps in hierarchy of control.	6	4	-	-
PC12. Understand Maslow’s theory of Hierarchical Needs, Herzberg’s two-factor theory and McClelland’s theory of needs, Vroom’s Theory of Expectancy, McGregor’s theory X and theory Y and Alderfer’s ERG theory.	6	4	-	-
NOS Total	60	40	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	SSD/VSQ/N0133
NOS Name	Hazard Identification & Risk Analysis.
Sector	Cross Sectoral
Sub-Sector	
Occupation	Occupational Safety Health & Environment (OSHE) Engineering & Management
NSQF Level	6
Credits	4
Version	1.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2027
NSQC Clearance Date	31/01/2024



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SSD/VSQ/N0121: Fire Safety and Emergency Management Plan

Description

The NOS describes the knowledge and skills required by the professional to understand different classes of fire, identify fire hazards, develop fire plans, evacuation plan & evacuation drills, and firefighting plans. The NOS also emphasizes the emergency management skills of the professional to tackle emergencies and will help the professional in the development of emergency plans and ensure a safe working environment.

Scope

The scope covers the following :

- Identify and mitigate the possibility of fire at the workplace.
- Develop plans to tackle different classes of fire.
- Develop plans for evacuations and fire drills.
- Prepare fire-fighting plans for different industries.

Elements and Performance Criteria

Understanding of Fire Hazards

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

- PC1.** Understand basic definitions related to fire safety. Fire triangle and classification fire. Learn the science of instigation of fire. The stages of fire instigation.
- PC2.** Understand the science of fire spread and mitigation techniques.
- PC3.** Understand different types of extinguishing media used in fire fighting equipment.

Fire-fighting Equipments

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

- PC4.** Understand types of fire-fighting equipment and their principle of operation.
- PC5.** Perform firefighting equipment planning and placement as per NBC (National Building Code).
- PC6.** Identify new technological interventions in fire safety.
- PC7.** Demonstrate use of PPEs in fire safety –SCBA (Self-contained breathing apparatus).

Fire-fighting plan & evacuations

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

- PC8.** Plan emergency evacuation route as per IS1644.
- PC9.** Understand Fire door, emergency directional signages, assembly point, evacuation, evacuation of differently abled, evacuation procedure, role of “Fire Marshals”. Carry out fire drills on emergency evacuation and fire fighting equipment.
- PC10.** Perform Fire Safety Risk assessment and control (HIRAC).

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** Definitions in fire & fire terminologies.



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- KU2.** Fire triangle, fire classification & common reasons for fire.
- KU3.** Fire stages, Fire spread & control by fuel source, control of ignition source and control of oxygen.
- KU4.** Fire extinguishers: Dry chemical powder, Co2 etc...
- KU5.** Water hydrant system & operation of water hydrant system.
- KU6.** New technological interventions in firefighting.
- KU7.** PPEs like SCBA, Hard hats, Safety shoes etc.
- KU8.** Evacuation route and emergency signages.
- KU9.** Emergency preparedness by training and mock drills.

Generic Skills (GS)

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

- GS1.** Effectively read, write and comprehend diverse languages.
- GS2.** Effectively communicate in the local language.
- GS3.** Apply Basic mathematics operations and ,methods of operating mathematical tools.
- GS4.** Plan and organize resource optimization.
- GS5.** Efficiently manage administrative tasks, make decisions, and resolve conflicts.
- GS6.** Understand & adhere to instructions related to safety protocols.
- GS7.** Use of personal protective equipment



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Understanding of Fire Hazards</i>	18	12	-	-
PC1. Understand basic definitions related to fire safety. Fire triangle and classification fire. Learn the science of instigation of fire. The stages of fire instigation.	6	4	-	-
PC2. Understand the science of fire spread and mitigation techniques.	6	4	-	-
PC3. Understand different types of extinguishing media used in fire fighting equipment.	6	4	-	-
<i>Fire-fighting Equipments</i>	24	16	-	-
PC4. Understand types of fire-fighting equipment and their principle of operation.	6	4	-	-
PC5. Perform firefighting equipment planning and placement as per NBC (National Building Code).	6	4	-	-
PC6. Identify new technological interventions in fire safety.	6	4	-	-
PC7. Demonstrate use of PPEs in fire safety –SCBA (Self-contained breathing apparatus).	6	4	-	-
<i>Fire-fighting plan & evacuations</i>	18	12	-	-
PC8. Plan emergency evacuation route as per IS1644.	6	4	-	-
PC9. Understand Fire door, emergency directional signages, assembly point, evacuation, evacuation of differently abled, evacuation procedure, role of “Fire Marshals”. Carry out fire drills on emergency evacuation and fire fighting equipment.	6	4	-	-
PC10. Perform Fire Safety Risk assessment and control (HIRAC).	6	4	-	-
NOS Total	60	40	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	SSD/VSQ/N0121
NOS Name	Fire Safety and Emergency Management Plan
Sector	Cross Sectoral
Sub-Sector	
Occupation	Occupational Safety Health & Environment (OSHE) Engineering & Management
NSQF Level	6
Credits	2
Version	1.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2027
NSQC Clearance Date	31/01/2024



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SSD/VSQ/N0122: Hazard Mitigation Methodologies

Description

The NOS describes the knowledge & skills required by the professional to identify and control hazards at the workplace, analyze severity of hazards, give risk rating, and implement improved hazard mitigation methodologies.

