



QUALIFICATION FILE

CRANE INSPECTOR (SAFETY)

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☒ Apprenticeship

☒ Upskilling ☐ Dual/Flexi Qualification ☒ For ToT ☒ For ToA

☒ General ☒ Multi-skill (MS) ☒ Cross Sectoral (CS) ☐ Future Skills ☐ OEM

NCrF/NSQF Level: 5.5

Submitted By:

SAFETY SKILL DEVELOPMENT FOUNDATION

D-507, Light House, Town Square, Sector 82-A, Vatika India Next,

Gurugram -122004 (Haryana)

+91-1243634989

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Section 1: Basic Details

1.	Qualification Name	Crane Inspector (Safety)										
2.	Sector/s	Hydrocarbon, Iron & steel, Mining, Power, Automotive, Construction, Chemicals & Petrochemicals, and others.										
3.	Type of Qualification: <input checked="" type="checkbox"/> New <input type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	NQR Code & version of existing/previous qualification: (change to previous, once approved) N/A	Qualification Name of existing/previous version: N/A									
4.	a. OEM Name b. Qualification Name (Wherever applicable)											
5.	National Qualification Register (NQR) Code & Version (Will be issued after NSQC approval)	QC-5.5-CO-03363-2024-V1-SSDF	6. NCrf/NSQF Level: 5.5									
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other) (Wherever applicable specify multiple entry/exits also & provide details in annexure)	Certificate										
8.	Brief Description of the Qualification	A Crane Inspector (Safety) is responsible for inspection of cranes to ensure that equipment and machinery used for lifting is in safe working order and in line with strict health and safety guidelines and standards. He is also responsible to bring out, shortcomings if any and submit the inspection report.										
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Completed 4-year UG</td> <td>Nil</td> </tr> <tr> <td>2</td> <td>Completed 3-year diploma after 10th</td> <td>3</td> </tr> </tbody> </table>		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	Completed 4-year UG	Nil	2	Completed 3-year diploma after 10th	3
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)										
1	Completed 4-year UG	Nil										
2	Completed 3-year diploma after 10th	3										

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18.	Is the Job Role Amenable to Persons with Disability	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes," specify applicable type of Disability:	
19.	How Participation of Women will be Encouraged	Women will be encouraged to join.	
20.	Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Colleges <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
22.	Name and Contact Details of Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: Anand Kumar Singh Email: aksingh@ssdfindia.org Contact No.: +91-8505955506 Website: www.ssdfindia.org	
23.	Final Approval Date by NSQC: 22-10-2024	24. Validity Duration: 3 Years	25. Next Review Date:22-10-2027

NSQC APPROVED

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer to the curriculum document.

Th.-Theory **Pr.**-Practical **OJT**-On the Job **Man.**-Mandatory Training **Rec.**-Recommended **Proj.**-Project

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-core	NCrF/ NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Introduction to Lifting and Rigging Operations	SSD/N0327 v1.0	Core	5.5	2	30	30		-	60	50	50	-	-	100	10.0%
2.	Crane Operational Mechanisms and Systems	SSD/N0328 v1.0	Core	5.5	2	30	30		-	60	50	50	-	-	100	10.0%
3.	Inspection, Maintenance, and Certification of Lifting Equipment	SSD/N0329 v1.0	Core	5.5	2	30	15	15	-	60	50	50	-	-	100	10.0%
4.	Legal and Regulatory Compliance for Lifting Operations	SSD/N0330 v1.0	Core	5.5	2	30	30		-	60	50	50	-	-	100	10.0%
5.	Hazard Identification, Risk Assessment, and Incident Reporting in Lifting Operation	SSD/N0331 v1.0	Core	5.5	2	30	15	15	-	60	50	50	-	-	100	10.0%

