



MODEL CURRICULUM



QP Name: Manager (OSHE)

QP Code: SSD/Q0106

QP Version: 1.0

NSQF Level: 6.0

Model Curriculum Version: 1.0

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Traini

ng Parameters

Sectors	Hydrocarbon, Iron & steel, Mining, Power, Automotive,
	Construction, Chemical / Petrochemical, and others.
Sub-Sector	-
Occupation	Occupational Safety Health & Environment (OSHE)
·	Engineering & Management
Country	India
•	-
NSQF Level	6
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3257.0600 : Health, Safety & Environment Officer
Minimum Educational Qualification and	Completed 4-year UG degree program in relevant field with 3.5-
Experience	year experience in relevant field
·	OR
	Completed 3-year UG degree program in relevant field with 8 years'
	experience in relevant field
	OR
	Previous qualification of NSQF level 5.5 in relevant field and 1.5 years of experience
	OR
	Previous qualification of NSQF level 5 in relevant field and 3 years
	of experience
Pre-Requisite License or Training	Nil
Minimum Job Entry Age	18 years
Last Reviewed On	31-01-2024
Next Review Date	31-01-2024
IVEAL NEVIEW Date	31-01-2027
Version	1.0
version	1.0
NCOC Approved Date	24 04 2024
NSQC Approval Date	31-01-2024





Model Curriculum Creation Date	31-01-2024
Model Curriculum Valid Up to Date	31-01-2027
Model Curriculum Version	1.0
Minimum Duration of the Course	810 Hours
Maximum Duration of the Course	810 Hours





Program Overview

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

Training Outcomes

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

- Perform and fulfill Health & Safety requirements at the workplace.
- Prepare Health & Safety record documents like permit to work, HIRA, HAZOP etc...
- Define scope of the safety management system.
- Perform risk assessment of a workplace.
- Learn accident prevention methods and implementations
- Learn environmental issues and preventive measures
- Collect and analyze root cause of incidents
- Meet regulatory requirements in Health & Safety as per OSH Code 2020, BOCW Act 1996 & Factories Act 1948.
- Meet the regulations and enforcement decided by the environmental act, 1986 and the SPCB & CPCB.
- Understand international requirement of OSHE, USA, UK, Gulf countries & ILO
- Carryout Inspection for OSHE processes
- Know & understand the good practices in organization and develop a positive safety culture.
- Understand proper communication channels in an organization.
- Plan, organize and implement safety committee recommendations at the workplace.
- Advise management on new technological advancement in health & Safety.
- Role of management in an organization, role of safety Inspector, safety officer, safety engineer, and safety manager.
- Fundamentals of process safety, OSHA standards QRA, LOPA, SIL, FERA, EERA.
- Role of occupier, controller of premise, role & need of contractors in the organization & work permit to contractors, role of safety committee.
- 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.

Compulsory Modules

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

NOS and Module Details	Theory Duratio n	Practi cal Durati on	On-the- Job Training Duration (Mandato ry)	On-the-Job Training Duration (Recommende d)	Total Duratio n
SSD/N0132, v1.0:	72:00	28:00	20:00	00:00 Hours	120:00
Occupational Safety,	Hours	Hours	Hours		Hours
Health, and Environment (OSHE)					
Management.					
Module 1:	04:00	00:00	00:00	00:00 Hours	04:00
Introduction to	Hours	Hours	Hours		Hours
Training					
Program,					
Overview,					
assessments,					
role Manager	, v				
(OSHE)					
employment					
opportunities					





Module 2: 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 of hazards including fire accidents	68:00 Hours	28:00 Hours	20:00 Hours	00:00 Hours	116:00 Hours
SSD/N0133, v1.0 : Hazard Identification & Risk Analysis.	72:00 Hours	28:00 Hours	20:00 Hours	00:00 Hours	120:00 Hours
Module 3: Identify hazards at workplace, severity of hazards, risk rating analysis, accidents, and mishaps at a workplace, implementing accident prevention theories	72:00 Hours	28:00 Hours	20:00 Hours	00:00 Hours	120:00 Hours
SSD/N0121, v1.0 : Fire Safety and Emergency Management plan.	36:00 Hours	4:00 Hours	20:00 Hours	00:00 Hours	60:00 Hours