Scope

The scope covers the following :

- Identify hazards at the workplace.
- Implement hierarchy of control in risk assessment.
- Identify residual or hidden risks in implementation of new control measures.
- Perform Risk assessment at workplace.

Elements and Performance Criteria

Understanding Hazard categories

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

- PC1.** Understand the terminologies/definitions in risk assessment. Identify hazard categories.
- PC2.** Understand the hierarchy of controls in safety & Importance of each hierarchy of control.
- PC3.** Understand different hazards & controls in electricity, use of tools & equipment, machinery, Work at height, confined space, working in an excavation.

Hazard Control measures

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

- PC4.** Understand different hazard & control for lone working and slips & trips, Hazardous substances, Musculoskeletal disorders, manual handling, and load handling equipment.
- PC5.** Understand different hazard & control for Noise, vibration, radiation, mental ill- health, violence at work, substance abuse at workplace, Lifting and Rigging hazards and control.
- PC6.** Understand & perform Risk matrix in risk assessment.
- PC7.** Perform risk assessment in warehouse, construction site, manufacturing industry, process industry and oil and gas industry.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** Various risks & hazards at work places.
- KU2.** Safety & health requirements at work places.
- KU3.** Safety audit types, methods, processes, and stages.
- KU4.** Safety & health measures against risks & hazards at work site.
- KU5.** Government safety legislation, rules, and compliances.
- KU6.** Various Government agencies in ensuring health & safety measures.



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- KU7.** Hierarchy in the organizations.
- KU8.** PDCA safety audit cycles.
- KU9.** Reporting preparation, processing of safety audit.

Generic Skills (GS)

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

- GS1.** Effectively read, write and comprehend diverse languages.
- GS2.** Effectively communicate in the local language.
- GS3.** Apply Basic mathematics operations and ,methods of operating mathematical tools.
- GS4.** Plan and organize resource optimization.
- GS5.** Efficiently manage administrative tasks, make decisions, and resolve conflicts.
- GS6.** Understand & adhere to instructions related to safety protocols.
- GS7.** Use of personal protective equipment.



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Understanding Hazard categories</i>	18	12	-	-
PC1. Understand the terminologies/definitions in risk assessment. Identify hazard categories.	6	4	-	-
PC2. Understand the hierarchy of controls in safety & Importance of each hierarchy of control.	6	4	-	-
PC3. Understand different hazards & controls in electricity, use of tools & equipment, machinery, Work at height, confined space, working in an excavation.	6	4	-	-
<i>Hazard Control measures</i>	42	28	-	-
PC4. Understand different hazard & control for lone working and slips & trips, Hazardous substances, Musculoskeletal disorders, manual handling, and load handling equipment.	6	4	-	-
PC5. Understand different hazard & control for Noise, vibration, radiation, mental ill- health, violence at work, substance abuse at workplace, Lifting and Rigging hazards and control.	12	8	-	-
PC6. Understand & perform Risk matrix in risk assessment.	12	8	-	-
PC7. Perform risk assessment in warehouse, construction site, manufacturing industry, process industry and oil and gas industry.	12	8	-	-
NOS Total	60	40	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	SSD/VSQ/N0122
NOS Name	Hazard Mitigation Methodologies
Sector	Cross Sectoral
Sub-Sector	
Occupation	Occupational Safety Health & Environment (OSHE) Engineering & Management
NSQF Level	6
Credits	2
Version	1.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2027
NSQC Clearance Date	31/01/2024



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SSD/VSQ/N0123: Hazards and Risk Perception.

Description

The NOS describes the knowledge and skills required by the professional to analyze different perceived risks with a wide range of effects (emotions, feelings, moods, etc.), cognitive, contextual, and individual personality traits, previous experience, age, and other factors influencing work related injuries.

Scope

The scope covers the following :

- Understand perceived risks and effects on individuals.
- Analyze risk tolerance capability of individuals.
- Include risk perception as a dynamic hazard in risk assessment and analysis.

Elements and Performance Criteria

Evaluation of Risk

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

- PC1.** Perform subjective evaluation of risk with the help of individuality context, risk tolerance, risk magnitude appraisal, risk acceptance and risk behavior.
- PC2.** Analyze real modeled risk; distinguish between perceived risk and modeled risk.
- PC3.** Understand risk perception & attitudes.
- PC4.** Identify different risk communication process frameworks.