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
6	Safety of Plant, Machinery, and Vehicle in Lifting Operation	SSD/N0332 v1.0	Core	5.5	2	30	10	20		60	50	50	-	-	100	10.0%
7	Planning and Organizing Lifting & Rigging and Emergency Protocols	SSD/N0333 v1.0	Core	5.5	2	30	20	10		60	50	50	-	-	100	10.0%
8	Load Planning and Stability Control in Lifting Operation	SSD/N0334 v1.0	Core	5.5	2	30	15	15		60	50	50	-	-	100	10.0%
9	Communication and Team Coordination in Lifting Operations	SSD/N0335 v1.0	Core	5.5	1	15	5	10		30	50	50	-	-	100	5.0%
10	Health, Hygiene and Environment Protocols for Lifting & Rigging Operations	SSD/N0336 v1.0	Core	5.5	1	15	10	5		30	50	50	-	-	100	5.0%
11	Employability Skills	DGT/VSQ/N 0102	Non-Core	5.5	2	30	30	-	-	60	25	25	-	-	50	10.0%
Duration (in Hours) / Total Marks			-	-	20	300	210	90	-	600	525	525	-	-	1050	100.0%

Elective NOS/s: No

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/non-core	NCrF/ NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-R ec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Duration (in Hours) / Total Marks (One of the Electives only)			-	-		-	-	-	-	-	-	-	-	-	-	-

Optional NOS/s: No

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/non-core	NCrF/ NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-R ec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	N/A															
Duration (in Hours) / Total Marks																

Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 50% (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Minimum Pass Percentage – NOS/Module-wise: 35% (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Completed UG/PG in relevant field with 3 years of experience. Completed UG in any discipline / Diploma in relevant field with 5 years of experience. Completed ITI/12TH with 10 years of experience
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2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Completed UG/PG in relevant field with 4 years of experience. Completed UG in any discipline / Diploma in relevant field with 6 years of experience. Completed ITI/12TH with 11 years of experience
3.	Tools and Equipment Required for Training	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes," details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Completed UG/PG in relevant field with 3 years of experience. Completed UG in any discipline / Diploma in relevant field with 5 years of experience. Completed ITI/12TH with 10 years of experience
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Completed UG/PG in relevant field with 2 years of experience. Completed UG in any discipline / Diploma in relevant field with 4 years of experience. Completed ITI/12TH with 9 years of experience
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Completed UG/PG in relevant field with 4 years of experience. Completed UG in any discipline / Diploma in relevant field with 6 years of experience. Completed ITI/12TH with 11 years of experience
4.	Assessment Mode (Specify the assessment mode)	Offline and online
5.	Tools and Equipment Required for Assessment	<input checked="" type="checkbox"/> Same as for training <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (details to be provided in Annexure-if it is different for Assessment)

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): Yes
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes
3.	Government /Industry initiatives/ requirement (Yes/No): No
4.	Number of Industry validation provided: 30
5.	Estimated nos. of persons to be trained and employed: 30000
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: "No"

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name.

1.	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors <i>(Mandatory)</i>	Yes
2.	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	Yes
3.	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	Yes
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	Yes
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is "Blended Learning")</i>	No
6.	Annexure: Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i>	Yes
7.	Annexure: Acronym and Glossary <i>(Optional)</i>	Yes
8.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	Yes

9.	Supporting Document: Career Progression (Mandatory - Public view)	Yes
10.	Supporting Document: Occupational Map (Mandatory)	Yes
11.	Supporting Document: Assessment SOP (Mandatory)	Yes
12.	Any other document you wish to submit:	No

Annexure: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge/Process	<ul style="list-style-type: none"> Understanding Occupational Safety and Health Administration (OSHA) regulations related to cranes and lifting operations. Knowledge of different types of mobile cranes, including truck-mounted, rough-terrain, and all-terrain cranes. Knowledge of crane structural components, such as booms, jibs, masts, and counterweights. Understanding principles of load calculations, including determining the center of gravity, load weight, and distribution. Familiarity with NDT methods, such as ultrasonic testing, magnetic particle testing, and radiographic testing. 	<ul style="list-style-type: none"> Good understanding of OSHA, ANSI/ASME, and ISO standards, including their practical applications and implications for crane safety and operations Detailed understanding of different crane types (mobile, tower, overhead, specialized) and their specific inspection requirements. Expertise in analyzing crane components, including structural, mechanical, hydraulic, and electrical systems, for signs of wear, damage, or malfunction. Proficiency in performing complex load calculations, including dynamic loading conditions and stability factors. 	5.5