Module 4: Understand how to tackle fire emergencies, the emergency scenarios, industrial case studies, emergency plan development for a safe working environment.	36:00 Hours	4:00 Hours	20:00 Hours	00:00 Hours	60:00 Hours
SSD/N0122, v1.0 : Hazards Mitigation Methodologies.	36:00 Hours	14:00 Hours	10:00 Hours	00:00 Hours	60:00 Hours
Module 5: Knowledge & skills to identify and control hazards at workplace, analyze severity of hazards, give risk rating, and implement improved hazard mitigation methodologies	36:00 Hours	14:00 Hours	10:00 Hours	00:00 Hours	60:00 Hours
SSD/N0123, v1.0 : Hazard and risk perception.	36:00 Hours	14:00 Hours	10:00 Hours	00:00 Hours	60:00 Hours
Module 6: Analysis of different perceived risks with wide range of affective (emotions, feelings, moods, etc.), cognitive, contextual, and individual personality traits, previous experience, age, other factors influencing work	36:00 Hours	14:00 Hours	10:00 Hours	00:00 Hours	60:00 Hours





related injuries					
SSD/N0134, v1.0: Statutes & Legislative requirements in Health & Safety.	54:00 Hours	36:00 Hours	00:00 Hours	00:00 Hours	90:00 Hours
Module 7: Learn regulations & regulatory compliance requirements as per the laws governed by the Government of India. Identify the shortcomings as per the recommendatio n of the regulatory body for a particular task or activity	54:00 Hours	36:00 Hours	00:00 Hours	00:00 Hours	90:00 Hours
SSD/N0124, v1.0: Statutes and Legislative requirements in OSHA (International).	36:00 Hours	24:00 Hours	00:00 Hours	00:00 Hours	60:00 Hours
Module 8: Introduction to regulations and regulatory compliance governed by countries across the globe and identifying the shortcomings	36:00 Hours	24:00 Hours	00:00 Hours	00:00 Hours	60:00 Hours





SSD/N0125, v1.0: Safety	36:00	4:00	20:00 Hours	00:00	60:00
Auditing and Inspection	Hours	Hours		Hours	Hours
Module 9: Knowledge & understanding to conduct audit and inspection of workplace, assess the workplace on Health & Safety parameters, review and upgrade existing safety controls at the workplace	36:00 Hours	4:00 Hours	20:00 Hours	00:00 Hours	60:00 Hours
SSD/N0112, v1.0: Pollution & Environment Management, Global warming, and sustainability.	36:00 Hours	14:00 Hours	10:00 Hours	00:00 Hours	60:00 Hours
Module 10: Identify impact of pollution, perform environment impact analysis, Learn waste management techniques	36:00 Hours	14:00 Hours	10:00 Hours	00:00 Hours	60:00 Hours
SSD/N0104, v1.0 : Plan, Organize and Emergency protocols	36:00 Hours	14:00 Hours	10:00 Hours	00:00 Hours	60:00 Hours
Module 11: Planning and organizing to provide a safe working environment for workers and	36:00 Hours	14:00 Hours	10:00 Hours	00:00 Hours	60:00 Hours





set emergency protocols and measure in case of any unforeseen and incidents or accidents to minimize the damages & losses	26.00	24.00			50.00
DGT/VSQ/0102 :	36:00	24:00	00:00 Hours	00:00	60:00
Employability Skills	Hours	Hours		Hours	Hours
Module 12: Understand scope in employment, financial dealing, digital literacy and communication with employer or customer	30:00 Hours	30:00 Hours	00:00 Hours	00:00 Hours	60:00 Hours
Total Duration	486:00 Hours	204:00 Hours	120:00 Hours	00:00 Hours	810:00 Hours





Modul e Details

Module 1: Introduction to Training Program, Overview, assessments, role Manager (OSHE) employment opportunities

Mapped to SSD/N0132, v1.0

- Discuss role of Manager OSHE , sectors & industries.
- Employment opportunities, career development & International opportunities.
- Course approach, duration, training & assessment processes.

Duration: 04:00	Duration : 00:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
 Role & responsibilities of Manager (OSHE) . Iceberg theory of safety 	
 Career progression in the occupation. 	
 Industries for Employment & international opportunities for employment. 	
• Training approach & methodology.	
• Assessment process & Certification.	
 The assistance provided by AB/TP/LMIS in employment 	
Classroom Aids:	
Black/White Board, Computer, Projection Equip Facilitator's Guide, Participant's Handbook.	ment, PowerPoint Presentation and software,
Tools, Equipment and Other Requirements	





Nil				







Module 2: 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 of hazards including fire accidents