Risk perception management

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

- PC5.** Understand risk perception and perceived risk management.
- PC6.** Identify the correlation in risk perception influencing hazard mitigation methodologies.
- PC7.** Underlying hazards at workplace due to poor risk perception.
- PC8.** Understand Behavior based safety and its limitations.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** Various activities that influence behavior.
- KU2.** Human risk tolerance
- KU3.** Risk communication methodologies.
- KU4.** Risk management.
- KU5.** Underlying risk.
- KU6.** Limitations of risk assessment.
- KU7.** Limitations of behavior-based safety.
- KU8.** Consequences of poor risk perception.



Qualification Pack

Generic Skills (GS)

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

- GS1.** Effectively read, write and comprehend diverse languages.
- GS2.** Effectively communicate in the local language.
- GS3.** Apply Basic mathematics operations and ,methods of operating mathematical tools.
- GS4.** Plan and organize resource optimization.
- GS5.** Efficiently manage administrative tasks, make decisions, and resolve conflicts.
- GS6.** Understand & adhere to instructions related to safety protocols.
- GS7.** Use of personal protective equipment.



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Evaluation of Risk</i>	30	20	-	-
PC1. Perform subjective evaluation of risk with the help of individuality context, risk tolerance, risk magnitude appraisal, risk acceptance and risk behavior.	12	8	-	-
PC2. Analyze real modeled risk; distinguish between perceived risk and modeled risk.	6	4	-	-
PC3. Understand risk perception & attitudes.	6	4	-	-
PC4. Identify different risk communication process frameworks.	6	4	-	-
<i>Risk perception management</i>	30	20	-	-
PC5. Understand risk perception and perceived risk management.	6	4	-	-
PC6. Identify the correlation in risk perception influencing hazard mitigation methodologies.	12	8	-	-
PC7. Underlying hazards at workplace due to poor risk perception.	6	4	-	-
PC8. Understand Behavior based safety and its limitations.	6	4	-	-
NOS Total	60	40	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	SSD/VSQ/N0123
NOS Name	Hazards and Risk Perception.
Sector	Cross Sectoral
Sub-Sector	
Occupation	Occupational Safety Health & Environment (OSHE) Engineering & Management
NSQF Level	6
Credits	2
Version	1.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2027
NSQC Clearance Date	31/01/2024



Qualification Pack

SSD/VSQ/N0134: Statutes & Legislative requirements in Health & Safety

Description

The NOS describes the knowledge & skills of the professionals of regulations & regulatory compliance requirements as per the laws governed by the Government of India. The professional will be able to identify the regulatory & compliance gaps and recommend remedial measures.

Scope

The scope covers the following :

- Understand & comply with BOCW Act 1996.
- Understand & comply with Factories Act, 1948.
- Understand & comply with OSH Code 2020.
- Environment Protection Act, 1986.

Elements and Performance Criteria

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

- PC1.** Apply regulatory obligations pertaining to safety, health, and environmental compliance in accordance with the BOCW Act of 1996.
- PC2.** Apply regulatory obligations pertaining to safety, health & environment compliance as per Factories Act, 1948.
- PC3.** Apply regulatory obligations pertaining to safety, health & environment compliance as per OSH Code 2020 & Occupational Safety & Health Administration (OSHA) compliance requirements.
- PC4.** Apply regulatory obligations pertaining to Environment Protection Act, 1986 & ILO Guidelines related to EHS.
- PC5.** Apply regulatory obligations pertaining to Oil Industry Safety Directorate (OSID) Guidelines.
- PC6.** Apply regulatory obligations pertaining to Mines Vocational Training Rules - DGMS.
- PC7.** Apply regulatory obligations pertaining to Electricity Act 2010 & 2003.
- PC8.** Apply regulatory obligations pertaining to National Building Code (NBC) - 2016.
- PC9.** Apply regulatory obligations pertaining to National Fire Protection Association regulations.
- PC10.** Apply regulatory obligations pertaining to Petroleum & Explosive Safety Organization (PESO)- Explosive Act 1884.
- PC11.** Apply regulatory obligations pertaining to Gas Cylinders Rule 2016.
- PC12.** Apply regulatory obligations pertaining to The Boilers Act 1923.
- PC13.** Apply regulatory obligations pertaining to Workmen Compensation Act 1923 & Employee State Insurance Act 1948 and related compliance.
- PC14.** Apply regulatory obligations pertaining to Motor vehicle Act 1988.
- PC15.** Apply regulatory obligations pertaining to First Aid at workplaces and training on first aid.

Knowledge and Understanding (KU)



Qualification Pack

The individual on the job needs to know and understand:

- KU1.** Safety Requirement at workplace.
- KU2.** Safety management theories.
- KU3.** Risks & hazards at work places.
- KU4.** Fire hazard, firefighting equipment & firefighting methods.
- KU5.** Environmental issues being faced.
- KU6.** Regulating bodies in India on safety, health & environment at work places.
- KU7.** Hierarchy in the organizations.
- KU8.** Report preparation, safety instructions & their implementation at workplace.
- KU9.** Reporting process of any accident/incident.
- KU10.** Safety & health measures against risks & hazards at work places and emergency protocols.
- KU11.** Management of safety, health & environment issues at workplace.