Professional and Technical Skills/ Expertise/ Professional Knowledge	<ul style="list-style-type: none"> • Proficiency in conducting detailed visual inspections to identify wear, damage, and defects in crane components. • Proficiency in setting up and conducting load tests to verify a crane's lifting capacity and stability. • In-depth knowledge of OSHA regulations related to crane safety and operation. • Expertise in different types of cranes, including mobile, tower, overhead, and specialized cranes • Proficient in performing complex load calculations, understanding load dynamics, and ensuring crane stability under various conditions. • Familiarity with SOPs for crane inspection, maintenance, and operation. 	<ul style="list-style-type: none"> • Utilize their advanced technical knowledge and inspection skills to ensure the highest standards of crane safety and performance. • Provide leadership and mentorship to junior inspectors and other team members, sharing expertise and promoting best practices. • Demonstrate strategic thinking in planning and executing inspections, addressing complex issues, and making informed decisions. • Act as an advocate for compliance and safety, ensuring that all crane operations adhere to relevant standards and regulations. 	5.5
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	<ul style="list-style-type: none"> • Ability to clearly explain inspection findings, safety concerns, and recommendations to various stakeholders, including crane operators, maintenance teams, and management. • Ability to analyze complex problems, identify underlying causes, and develop effective solutions. • Developing innovative solutions to inspection challenges, improving processes, and enhancing service offerings. • Developing and implementing business strategies that align with market demands and organizational goals. 	<ul style="list-style-type: none"> • Utilize their advanced technical and professional skills to perform high-quality inspections, ensure compliance, and enhance safety. • Apply entrepreneurial skills to identify new opportunities, improve service offerings, and potentially start and manage a successful inspection business. • Lead teams, mentor junior inspectors, and drive innovation in inspection techniques and processes. • Engage in strategic planning, set clear goals, and develop business strategies that align with industry trends and client needs. 	5.5

	<ul style="list-style-type: none"> • Mastery of various crane inspection techniques, including visual inspections, non-destructive testing, and functional testing • Ability to conduct thorough risk assessments, identifying potential hazards and implementing appropriate control measures. 		
Broad Learning Outcomes/Core Skill	<ul style="list-style-type: none"> • Understand and proficiently inspect various crane systems, including mechanical, hydraulic, and electrical components. • Ensure all crane operations comply with safety standards and regulations (OSHA, ANSI/ASME, ISO). • Perform detailed and systematic inspections of cranes, identifying wear, damage, and potential safety issues. • In-depth knowledge of different crane types (mobile, tower, overhead) and their specific components • Detailed understanding of OSHA regulations relevant to crane operations. • Skills in conducting risk assessments to identify potential hazards and implement mitigation strategies. 	<ul style="list-style-type: none"> • Apply advanced technical knowledge and skills to perform high-quality inspections, ensure compliance, and enhance safety. • Lead and mentor junior inspectors, promoting best practices and fostering a culture of safety and excellence. • Utilize strategic thinking in planning and executing inspections, addressing complex issues, and making informed decisions. • Engage in continuous professional development, staying updated with industry trends, new technologies, and regulatory changes. 	5.5
Responsibility	<ul style="list-style-type: none"> • Perform thorough and systematic inspections of cranes, including visual, mechanical, hydraulic, and electrical inspections. • Ensure all crane operations comply with relevant safety regulations and 	<ul style="list-style-type: none"> • Apply advanced technical skills to conduct thorough inspections and ensure compliance with safety standards. • Provide leadership and mentorship to junior inspectors, promoting a culture of safety and continuous improvement. 	5.5