Mapped to SSD/N0132, v1.0

- Understanding health & safety requirements, financial losses of an organization because of an accident.
- Safety Policy and Health & Safety objectives formulation.
- Identifying fire hazards at the workplace.
- Understanding different classes of fire, evacuations, fire drills, use of PPEs.
- Onboarding and managing contractors to comply with statutory requirements in occupational OSHE
- Understand fundamental of process safety, OSHA standards QRA, LOPA, SIL, FERA, EERA





- Requirement of Plan-Do-Check-Act (PDCA)
 Cycle in safety management system;
 understanding and analysis.
- Stages of "Plan" & "Do" and "Check" and "Act" stages of PDCA cycle.
- Need of training, induction training & competency at workplace, "Toolbox talk."
- Gas testing using LEL sensor, O2 sensor, H2S sensor, Co Sensor.
- Understand basic definitions- Flammable liquids, Combustible matter/liquids, Combustible GASES, combustion, oxygen percentage in air, exothermic and endothermic reactions, radiation.
- Fire triangle and classification fire, common reason for fire accidents.
- Types of fire-fighting equipment, its principle of operation, components in different fire extinguishers, PASS technique & operation of fire hydrants.
- 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.
- 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 management in an organization, role of safety Inspector, safety officer, safety engineer, and safety manager.

- Role of management in an organization, role of safety Inspector, safety officer, safety engineer, and safety manager.
- Role of occupier, controller of premise, role & need of contractors in the organization & work permit to contractors, role of safety committee.
- 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.





- Fundamentals of process safety, OSHA standards QRA, LOPA, SIL, FERA, EERA.
- Role of occupier, controller of premise, role & need of contractors in the organization & work permit to contractors, role of safety committee.
- 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.

Black/White Board, Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.

Tools, Equipment and Other Requirements

Safety goggles, Full face shield, Leather gloves, Puncture resistant gloves, Chemical resistant gloves, Electrically insulated latex gloves, Safety helmets/hard hats, Ear plugs, Ear muffs, Safety shoes, Safety gumboots, High visibility jackets, N95 masks, Double filter half face mask, Double filter full face mask, SCBA — Self-contained breathing apparatus, Safety harness, Lanyard, Fall arrestor, CO2 Fire extinguisher, Dry Chemical Powder Fire extinguisher, Fire hydrant system, Multiple gas detector, TDS Meter

Module 3: Identify hazards at workplace, severity of hazards, risk rating analysis, accidents, and mishaps at a workplace, implementing accident prevention theories

Mapped to SSD/N0133, v1.0

- Identification of hazards, categories of the hazards and Hazard and Operability Analysis (HAZOP).
- Understanding & carrying out Fault Tree analysis & Event Tree Analysis, failure modes and effect analysis.
- Hazard Identification and Risk Assessment (HIRA) and Job Safety Analysis.
- "Hierarchy of control" and methodologies for improvement.





Understand hidden risk in improved methodologies.

Duration: 72 Hours	Duration: 28 Hours	
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes	
 Hazards, unsafe conditions & acts. Incidents & accidents; fatal, non-fatal, near miss incidents & accidents; lost time injury & first aid injury. 	 Perform Hazard and Operability Analysis (HAZOP). Perform Tree analysis & Event Tree Analysis 	
 Hazard categories, controls, hierarchy of controls. Hazards from electricity, fire, workplace hazard - work at height, confined space, working in an excavation, lone working, slips & trips, lifting and Rigging hazards 	 Carry out Job Safety Analysis. Carry out Hazard Identification and Risk Assessment (HIRA) 	
 Hazardous substances, Musculoskeletal disorders, manual handling, and load handling equipment, noise, vibration, radiation, mental ill- health, violence at work, abuse at workplace. Basic definitions- incident, accident, Injury, lost time injury, unsafe condition, unsafe Acts, dangerous occurrences, hazards, error, near miss. 		
 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". 		
 "Frequency rate & Incident rate." Lost time case rate, DART rate, Severity rate. 		
 "Fault tree analysis" and "Event tree analysis", "HAZOP- Hazard, operability analysis" and "Job safety analysis." 		
"Hazard Identification and risk assessment."		





- Hierarchy of controls, Importance of hierarchy of control & steps in hierarchy of control
- 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.

Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.