Generic Skills (GS)

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

- GS1.** Effectively read, write and comprehend diverse languages.
- GS2.** Effectively communicate in the local language.
- GS3.** Apply Basic mathematics operations and ,methods of operating mathematical tools.
- GS4.** Plan and organize resource optimization.
- GS5.** Efficiently manage administrative tasks, make decisions, and resolve conflicts.
- GS6.** Understand & adhere to instructions related to safety protocols.
- GS7.** Use of personal protective equipment.



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	60	40	-	-
PC1. Apply regulatory obligations pertaining to safety, health, and environmental compliance in accordance with the BOCW Act of 1996.	4	3	-	-
PC2. Apply regulatory obligations pertaining to safety, health & environment compliance as per Factories Act, 1948.	4	3	-	-
PC3. Apply regulatory obligations pertaining to safety, health & environment compliance as per OSH Code 2020 & Occupational Safety & Health Administration (OSHA) compliance requirements.	4	3	-	-
PC4. Apply regulatory obligations pertaining to Environment Protection Act, 1986 & ILO Guidelines related to EHS.	4	2	-	-
PC5. Apply regulatory obligations pertaining to Oil Industry Safety Directorate (OSID) Guidelines.	4	3	-	-
PC6. Apply regulatory obligations pertaining to Mines Vocational Training Rules - DGMS.	4	3	-	-
PC7. Apply regulatory obligations pertaining to Electricity Act 2010 & 2003.	4	2	-	-
PC8. Apply regulatory obligations pertaining to National Building Code (NBC) - 2016.	4	2	-	-
PC9. Apply regulatory obligations pertaining to National Fire Protection Association regulations.	4	2	-	-
PC10. Apply regulatory obligations pertaining to Petroleum & Explosive Safety Organization (PESO)-Explosive Act 1884.	4	3	-	-
PC11. Apply regulatory obligations pertaining to Gas Cylinders Rule 2016.	4	3	-	-
PC12. Apply regulatory obligations pertaining to The Boilers Act 1923.	4	2	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. Apply regulatory obligations pertaining to Workmen Compensation Act 1923 & Employee State Insurance Act 1948 and related compliance.	4	3	-	-
PC14. Apply regulatory obligations pertaining to Motor vehicle Act 1988.	4	3	-	-
PC15. Apply regulatory obligations pertaining to First Aid at workplaces and training on first aid.	4	3	-	-
NOS Total	60	40	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	SSD/VSQ/N0134
NOS Name	Statutes & Legislative requirements in Health & Safety
Sector	Cross Sectoral
Sub-Sector	
Occupation	Occupational Safety Health & Environment (OSHE) Engineering & Management
NSQF Level	4.5
Credits	3
Version	1.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2027
NSQC Clearance Date	31/01/2024



Qualification Pack

SSD/VSQ/N0124: Statutes and Legislative requirements in OSHE (International).

Description

The NOS describes the knowledge & skills of the professionals of regulations & regulatory compliance requirements as per the laws governed by the respective government of the country where they are working. The professional will be able to identify the regulatory & compliance gaps and recommend remedial measures.

Scope

The scope covers the following :

- Understand compliance requirements of Occupational Safety and Health Act (USA).
- Understand compliance requirements of Health and Safety work Act 1974(UK).
- Understand compliance requirements of The European Union.
- Understand compliance requirements of The Gulf Countries Acts.
- Understand compliance requirements of ILO convention C155.

Elements and Performance Criteria

Occupational Safety and Health Act (USA) & UK

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

- PC1.** Understand Occupational Safety and Health Act (USA), general duty clause & hazard communication standard.
- PC2.** Understand record keeping and use of PPE standards as per Occupational Safety and Health Act (USA).
- PC3.** Understand a safe and healthy working environment, including safe equipment and machinery, safe systems of work, and adequate welfare facilities. As per Health and Safety work Act 1974(UK):

European & Gulf Countries OSHE Acts

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

- PC4.** Understand the European Union: Framework Directive 89/391/EEC:
- PC5.** Understand the general principles of workplace health and safety that apply to all workplaces in the EU.
- PC6.** Understand the Gulf Countries Acts: Federal Law No. 8 of 1980 on Regulation of Labor Relations as in UAE.
- PC7.** Understand Royal Decree No. M/51 of 2003 as in Saudi Arabia.
- PC8.** Understand the Qatar Labor Law No. 14 of 2004 as in Qatar.
- PC9.** Understand the Labor Law No. 6 of 2010 as in Kuwait, the Labor Law No. 36 of 2012.

ILO Convention

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

- PC10.** Understand the framework of implementation of ILO convention C155.