	<p>standards, including OSHA, ANSI/ASME, and ISO.</p> <ul style="list-style-type: none"> • Compile detailed inspection reports that document findings, identify issues, and recommend corrective actions. • Identify and diagnose issues with crane systems, determining root causes and developing effective solutions. • Provide detailed recommendations for maintenance and repairs based on inspection findings. 	<ul style="list-style-type: none"> • Engage in strategic planning and decision-making, addressing complex issues and making informed decisions based on comprehensive data analysis. • Act as an advocate for safety and compliance, ensuring that all crane operations adhere to relevant regulations and standards. 	
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Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30

No	Equipment Name	Unit Type	Minimum number of Equipment required
•	Load Cells and Load Testing Equipment	Nos	3
•	Laser Alignment Tools	Nos	3
•	Digital Calipers	Nos	3
•	Micrometers	Nos	3
•	Dial Indicators	Nos	3
•	Measuring Tapes	Nos	3
•	Spirit Levels	Nos	3
•	Plumb Bobs	Nos	3
•	Theodolites and Total Stations	Nos	3

No	Equipment Name	Unit Type	Minimum number of Equipment required
•	Crane Scales	Nos	3
•	Personal Protective Equipment (PPE)	Nos	5
•	First Aid Kits	Nos	1
•	Fire Extinguishers	Nos	1
•	Lockout/Tagout (LOTO) Kits	Nos	1
•	Rescue Equipment (e.g., rescue ropes, stretchers)	Nos	1
•	Wrenches and Spanners	Nos	1
•	Torque Wrenches	Nos	1
•	Screwdrivers and Nut Drivers	Nos	1
•	Hammers and Mallets	Nos	1
•	Impact Drivers	Nos	1
•	Cordless Drills	Nos	1
•	Hydraulic Jacks	Nos	1
•	Grease Guns for lubrication	Nos	1
•	Slings, Shackles, and Hooks	Nos	1
•	Chains and Chain Hoists	Nos	1
•	Spreader Bars	Nos	1

No	Equipment Name	Unit Type	Minimum number of Equipment required
•	Rigging Hardware	Nos	1
•	Tag Lines for guiding loads	Nos	1

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Black/White board
2. Marker
3. Projector
4. Computer with relevant software

Annexure: Industry Validations Summary

Provide summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	Irrigation Department Government of UP	Er. Manoj Kumar Arya	Junior Engineer	Aligarh, Uttar Pradesh	9412818118	-	-
2	Shaheed Bhagat Singh College, University of Delhi	Dr. Chandrakanta	Former Faculty	Delhi University, New Delhi	-	chandrakantajnu@gmail.com	-
3	Surya Contractors	Mr. Rajendra Kumar	Billing Engineer (Civil)	Amritsar, Punjab	8802661569	-	-

4	Accurate Institute of Management and Technology	Dr. S L Rajput	Associate Professor	Greater Noida, Uttar Pradesh	807626549	-	-
5	Pratham education foundation	Mr. Ashutosh Sharma Mr. Raman Singh	Program Associate (Civil)	Noida, Uttar Pradesh	7982315949 7827582148	-	-
6	CPWD, New Delhi	Mr. Bharat Singh Chauhan	Junior Engineer (Civil)	O/A Assistant Engineer, 4/N, CPWD Shahjahan road, New Delhi	-	-	-
7	UPPCL, Lucknow	Ms. Sandhya Mishra	Junior Engineer (Civil)	UPPCL, Left Bank Gomti Barrage, Gomti Nagar, Lucknow, UP	-	-	-
8	Deepam Contractors Pvt. Ltd.	Mr. R. B. Singh	Director	H-156 Beta 2, Greater Noida, UP- 203010	7503920973	deepamcontractor@gmail.com	-
9	IIT Guwahati	Dr. Sparsh Johari	Assistant Professor	Indian Institute of Technology, Guwahati	7827060976	sparshjohari@iitg.ac.in	-
10	Ciria India Limited	Mr. Akash Nirvan	Head EHSS	C-116, 2 ND & 3 RD Floor, Sector-2, Noida- 201301, UP	8800377994	Akash.nirvan@morganplc.com	-