Tools, Equipment and Other Requirements

Safety goggles, Full face shield, Leather gloves, Puncture resistant gloves, Chemical resistant gloves, Electrically insulated latex gloves, Safety helmets/hard hats, Ear plugs, Ear muffs, Safety shoes, Safety gumboots, High visibility jackets, N95 masks, Double filter half face mask, Double filter full face mask, SCBA — Self-contained breathing apparatus, Safety harness, Lanyard, Fall arrestor, CO2 Fire extinguisher, Dry Chemical Powder Fire extinguisher, Fire hydrant system, Multiple gas detector, TDS Meter

Module 4: Understand to tackle fire emergencies, the emergency scenarios, industrial case studies, emergency plan development for safe working environment

Mapped to SSD/N0121, v1.0

- Identification and mitigation of fire at the workplace.
- Development of plans to tackle different classes of fire.
- Development of plans for evacuations and fire drills.
- Preparation fire-fighting plans for different industries

Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
Duration: 36 Hours	Duration: 04 Hours





- Basic definitions related to fire safety.
- Fire triangle and classification fire. Learn the science of instigation of fire.
- The stages of fire instigation.
- The science of fire spread and mitigation techniques.
- Different types of extinguishing media used in fire fighting equipment.
- Types of fire-fighting equipment and their principle of operation.
- Firefighting equipment planning and placement as per NBC (National Building Code).
- New technological interventions in fire safety.
- Use of PPEs in fire safety –SCBA (Selfcontained breathing apparatus)
- Emergency evacuation route as per IS1644.
- Planning of emergency evacuation.
- Fire door, emergency directional signages, assembly point, evacuation, evacuation of differently abled, evacuation procedure.
- Role of "Fire Marshals."
- Fire drills on emergency evacuation and fire fighting equipment.
- Fire Safety Risk assessment and control (HIRAC).

- Identify fire hazards at the workplace.
- Develop systematic approach in identifying and correcting probable fire accidents and suggest fire-fighting equipment.
- Operate fire extinguisher and fire hydrant.
- Prepare an Emergency evacuation plan.





Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.

Tools, Equipment and Other Requirements

Safety goggles, Full face shield, Leather gloves, Puncture resistant gloves, Chemical resistant gloves, Electrically insulated latex gloves, Safety helmets/hard hats, Ear plugs, Ear muffs, Safety shoes, Safety gumboots, High visibility jackets, N95 masks, Double filter half face mask, Double filter full face mask, SCBA — Self-contained breathing apparatus, Safety harness, Lanyard, Fall arrestor, CO2 Fire extinguisher, Dry Chemical Powder Fire extinguisher, Fire hydrant system, Multiple gas detector, TDS Meter.

Module 5: Knowledge & skills to identify and control hazards at workplace, analyze severity of hazards, give risk rating, and implement improved hazard mitigation methodologies

Mapped to SSD/N0122, v1.0

- Identify hazards & categories the hazards
- Implement "Hierarchy of control" in improvement methodologies.
- Understand hidden risk in improved methodologies.

Duration: 36 Hours	Duration: 14 Hours
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
 Terminologies/definitions in risk assessment. Identify hazard categories. Hierarchy of controls in safety & Importance of each hierarchy of control. Different hazard & control in electricity, use of tools & equipment, machinery, Work at height, confined space, working in an excavation. Different hazard & control for lone working and slips & trips. 	 Identify hazard Formulate hierarchy of control in risk mitigation. Identify residual or hidden risks & control measures. Make presentation on different hazards & controls





- Hazardous substances, Musculoskeletal disorders, manual handling, and load handling equipment.
- Hazard & control for Noise, vibration, radiation, mental ill- health, violence at work, substance abuse at workplace, Lifting and Rigging hazards and control.
- Risk matrix in risk assessment.
- Risk assessment in warehouse, construction site, manufacturing industry, process industry and oil and gas industry.

Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.

Tools, Equipment and Other Requirements

Safety goggles, Full face shield, Leather gloves, Puncture resistant gloves, Chemical resistant gloves, Electrically insulated latex gloves, Safety helmets/hard hats, Ear plugs, Ear muffs, Safety shoes, Safety gumboots, High visibility jackets, N95 masks, Double filter half face mask, Double filter full face mask, SCBA — Self-contained breathing apparatus, Safety harness, Lanyard, Fall arrestor, CO2 Fire extinguisher, Dry Chemical Powder Fire extinguisher, Fire hydrant system, Multiple gas detector, TDS Meter.

Module 6: Analysis of different perceived risks with wide range of affective (emotions, feelings, moods, etc.), cognitive, contextual, and individual personality traits, previous experience, age, other factors influencing work related injuries

Mapped to SSD/N0123, v1.0

- Identify hazards & categories the hazards
- Implement "Hierarchy of control" in improvement methodologies.
- Understand hidden risk in improved methodologies.