Qualification Pack

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** Definitions in fire & fire terminologies.
- KU2.** Fire triangle, fire classification & common reasons for fire.
- KU3.** Fire stages, fire spread & control by fuel source, control of ignition source and control of oxygen.
- KU4.** Fire extinguishers: Dry chemical powder, Co2 etc...
- KU5.** Water hydrant system & operation of water hydrant system.
- KU6.** New technological interventions in firefighting.
- KU7.** PPEs like SCBA, Hard hats, Safety shoes etc.
- KU8.** Evacuation route and emergency signages.
- KU9.** Emergency preparedness by training and mock drills.

Generic Skills (GS)

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

- GS1.** Effectively read, write and comprehend diverse languages.
- GS2.** Effectively communicate in the local language.
- GS3.** Apply Basic mathematics operations and ,methods of operating mathematical tools.
- GS4.** Plan and organize resource optimization.
- GS5.** Efficiently manage administrative tasks, make decisions, and resolve conflicts.
- GS6.** Understand & adhere to instructions related to safety protocols.
- GS7.** Use of personal protective equipment



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Occupational Safety and Health Act (USA) & UK</i>	18	12	-	-
PC1. Understand Occupational Safety and Health Act (USA), general duty clause & hazard communication standard.	6	4	-	-
PC2. Understand record keeping and use of PPE standards as per Occupational Safety and Health Act (USA).	6	4	-	-
PC3. Understand a safe and healthy working environment, including safe equipment and machinery, safe systems of work, and adequate welfare facilities. As per Health and Safety work Act 1974(UK):	6	4	-	-
<i>European & Gulf Countries OSHE Acts</i>	36	24	-	-
PC4. Understand the European Union: Framework Directive 89/391/EEC:	6	4	-	-
PC5. Understand the general principles of workplace health and safety that apply to all workplaces in the EU.	6	4	-	-
PC6. Understand the Gulf Countries Acts: Federal Law No. 8 of 1980 on Regulation of Labor Relations as in UAE.	6	4	-	-
PC7. Understand Royal Decree No. M/51 of 2003 as in Saudi Arabia.	6	4	-	-
PC8. Understand the Qatar Labor Law No. 14 of 2004 as in Qatar.	6	4	-	-
PC9. Understand the Labor Law No. 6 of 2010 as in Kuwait, the Labor Law No. 36 of 2012.	6	4	-	-
<i>ILO Convention</i>	6	4	-	-
PC10. Understand the framework of implementation of ILO convention C155.	6	4	-	-
NOS Total	60	40	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	SSD/VSQ/N0124
NOS Name	Statutes and Legislative requirements in OSHE (International).
Sector	Cross Sectoral
Sub-Sector	
Occupation	Occupational Safety Health & Environment (OSHE) Engineering & Management
NSQF Level	6
Credits	2
Version	1.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2027
NSQC Clearance Date	31/01/2024



Qualification Pack

SSD/VSQ/N0125: Safety Auditing and Inspection

Description

The NOS describes the knowledge and skills required by the professional to conduct audit and inspection of the workplace assess the workplace on health and safety parameters, review, and upgrade existing safety controls at the workplace.

Scope

The scope covers the following :

- Perform Audit & Inspections globally.
- Prepare audit and review documents.
- Provide continual improvement in health and safety.

Elements and Performance Criteria

Safety Audit codes & requirements

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

- PC1.** Understand safety audit requirements as per IS14489.
- PC2.** Understand roles & responsibilities of parties involved in safety audit.
- PC3.** Formulate safety audit checklist as per IS14489.
- PC4.** Understand safety audit requirements as per ISO 45001.
- PC5.** Formulate safety audit checklist as per ISO 45001.

Safety Audit & Inspections

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

- PC6.** Prepare audit checklist for construction, mining, oil & gas, manufacturing, and chemical industries.
- PC7.** Perform inspection of scaffolding.
- PC8.** Perform inspection of PPEs.
- PC9.** Perform inspection of electrical protective devices like MCB, RCCB, ELCB.
- PC10.** Preparation of Audit reports.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** Auditing & inspections.
- KU2.** Safety & health audit requirements at work places.
- KU3.** Safety audit types, methods, processes, and stages.
- KU4.** PDCA safety audit cycles.
- KU5.** Government safety legislation, rules, and compliances.
- KU6.** Various Government agencies in ensuring health & safety measures.



Qualification Pack

KU7. Hierarchy in the organizations.

KU8. Reporting preparation, processing of safety audit.

Generic Skills (GS)

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

GS1. Effectively read, write and comprehend diverse languages.

GS2. Effectively communicate in the local language.

GS3. Apply Basic mathematics operations and ,methods of operating mathematical tools.

GS4. Plan and organize resource optimization.

GS5. Efficiently manage administrative tasks, make decisions, and resolve conflicts.

GS6. Understand & adhere to instructions related to safety protocols.