11	IIT Roorkee	Mr. Amarjeet	Research Scholar (Dept. of Civil Engg)	Indian Institute of Technology Roorkee, Uttarakhand	7839116059	-	-
12	N.R., Indian Railways	Bishun Dayal Verma	SSE	Carriage workshop, Alam Bagh, Lucknow- Uttar Pradesh	8707481190 9794830451	-	-
13	Larsen & Toubro Limited	Mr. Rahul Sinha	Assistant Construction Manager	NCRTC RRTS Project, Meerut, Uttar Pradesh	-	Rahul.sinha1@lntecc.com	-
14	Ask EHS engineering & consultants Pvt ltd	Mahesh S Lanjekar	Business Head	Surat, Gujarat	9227695202	Mahesh.lanjekar@askehsPMC.com	-
15	Symplico	Ms. Lata Rawat	Manager	Surat, Gujarat	9484825000	-	-
16	Pooja Enterprises	Mr. Karan Aggarwal	General Manager	Surat, Gujarat	9725348874	-	-
17	Structural Specialties & Projects Pvt Ltd	Mr. Sawant	-	801, Odyssey, Road No. 9, Wagle Estate, Thane (West), Thane, Maharashtra 400604	022 2580 1080	-	-
18	Jobby Industrial Services Pvt Ltd	Mr. B Naik	-	UNIT NO. 25 & 26, NAHUR UDYOG CO-OP SOCIETY LTD. PANDIT	02221675100	-	-

				M. M. MALVIYA MARG, MULUND (W), MUMBAI Mumbai City MH 400080 IN			
19	Enercore Power Builders	Mr. S Paramasiram	-	351 / 270, 1st Floor, MKN Road, Alandur, Chennai, Tamil Nadu 600016	(949) 732-4400	-	-
20	Munn Engineers & Developers Pvt Ltd	-	-	Ward No. 3, House No: 26, Nadikhandisah i, Phulbani, Gndhamal, Odisha- 762001	-	-	-
21	Micron Electricals	Syed Akbar Ahmed Zaidi Mr. Mohan Rangala	Safety Head EHS Engineer	No.86/E-1,2nd Cross,3rd Main Road, Industrial Suburb,2nd Stage. Yeshwanthpur, Bengaluru – 560 022	9885092841 9515470663	qhseakbar@gmail.com rangalamohanrao@gmail.com	-

22	Tata Project	SK Mohammad Ali Akbar	Safety Officer	Mumbai, Maharashtra, India	9040597712	-	-
23	Reliance Industries Limited	Ravi Ballabh	GM, S&OR-Const. Safety		9725007688	Ravi.ballabh@ril.com	-
24	Signify Innovation India Limited	Pradeep Singh Parhar	Manager Health & Safety	9 th floor, Building 9B, DLF cyber city, Gurugram-Haryana	9814721820	Pradeep.parhar@signify.com	-
25	ASK EHS	Harshit Parikh	Business Development Overseas (HSE Recruitment & Projects)	Surat, Gujarat	6359922897	harshitparikh@askehspmc.com	-
26	JSW	Veerendra Kumar	Safety Consultant			Veerendra.kumar@jsw.in	-
27	Carrier India Limited	Md. Mukaram	Safety Head			md.mukaram@carrier.com	-
28	Kalpataru Group	Lalit Tiwari	President- EHS & Group chief sustainability officer			lalitkumar.tiwari@kalpataru.com	-
29	United Fire & Safety Services	Sandeep Mehta	Owner	GIDC, Industrial estate, makarpura, Vadodara-390010	6358827798	Usafe.fire@gmail.com	-

30	L&T Limited	Manish Gupta	HSE Head	L&T Energy-Hydrocarbon (HSE), Hazira			
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Annexure: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2024	300	300	50	50	-	-
2025	500	500	100	100	-	-
2026	800	800	150	150	-	-

Data to be provided year-wise for the next 3 years.

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed

Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

List Schemes in which the previous version of Qualification was implemented: This is a new qualification.