É		कौशल भारत
	Duration: 36 Hours	Duration: 14 Hours
	Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
	• Subjective evaluation of risk with the help of individuality context.	Identify & monitor hazards.Analyze risk tolerance capability of
	 Risk tolerance, Risk magnitude appraisal, Risk acceptance and Risk behavior. 	individuals.Carry risk assessment including risk
	Modeled risk.	perception as a dynamic hazard in risk assessment.
	 Difference between perceived risk and modeled risk. 	 Make a presentation on risk tolerance, risk magnitude appraisal, risk acceptance
	Risk attitudes.	and risk behavior.
	• Different risk communication process & framework.	
	Understanding Risk Management.	
	 Correlation in risk perception influencing hazard mitigation methodologies. 	
	 Underlying hazards at the workplace due to poor risk perception. 	
	Behavior based safety and its limitations.	

Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.

Tools, Equipment and Other Requirements

Safety goggles, Full face shield, Leather gloves, Puncture resistant gloves, Chemical resistant gloves, Electrically insulated latex gloves, Safety helmets/hard hats, Ear plugs, Ear muffs, Safety shoes, Safety gumboots, High visibility jackets, N95 masks, Double filter half face mask, Double filter full face mask, SCBA — Self-contained breathing apparatus, Safety harness, Lanyard, Fall arrestor, CO2 Fire extinguisher, Dry Chemical Powder Fire extinguisher, Fire hydrant system, Multiple gas detector, TDS Meter.





Module 7: Learn regulations & regulatory compliance requirements as per the laws governed by the Government of India. Identify the shortcomings as per the recommendation of the regulatory body for a particular task or activity

Mapped to SSD/N0134, v1.0

Terminal Outcomes:

 Understanding various rules, regulations and statutes required related to occupational safety, health & environment including BOCW Act 19196, Factories Act 1948, OSH Code 2020, Environment protection Act, 1996 and others applicable in various fields.

Duration: 54 Hours	Duration: 36 Hours
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
 Apply the regulatory obligations pertaining to safety, health, and environmental compliance in accordance with the BOCW Act of 1996. Apply the regulatory obligations pertaining to safety, health & environment compliance as per Factories Act, 1948. 	 Apply BOCW act safeguarding the rights and interests of workers in terms of accidental insurance, immediate healthcare, and financial assistance Apply factories act that protect the health and safety of workers, ensures
 Apply the regulatory obligations pertaining to safety, health & environment compliance as per OSH Code 2020 & Occupational Safety & Health Administration (OSHA) compliance requirements. 	 adherence to global best practices. Apply OSH code 2020. Apply ILO guidelines that govern the principle that workers against sickness, disease and injury arising from their
 Apply the regulatory obligations pertaining to Environment Protection Act, 1986 & ILO Guidelines related to EHS. Apply the regulatory obligations pertaining to Oil Industry Safety Directorate (OSID) Guidelines 	 Apply Oil Industry Safety Directorate (OSID) Guidelines, External Safety Audits, Offshore Safety Regulatory Activities, Training Program / Workshop, and Accident Reporting &
 Apply the regulatory obligations pertaining to Mines Vocational Training Rules – DGMS Apply the regulatory obligations pertaining to Electricity Act 2010 & 2003 Apply the regulatory obligations pertaining 	 Investigation in oil fields Apply regulatory obligations pertaining to Mines Vocational Training Rules – DGMS Apply Electricity Act 2010 & 2003





to National Building Code (NBC) - 2016

- Apply the regulatory obligations pertaining to National Fire Protection Association regulations.
- Apply the regulatory obligations pertaining to Petroleum & Explosive Safety Organization (PESO)-Explosive Act 1884.
- Apply the regulatory obligations pertaining to Gas Cylinders Rule 2016
- Apply the regulatory obligations pertaining to The Boilers Act 1923
- Apply regulatory obligations pertaining to Workmen Compensation Act 1923 & Employee State Insurance Act 1948 and related compliance.
- Apply regulatory obligations pertaining to Motor vehicle Act 1988
- Apply the regulatory obligations pertaining to First Aid at workplaces and training on first aid.

- consolidate the laws relating to generation, transmission, distribution, trading, and use of electricity
- Apply NBC 2016 contains administrative regulations, development control rules and general building requirements; fire safety and other requirements.
- Apply fire, electrical, and life safety guidelines and requirements.
- Apply regulations on the manufacture, possession, use, sale, transport, and importation of Explosives
- Apply insurance policy designed to financially protect employees in the wake of any accidents, social security scheme aimed at providing the requisite medical and financial assistance to employees across the country.
- Apply necessary first aid assistance to an injured person until professional medical care can be provided.