GS7. Use of personal protective equipment



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Safety Audit codes & requirements</i>	30	20	-	-
PC1. Understand safety audit requirements as per IS14489.	6	4	-	-
PC2. Understand roles & responsibilities of parties involved in safety audit.	6	4	-	-
PC3. Formulate safety audit checklist as per IS14489.	6	4	-	-
PC4. Understand safety audit requirements as per ISO 45001.	6	4	-	-
PC5. Formulate safety audit checklist as per ISO 45001.	6	4	-	-
<i>Safety Audit & Inspections</i>	30	20	-	-
PC6. Prepare audit checklist for construction, mining, oil & gas, manufacturing, and chemical industries.	6	4	-	-
PC7. Perform inspection of scaffolding.	6	4	-	-
PC8. Perform inspection of PPEs.	6	4	-	-
PC9. Perform inspection of electrical protective devices like MCB, RCCB, ELCB.	6	4	-	-
PC10. Preparation of Audit reports.	6	4	-	-
NOS Total	60	40	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	SSD/VSQ/N0125
NOS Name	Safety Auditing and Inspection
Sector	Cross Sectoral
Sub-Sector	
Occupation	Occupational Safety Health & Environment (OSHE) Engineering & Management
NSQF Level	6
Credits	2
Version	1.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2027
NSQC Clearance Date	31/01/2024

Qualification Pack

SSD/VSQ/N0112: Pollution & Environment Management, Global warming, and sustainability.

Description

The NOS describes the knowledge & skills required by the professional to identify the impact of process, task, or activity on the environment. It is a planning tool which is accepted as an integral part of decision making for sustainable development. The NOS aims at providing relevant information on physical and biological environmental factors, environment degradation because of development activities, impacts and possible methods of mitigation in degradation of environment.

Scope

The scope covers the following :

- Identify the impact of pollution.
- Perform Environmental Impact Assessment.
- Learn waste management techniques.

Elements and Performance Criteria

Pollution & Environment Management

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

- PC1.** Understand environment & atmospheric pollution, water pollution, land pollution, noise pollution, air quality, ill effects and control.
- PC2.** Understand types of waste, its disposal techniques, and concepts of effluent treatment plants.
- PC3.** Hazardous waste management & 6R's (Rethink, Refuse, Reduce, Reuse, Recycle, Repair).
- PC4.** Understand the regulatory requirements of Central Pollution Control Board & State Pollution Control Board and Environment Protection Act, 1986" & KYOTO protocol.

Environment Monitoring Techniques

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

- PC5.** Learn about remote sensing, air monitoring, biological monitoring, soil monitoring and water monitoring.
- PC6.** Understand EIA- Environmental impact assessment and LCI- Life cycle Impact assessment.

Global warming

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

- PC7.** Understand global warming and climate change, greenhouse gasses & greenhouse effect, carbon cycle, carbon footprints, carbon neutrality & Carbon credits.
- PC8.** Understand ozone layer, ozone layer depletion, elements affecting ozone layer, acid rain, wet deposition, dry deposition, and its factors.
- PC9.** Understand the meaning of Eco-friendly, energy conservation methods using solar, hydro, wind, biomass, water and harvesting.

Knowledge and Understanding (KU)



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The individual on the job needs to know and understand:

- KU1.** Environment & Pollution (air, water, land, noise etc.).
- KU2.** Waste management, CPCB & SPCB and environmental protection Act, 1986.
- KU3.** KYOTO protocol and Carbon Credits.
- KU4.** Environment monitoring by remote sensing, biological monitoring, air monitoring, soil monitoring and water monitoring.
- KU5.** Environmental impact assessment & life cycle assessment.
- KU6.** Global warming, greenhouse cases & climate change.
- KU7.** Carbon footprint and how it affects the environment.
- KU8.** Ozone layer and its depletion.
- KU9.** Energy conservation methodologies like solar hydro, wind etc...

Generic Skills (GS)

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

- GS1.** Effectively read, write and comprehend diverse languages.
- GS2.** Effectively communicate in the local language.
- GS3.** Apply Basic mathematics operations and ,methods of operating mathematical tools.
- GS4.** Plan and organize resource optimization.
- GS5.** Efficiently manage administrative tasks, make decisions, and resolve conflicts.
- GS6.** Understand & adhere to instructions related to safety protocols.
- GS7.** Use of personal protective equipment