Content availability for previous versions of qualifications: This is a new qualification.

☐ Participant Handbook ☐ Facilitator Guide ☐ Digital Content ☐ Qualification Handbook ☐ Any Other:

Languages in which Content is available: Hindi and English

Annexure: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
SSD/N0327 v1.0 : Introduction to Lifting and Rigging Operations	PC1: Explain the principles of lifting, rigging, and load handling.	4	4	-	-
	PC2: Identify common tools and equipment used in lifting operations (e.g., cranes, slings, hooks).	4	4	-	-
	PC3: Describe the importance of load stability and correct sling angles for safe lifting.	4	4	-	-
	PC4: Identify the safety hazards associated with lifting and rigging operations.	4	4	-	-
	PC5: Explain the role of the Crane Safety Inspector in ensuring compliance with safety standards.	4	4	-	-
	PC6: Outline the responsibilities of Crane Operators in executing safe lifts.	4	4	-	-
	PC7: Describe the duties of Riggers in load preparation and guiding lifts.	4	4	-	-
	PC8: Identify the role of the Rigging Supervisor in overseeing rigging activities and ensuring team coordination.	4	4	-	-
	PC9: Demonstrate knowledge of pre-operation safety checks.	4	4	-	-
	PC10: Explain the importance of personal protective equipment (PPE) in lifting operations.	4	4	-	-
	PC11: Identify common safety protocols such as lockout/tagout procedures and emergency controls.	4	4	-	-
	PC12: Monitor compliance with safety standards during operations to minimize risks.	3	3	-	-

	PC13: Use appropriate communication tools (e.g., radios, hand signals) to coordinate with team members.	3	3	-	-
	NOS Total Marks	50	50	-	-
SSD/N0328 v1.0 : Crane Operational Mechanisms and Systems	PC1: Identify key mechanical components such as booms, hooks, slings, and gears.	5	5	-	-
	PC2: Explain how boom types (e.g., telescopic, articulated) affect operations.	5	5	-	-
	PC3: Describe the role of counterweights in ensuring crane stability.	4	4	-	-
	PC4: Explain the role of hydraulic systems in crane movements (e.g., lifting, lowering).	4	4	-	-
	PC5: Identify electrical components such as control systems, motors, and sensors.	4	4	-	-
	PC6: Detect common malfunctions in hydraulic and electrical systems.	4	4	-	-
	PC7: Understand the operation of braking systems to prevent unintended movement.	4	4	-	-
	PC8: Explain the role of safety features such as anti-two-block systems and limit switches.	4	4	-	-
	PC9: Use load indicators and charts to monitor crane capacity.	4	4	-	-
	PC10: Conduct basic troubleshooting for hydraulic, mechanical, and electrical faults.	4	4	-	-
	PC11: Ensure that all systems are maintained according to manufacturer's guidelines.	4	4	-	-
	PC12: Maintain documents and report any faults to the appropriate personnel.	4	4	-	-
	NOS Total Marks	50	50	-	-
SSD/N0329 v1.0 : Inspection, Maintenance, and Certification of Lifting Equipment	PC1: Perform visual inspections of equipment components for signs of wear and damage.	5	5	-	-
	PC2: Ensure that safety devices and indicators are functional.	5	5	-	-
	PC3: Check the condition of slings, hooks, pulleys, ropes, and other lifting gear.	4	4	-	-
	PC4: Conduct maintenance activities according to manufacturer's guidelines.	4	4	-	-