Classroom Aids:

Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.

Tools, Equipment and Other Requirements

Regulations, Books, Handouts, Laptop/computer, internet.

Module 8: Introduction to regulations and regulatory compliance governed by countries across the globe and identifying the shortcomings

Mapped to SSD/N0124, v1.0

Terminal Outcomes:

• Understanding compliance requirements of Occupational Safety and Health Act (USA).





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

Duration: 36 Hours	Duration: 24 Hours		
Theory–Key Learning Outcomes	Practical-Key Learning Outcomes		
 General duty clause, hazard communication standard, record keeping standard, PPE standards as per occupational safety and health Act USA. Understand the safe and healthy working environment, including safe equipment and machinery, safe systems of work, and adequate welfare facilities. Record keeping and use of PPE standards as per Occupational Safety and Health Act (USA). Health and Safety work Act 1974(UK) 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). The directive sets out the general principles of workplace health and safety that apply to all workplaces in the EU. European Union: Framework Directive 89/391/EEC. General principles of workplace health and safety that apply to all workplaces in the EU. 	 Understand & present compliance requirements of Occupational Safety and Health Act (USA). Understand & present requirements of Health and Safety work Act 1974(UK). Understand & present compliance requirements of The European Union. Understand & present compliance requirements of The Gulf Countries Acts. Understand & present compliance requirements of ILO convention C155. 		





- Gulf Countries Acts: Federal Law No. 8 of 1980 on Regulation of Labor Relations as in UAE.
- Royal Decree No. M/51 of 2003 as in Saudi Arabia.
- Qatar Labor Law No. 14 of 2004 as in Qatar.
- Labor Law No. 6 of 2010 as in Kuwait, The Labor Law No. 36 of 2012.
- ILO convention C155.

Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.

Tools, Equipment and Other Requirements

Regulations, Books, Handouts, Laptop/computer, internet.

Module 9: Knowledge & understanding to conduct audit and inspection of workplace, assess the workplace on Health & Safety parameters, review and upgrade existing safety controls at the workplace

Mapped to SSD/N0125, v1.0

- Able to perform Audit & Inspections Internationally.
- Preparation of audit reports and review documents.
- Understanding continuous improvement in health & safety parameters & environment

Duration: 36 Hours		Duration: 04 Hours		
Theory–Key Learning Outcomes		Practical–Key Learning Outcomes		
General safety audit safety audit as per I	•	Prepare safety Audit plan		
Roles & responsibili in safety audit.	ties of parties involved	Perform Safety audit		





- Safety audit checklist as per IS14489.
- General conditions & safety audit
- requirements and checklist as per ISO 45001.
- Audit process and checklist for Construction, mining, oil & gas, manufacturing, and chemical industries.
- Inspection process of scaffoldings and PPEs
- Inspection of Electrical protective devices like MCB, RCCB, ELCB.
- Preparation of Audit reports.

Prepare audit and review documents.

Classroom Aids:

Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.

Tools, Equipment and Other Requirements

Regulations, Books, Handouts, Laptop/computer, internet.

Module 10: Identify impact of pollution, perform environment impact analysis, Learn waste management techniques.

Mapped to SSD/N0112, v1.0

Terminal Outcomes:

- Identification and understanding impact of pollution.
- Performing Environmental Impact Assessment
- Learning waste management techniques.

Duration: 36 Hours Duration: 14 Hours





Theory–Key Learning Outcomes

- Introduction to Environment & atmospheric pollution, deep dive into water pollution, land pollution, noise pollution, air quality, ill effects, and control.
- Introduction to waste management, its disposal techniques, Learn about effluent treatment plants.
- Introduction to Hazardous waste management & 6R's (Reuse, reduce, repair, refuse, recycle, reimagine).
- Overview on the regulatory requirements of Central Pollution control Board & State Pollution Control Board.
- Introduction to Environment Protection Act, 1986" & KYOTO protocol.
- Introduction to remote sensing, air monitoring, biological monitoring, soil monitoring and water monitoring. Learn how they play an important role in environment monitoring.
- Introduction to EIA- Environmental impact assessment and LCI- Life cycle Impact assessment. Requirement of EIA and LCI.
- Introduction to global warming and climate change, greenhouse gases & greenhouse effect, carbon cycle, carbon footprints, carbon neutrality & Carbon credits. Learn how they affect the environment and steps taken towards sustainability.
- Introduction to ozone layer, ozone layer depletion, notifying elements affecting ozone layer, acid rain, wet deposition, dry deposition, and its factors.
- Introduction to the term Eco-friendly, energy conservation methods using solar,

Practical–Key Learning Outcomes

- Identify & analyze impact of pollution.
- Carry out environmental impact assessment
- Plan waste management techniques.





hydro,	wind,	biomass,	water,	and
harves ⁻	ting.			

Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.

Tools, Equipment and Other Requirements

Safety goggles, Full face shield, Leather gloves, Puncture resistant gloves, Chemical resistant gloves, Electrically insulated latex gloves, Safety helmets/hard hats, Ear plugs, Ear muffs, Safety shoes, Safety gumboots, High visibility jackets, N95 masks, Double filter half face mask, Double filter full face mask, SCBA — Self-contained breathing apparatus, Safety harness, Lanyard, Fall arrestor, CO2 Fire extinguisher, Dry Chemical Powder Fire extinguisher, Fire hydrant system, Multiple gas detector, TDS Meter.

Module 11: Planning and organizing to provide a safe working environment for workers and set emergency protocols and measure in case of any unforeseen and incidents or accidents to minimize the damages & losses

Mapped to SSD/N0104, v1.0

- 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.

Duration: 36 Hours	Duration: 14 Hours
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes





- Planning of resources and communication to subordinates, co-workers, and superiors.
- Introduction to hierarchy of organization and modes of communication to team members.
- Introduction to identifying the task and distribution among subordinates, supervision, and coordination among the team members for readiness in sync with overall task & timelines.
- Introduction to supervision and monitoring of a task to ensure timely completion of such work.
- Setting up emergency protocols and implementation at working places to minimize the loss in case of any incident or accident.
- Setting up evacuation plans, evacuation drills, assembly area, emergency communication & guidance.

- Plan resources and communication methodologies to subordinates, coworkers, and superiors.
- Prepare necessary support to subordinates, coordinate with co-workers and liaison with superiors and monitoring.
- Set up emergency protocols and implement them at working places to minimize loss in case of any incident or accident.

Black/White Board, Computer, Projection Equipment, MS office & Design & drafting software, Facilitator's Guide, Participant's Handbook.

Tools, Equipment and Other Requirements

Safety goggles, Full face shield, Leather gloves, Puncture resistant gloves, Chemical resistant gloves, Electrically insulated latex gloves, Safety helmets/hard hats, Ear plugs, Ear muffs, Safety shoes, Safety gumboots, High visibility jackets, N95 masks, Double filter half face mask, Double filter full face mask, SCBA — Self-contained breathing apparatus, Safety harness, Lanyard, Fall arrestor, CO2 Fire extinguisher, Dry Chemical Powder Fire extinguisher, Fire hydrant system, Multiple gas detector, TDS Meter

Module 12: Understand scope in employment, financial dealing, digital literacy and communication with employer or customer

Mapped to DGT/VSQ/N0102





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

Duration: 36:00	Duration: 24:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Discuss the importance of Employability Skills in meeting the job requirements. Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen. Discuss 21st century skills. Display positive attitude, self - motivation, problem solving, time management skills and continuous learning mindset in different situations. Discuss the significance of reporting sexual harassment issues in time Discuss the significance of using financial products and services safely and securely. Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws Explain the importance of managing expenses, income, and savings. Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely Discuss the need for identifying 	 Show how to practice different environmentally sustainable practices Use appropriate basic English sentences/phrases while speaking Demonstrate how to communicate in a well -mannered way with others Demonstrate working with others in a team Show how to conduct oneself appropriately with all genders and PwD Show how to operate digital devices and use the associated applications and features, safely and securely Create a biodata Use various sources to search and apply for jobs





opportunities for potential business, sources for arranging money and potential legal and financial challenges

- Differentiate between types of customers
- Explain the significance of identifying customer needs and addressing them
- Discuss the significance of maintaining hygiene and dressing appropriately
- Discuss the significance of dressing up neatly and maintaining hygiene for an interview
- Discuss how to search and register for apprenticeship opportunities

Classroom Aids:

• Black/White Board, Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.

Tools, Equipment and Other Requirements

• Laptop/computer, internet, mobile

On The Job Training Plan: Manager (OSHE)

Occupational Safety, Health, and Environment (OSHE) Management : 20 Hours Key Learning Outcomes

- Workout health & safety requirements of the organization.
- Identify fire hazards at the workplace & evacuation during fire.
- Formulate safety policy for contractor onboarding.