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Pollution & Environment Management</i>	30	30	-	-
PC1. Understand environment & atmospheric pollution, water pollution, land pollution, noise pollution, air quality, ill effects and control.	10	10	-	-
PC2. Understand types of waste, its disposal techniques, and concepts of effluent treatment plants.	10	10	-	-
PC3. Hazardous waste management & 6R's (Rethink, Refuse, Reduce, Reuse, Recycle, Repair).	5	5	-	-
PC4. Understand the regulatory requirements of Central Pollution Control Board & State Pollution Control Board and Environment Protection Act, 1986" & KYOTO protocol.	5	5	-	-
<i>Environment Monitoring Techniques</i>	10	10	-	-
PC5. Learn about remote sensing, air monitoring, biological monitoring, soil monitoring and water monitoring.	5	5	-	-
PC6. Understand EIA- Environmental impact assessment and LCI- Life cycle Impact assessment.	5	5	-	-
<i>Global warming</i>	10	10	-	-
PC7. Understand global warming and climate change, greenhouse gasses & greenhouse effect, carbon cycle, carbon footprints, carbon neutrality & Carbon credits.	4	4	-	-
PC8. Understand ozone layer, ozone layer depletion, elements affecting ozone layer, acid rain, wet deposition, dry deposition, and its factors.	3	3	-	-
PC9. Understand the meaning of Eco-friendly, energy conservation methods using solar, hydro, wind, biomass, water and harvesting.	3	3	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	50	50	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	SSD/VSQ/N0112
NOS Name	Pollution & Environment Management, Global warming, and sustainability.
Sector	Cross Sectoral
Sub-Sector	
Occupation	Occupational Safety Health & Environment (OSHE) Engineering & Management
NSQF Level	5
Credits	2
Version	1.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2027
NSQC Clearance Date	31/01/2024



Qualification Pack

SSD/VSQ/N0104: Plan, Organize and Emergency protocols

Description

The NOS describes the knowledge & skills required by the professionals about planning and organizing of their work to provide a safe working environment for workers and set emergency protocols and measures in case of any unforeseen incidents or accidents to minimize the damages & losses.

Scope

The scope covers the following :

- Planning of resources for own work and communication to concerned subordinates, co-workers, and superiors.
- Provide necessary support to subordinates, coordinate with co-workers and liaise with superiors and monitor.
- Setting up emergency protocols and implementing them at working places to minimize the loss in case of any incident or accident.

Elements and Performance Criteria

Planning of Work

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

- PC1.** Planning of safety resources, schedules, measures, and timelines for readiness as per overall work timelines.
- PC2.** Communication to other team members, co-workers, subordinates & superiors, and coordination with other team members.
- PC3.** Task identification and allotment to subordinates, supervision, and coordination among the team members for readiness in sync with overall task & timelines.

Organizing & monitoring

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

- PC4.** Resource collection, provisioning of resources to team members as per task & timelines
- PC5.** Communicate & brief to concerned co-workers, subordinates & superiors, provide guidance to subordinate & co-workers for timely and correct completion.
- PC6.** Supervision & monitoring progress of work, reporting the progress & completion, preparation of reports & documents.

Emergency Protocols

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

- PC7.** Set up medical emergency measures, in case of accidents/incidents at the workplace.
- PC8.** Set up fire emergency measures as per plans in case of any fire accidents at the workplace.
- PC9.** Set up emergency assembly area, evacuation plan, sign boards and guidance.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:



Qualification Pack

- KU1.** Task, roles & responsibility of own and subordinates.
- KU2.** Planning timelines of task, sequence, and resources deployment for the task.
- KU3.** Roles & tasks of co-workers & other teams working for the same task.
- KU4.** Instruction, advice, briefing and resource allocation to subordinates.
- KU5.** Communication to co-workers, other teams & superiors for the work.
- KU6.** Organizing tools, equipment, materials & other resources on time as per timelines & emergency.
- KU7.** Knowledge of local emergency support.
- KU8.** Providing support and guidance to his team & subordinates.
- KU9.** Planning & monitoring tools & software and its operation
- KU10.** Knowledge & understanding complexities, priorities & severity of the task.
- KU11.** Report preparation & reporting methods as per organizational hierarchy.

Generic Skills (GS)

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

- GS1.** Effectively read, write and comprehend diverse languages.
- GS2.** Effectively communicate in the local language.
- GS3.** Apply Basic mathematics operations and ,methods of operating mathematical tools.
- GS4.** Plan and organize resource optimization.
- GS5.** Efficiently manage administrative tasks, make decisions, and resolve conflicts.
- GS6.** Understand & adhere to instructions related to safety protocols.
- GS7.** Use of personal protective equipment.



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Planning of Work</i>	15	15	-	-
PC1. Planning of safety resources, schedules, measures, and timelines for readiness as per overall work timelines.	5	5	-	-
PC2. Communication to other team members, co-workers, subordinates & superiors, and coordination with other team members.	5	5	-	-
PC3. Task identification and allotment to subordinates, supervision, and coordination among the team members for readiness in sync with overall task & timelines.	5	5	-	-
<i>Organizing & monitoring</i>	18	17	-	-
PC4. Resource collection, provisioning of resources to team members as per task & timelines	6	6	-	-
PC5. Communicate & brief to concerned co-workers, subordinates & superiors, provide guidance to subordinate & co-workers for timely and correct completion.	6	6	-	-
PC6. Supervision & monitoring progress of work, reporting the progress & completion, preparation of reports & documents.	6	5	-	-
<i>Emergency Protocols</i>	17	18	-	-
PC7. Set up medical emergency measures, in case of accidents/incidents at the workplace.	6	6	-	-
PC8. Set up fire emergency measures as per plans in case of any fire accidents at the workplace.	6	6	-	-
PC9. Set up emergency assembly area, evacuation plan, sign boards and guidance.	5	6	-	-
NOS Total	50	50	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	SSD/VSQ/N0104
NOS Name	Plan, Organize and Emergency protocols
Sector	Cross Sectoral
Sub-Sector	
Occupation	Occupational Safety Health & Environment (OSHE) Engineering & Management
NSQF Level	4.5
Credits	2
Version	1.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2027
NSQC Clearance Date	31/01/2024



Qualification Pack

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:



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- 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.