	PC5: Identify minor faults and perform necessary repairs.	4	4	-	-
	PC6: Coordinate with maintenance teams for major repairs and replacements.	4	4	-	-
	PC7: Verify that all equipment complies with national and international safety standards (e.g., OSHA, LOLER).	4	4	-	-
	PC8: Ensure that testing certificates and maintenance records are valid and accessible.	4	4	-	-
	PC9: Prepare documentation for audits and certifications as required.	4	4	-	-
	PC10: Document any identified defects, faults, or non-compliance issues.	4	4	-	-
	PC11: Report findings to relevant personnel for corrective action.	4	4	-	-
	PC12: Monitor and follow up on corrective actions to ensure compliance.	4	4	-	-
	NOS Total Marks	50	50	-	-
SSD/N0330 v1.0 : Legal and Regulatory Compliance for Lifting Operations	PC1: Identify and interpret relevant national and international standards (e.g., OSHA, LOLER, ISO 45001).	5	5	-	-
	PC2: Ensure lifting operations align with legal and safety standards.	5	5	-	-
	PC3: Communicate regulatory requirements to operational teams.	4	4	-	-
	PC4: Verify that all procedures comply with organizational safety protocols.	4	4	-	-
	PC5: Monitor lifting operations to ensure adherence to policies and procedures.	4	4	-	-
	PC6: Identify and report any non-compliance issues to the relevant authorities.	4	4	-	-
	PC7: Ensure all equipment certifications and safety inspections are up to date.	4	4	-	-
	PC8: Maintain accurate documentation of audits, inspections, and certifications.	4	4	-	-
	PC9: Prepare documentation for regulatory audits and internal reviews.	4	4	-	-

	PC10: Identify and document any incidents of non-compliance.	4	4	-	-
	PC11: Report non-compliance to appropriate personnel and external authorities.	4	4	-	-
	PC12: Implement corrective actions to address non-compliance and prevent recurrence.	4	4	-	-
	NOS Total Marks	50	50		-
SSD/N0331 v1.0: Hazard Identification, Risk Assessment, and Incident Reporting in Lifting Operation.	PC1: Identify potential hazards associated with cranes, equipment, and site conditions.	5	5	-	-
	PC2: Recognize environmental factors (e.g., high winds, uneven surfaces) that could impact operations.	5	5	-	-
	PC3: Monitor equipment for wear, defects, or malfunctions that may cause risks.	4	4	-	-
	PC4: Perform risk assessments to determine the likelihood and impact of identified hazards.	4	4	-	-
	PC5: Develop and implement preventive measures to mitigate risks.	4	4	-	-
	PC6: Communicate identified risks and control measures to team members.	4	4	-	-
	PC7: Document and report incidents, near-misses, and safety violations promptly.	4	4	-	-
	PC8: Ensure incident reports are aligned with organizational procedures and standards.	4	4	-	-
	PC9: Conduct root-cause analysis to determine underlying factors for incidents.	4	4	-	-
	PC10: Maintain detailed records of incidents and corrective actions taken.	4	4	-	-
	PC11: Monitor and verify the implementation of corrective measures.	4	4	-	-
	PC12: Participate in safety audits and provide input for continuous improvement.	4	4	-	-
	NOS Total Marks	50	50		-
SSD/N0332 v1.0: Safety of Plant, Machinery, and Vehicle in Lifting Operation	PC1: Monitor the safe handling and operation of plant, machinery, and vehicles at work sites.	5	5	-	-

	PC2: Ensure operators follow manufacturer's instructions and safety guidelines.	5	5	-	-
	PC3: Verify that all personnel are using the appropriate personal protective equipment (PPE).	4	4	-	-
	PC4: Perform pre-operation inspections of machinery, plant, and vehicles to identify faults.	4	4	-	-
	PC5: Detect any wear, damage, or malfunctions and report them to the maintenance team.	4	4	-	-
	PC6: Document inspection results and ensure that any faults are addressed promptly.	4	4	-	-
	PC7: Ensure that safety protocols, such as lockout/tagout procedures, are followed during maintenance.	4	4	-	-
	PC8: Monitor the interaction of vehicles and personnel to prevent accidents.	4	4	-	-
	PC9: Identify and mitigate environmental risks, such as uneven surfaces or weather conditions.	4	4	-	-
	PC10: Collaborate with machine operators, supervisors, and safety officers to ensure compliance.	4	4	-	-
	PC11: Ensure compliance with statutory and organizational safety standards.	4	4	-	-
	PC12: Participate in safety briefings and provide input for continuous improvement.	4	4	-	-
	NOS Total Marks	50	50		-
SSD/N0333 v1.0: Planning and Organizing Lifting & Rigging and Emergency Protocols	PC1: Identify common emergencies such as equipment failures, load slippage, or environmental hazards.	5	5	-	-
	PC2: Assess site conditions and risks that could lead to emergencies.	5	5	-	-
	PC3: Monitor equipment and team activities to detect early signs of potential emergencies.	4	4	-	-
	PC4: Prepare detailed emergency response plans aligned with organizational policies.	4	4	-	-
	PC5: Define the roles and responsibilities of team members during emergencies.	4	4	-	-