Hazard Identification & Risk Analysis : 20 Hours

Key Learning Outcomes

- Identify hazards
- Perform Hazard and Operability Analysis (HAZOP).





• Perform Hazard Identification and Risk Assessment (HIRA)

Fire Safety, fire fighting equipments, and fire evacuation plan: 20 Hours

Key Learning Outcomes

- Identify fire hazards at the workplace.
- Develop systematic approach in identifying and correcting probable fire accidents and suggest fire-fighting equipment.
- Operate fire extinguisher and fire hydrant.
- Prepare an Emergency evacuation plan.

Hazards Mitigation Methodologies : 10 Hours

Key Learning Outcomes

- Formulate hierarchy of control in risk mitigation.
- Identify residual or hidden risks & control measures.

Hazard and risk perception: 10 Hours

Key Learning Outcomes

- Formulate monitor ways of hazards.
- Analyze risk tolerance capability of individuals.

Safety auditing and inspection: 20 Hours

Key Learning Outcomes

- Perform safety Audit & Inspections.
- Prepare audit and review documents.

Pollution & Environment Management, Global warming, and sustainability: 10 Hours

Key Learning Outcomes

- Identify & analyze impact of pollution.
- Carry out environmental impact assessment
- Plan waste management techniques.

Plan, Organize and Emergency protocols: 10 hours





Key Learning Outcomes

- Planning of resources and communication to concerned subordinates, co-workers, and superiors.
- Prepare necessary support to subordinates, coordinate with co-workers and liaison with superiors and monitoring.
- Set up emergency protocols and implement them at working places to minimize loss in case of any incident or accident.

Total Duration of OJT – 120 Hours (2.5 weeks)





Annexure

Trainer Requirements

	Pro	Trainer erequisit	tes			
Minimum	num Specialization		Relevant Industry		Training	
Educational Qualification		Experience		Experience		arks
Qualification		Year s	Specialization	Ye ar s	Specializ ation	
ITI/12 th Pass	Any domain	15	Safety Domain	0	-	
Graduate in any discipline / Diploma in Engineering	Civil, Mechanical, Manufacturing, Mining, Production, Industrial, Chemical, Safety, Petroleum Engineering, Mathematics, Physics degree and others.	8	Safety Domain	0	-	
M. Tech/ B. Tech	Civil, Mechanical, Manufacturing, Mining, Production, Industrial, Chemical, Safety, Petroleum Engineering and others.	5	Safety Domain	0	-	

Trainer Certification	
Domain Certification	Platform Certification





Certified as Trainer for the Job Role "SSD/Q0106 v1.0: Manager (OSHE)" or higher qualification as per career progression by SSDF. The minimum accepted score is 80%.

Recommended that the Trainer is certified for the Job Role: "Trainer (VET and Skills)", mapped to the Qualification Pack: "MEP/Q2601 v2.0". The minimum accepted score is 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educationa I	Specialization	Relevant Industry Experience		Training/Assessm ent Experience		Remar ks
Qualificati on		Years	Specializati on	Ye ar s	Specialization	
ITI/12 th Pass	Any domain	15	Safety Domain	0	-	
Grad uate in any discip line / Diplo ma in Engin eerin g	Civil, Mechanical, Manufacturing, Mining, Production, Industrial, Chemical, Safety, Petroleum Engineering, Mathematics, Physics degree and others	8	Safety Domain	0	-	
M. Tech/ B. Tech	Civil, Mechanical, Manufacturing, Mining, Production, Industrial, Chemical, Safety, Petroleum Engineering and others.	5	Safety Domain	0	-	





Assessor Certification					
Domain Certification	Platform Certification				
Certified as assessor for the QP: "SSD/Q0106 v1.0: Manager (OSHE)" or higher qualification as per career progression. The minimum accepted score is 80%.	Recommended that the Assessor is certified for the Job Role: "Assessor (VET and Skills)", mapped to the Qualification Pack: "MEP/Q2701 v2.0". The minimum accepted score is 80%.				







Assessment Strategy

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

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

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

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





Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to Be known and/or understood to accomplish or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training Outcome is specified in terms of knowledge, understanding(theory)and skills (practical application).
OJT(M)	On-the-job training(Mandatory);trainees are mandated to complete specified hours of training on site
OJT(R)	On-the-job training(Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective, or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.





Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standard
АВ	Awarding Body
AA	Assessment Agency
TP	Training Partner