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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



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- 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



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	1	1	-	-
PC1. identify employability skills required for jobs in various industries	-	-	-	-
PC2. identify and explore learning and employability portals	-	-	-	-
<i>Constitutional values - Citizenship</i>	1	1	-	-
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	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	2	4	-	-
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	-	-	-	-
<i>Basic English Skills</i>	2	3	-	-
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	-	-	-	-
<i>Career Development & Goal Setting</i>	1	2	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. understand the difference between job and career	-	-	-	-
PC11. prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
<i>Communication Skills</i>	2	2	-	-
PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
PC13. work collaboratively with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	2	-	-
PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
<i>Financial and Legal Literacy</i>	2	3	-	-
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	-	-	-	-
<i>Essential Digital Skills</i>	3	4	-	-
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	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Entrepreneurship</i>	2	3	-	-
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	-	-	-	-
<i>Customer Service</i>	1	2	-	-
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	-	-	-	-
<i>Getting ready for apprenticeship & Jobs</i>	2	3	-	-
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	-	-	-	-
NOS Total	20	30	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0102
NOS Name	Employability Skills (60 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	4
Credits	2
Version	1.0
Last Reviewed Date	24/02/2022
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. The assessment criteria given in the Qualification Pack MANAGER (OSHE) by the SSDF.
2. Assessments can be carried out with pen-paper as well as online.
3. Assessment will be carried by certified assessor and affiliated Assessment Agency only.
4. Each NOS for its Performance Criteria (PC) has been assigned marks proportional to its importance. Proportion of marks for Theory and Practical has been marked NOS wise.
5. Questions on practical & theory will be formed in such a way as to provide outcome on maximum Performance Criteria and in proportional way within the NOS.
6. The assessment for the theory part will be based on written questions (short question, multiple choice & viva, or a combination of them) created/approved by the SSDF.
7. The assessment for the practical part will be based on practical conducted for trainees. In case of remote/on-line assessments, the practical's can be carried through proctors or practical questions formulated based on pictorially represented logical questions (based on pictures of practical & logical steps) created/approved by the SSDF.



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8. The passing and grading criteria of each NOS & cumulative for QP will be as follows:-

a. 70% or more than 70% - Grade A

b. 60% or more than 60% but less than 70% - Grade B

c. 50% or more than 50% but less than 60% - Grade C

d. Less than 50% - Grade Fail

e. If an individual gets less than 50% and 35% or more in one NOS and; overall, 50% or more; individual will be considered pass with grade "C" irrespective of overall marks.

f. Individuals getting less than 50% in more than one NOS and getting overall marks 50% or more in QP will be put in grade Fail.

9. Assessment will be for complete QP and the trainees can be given additional chance to appear in re-assessment for improvements, based on decision by SSDF.

10. In case a trainee fails in one or two NOSs, re-assessments in the failing NOSs can be allowed in the next 3 months from the date of publication of results. Otherwise, the failed candidate will have to re-appear in all NOSs.

11. Minimum overall duration of assessment will be six hours.

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.)

Minimum Passing % at NOS Level: 50

(Please note: A Trainee must score the minimum percentage for each NOS separately as well as on the QP as a whole.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
SSD/VSQ/N0132.Occupational Safety, Health, and Environment (OSHE) Management.	60	40	-	-	100	15



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National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
SSD/VSQ/N0133.Hazard Identification & Risk Analysis.	60	40	-	-	100	15
SSD/VSQ/N0121.Fire Safety and Emergency Management Plan	60	40	-	-	100	8
SSD/VSQ/N0122.Hazard Mitigation Methodologies	60	40	-	-	100	7
SSD/VSQ/N0123.Hazards and Risk Perception.	60	40	-	-	100	7
SSD/VSQ/N0134.Statutes & Legislative requirements in Health & Safety	60	40	-	-	100	11
SSD/VSQ/N0124.Statutes and Legislative requirements in OSHE (International).	60	40	0	0	100	8
SSD/VSQ/N0125.Safety Auditing and Inspection	60	40	-	-	100	8
SSD/VSQ/N0112.Pollution & Environment Management, Global warming, and sustainability.	50	50	-	-	100	7
SSD/VSQ/N0104.Plan, Organize and Emergency protocols	50	50	-	-	100	7
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	7
Total	600	450	0	0	1050	100



Qualification Pack

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training



Qualification Pack

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.



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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.