	PC6: Ensure the availability and functionality of emergency equipment, such as alarms, fire extinguishers, and rescue kits.	4	4	-	-
	PC7: Coordinate with crane operators, riggers, and supervisors to ensure smooth execution of emergency protocols.	4	4	-	-
	PC8: Establish clear lines of communication and designate emergency leaders.	4	4	-	-
	PC9: Monitor compliance with emergency procedures during lifting operations.	4	4	-	-
	PC10: Organize regular emergency drills and simulations to enhance team preparedness.	4	4	-	-
	PC11: Document and evaluate the effectiveness of drills and protocols.	4	4	-	-
	PC12: Conduct post-incident reviews to identify gaps and improve future responses.	4	4	-	-
	NOS Total Marks	50	50	-	-
SSD/N0334 v1.0 : Load Planning and Stability Control in Lifting Operation	PC1: Assess the site conditions and determine the feasibility of lifting operations.	5	5	-	-
	PC2: Identify the type and weight of loads to be lifted.	5	5	-	-
	PC3: Verify that the lifting equipment and accessories are suitable for the operation.	4	4	-	-
	PC4: Calculate the total weight of loads, including attachments and accessories.	4	4	-	-
	PC5: Determine center of gravity and load distribution for safe lifting.	4	4	-	-
	PC6: Calculate sling angles and pressure points to ensure load stability.	4	4	-	-
	PC7: Ensure that counterweights are correctly placed for balance.	4	4	-	-
	PC8: Monitor crane stability indicators and load charts during lifting operations.	4	4	-	-
	PC9: Adjust the boom angle, sling length, and load position as necessary to maintain stability.	4	4	-	-
	PC10: Confirm that the load weight does not exceed the equipment's capacity.	4	4	-	-

	PC11: Ensure that load charts and equipment manuals are accessible and followed.	4	4	-	-
	PC12: Verify compliance with regulatory standards and safety protocols.	4	4	-	-
	NOS Total Marks	50	50	-	-
SSD/N0335 v1.0 : Communication and Team Coordination in Lifting Operations	PC1: Use appropriate hand signals, radios, or verbal instructions during operations.	5	5	-	-
	PC2: Ensure that all instructions are understood and acknowledged by the team.	5	5	-	-
	PC3: Communicate any changes or risks immediately to relevant personnel.	4	4	-	-
	PC4: Ensure clear coordination between crane operators, riggers, and supervisors.	4	4	-	-
	PC5: Monitor team actions to ensure they align with the lifting plan.	4	4	-	-
	PC6: Adjust team coordination based on environmental conditions or operational challenges.	4	4	-	-
	PC7: Identify potential conflicts within the team and resolve them proactively.	4	4	-	-
	PC8: Encourage collaboration and open communication to enhance teamwork.	4	4	-	-
	PC9: Provide constructive feedback to improve team coordination.	4	4	-	-
	PC10: Lead pre-operation briefings to align team members with the lifting plan.	4	4	-	-
	PC11: Conduct post-operation debriefs to review performance and identify areas for improvement.	4	4	-	-
	PC12: Prepare document and communicate lessons learned from operations to the team.	4	4	-	-
	NOS Total Marks	50	50	-	-
SSD/N0336 v1.0 : Health, Hygiene, Environment, Protocols for Lifting & Rigging Operations	PC1: Ensure workers follow personal hygiene protocols at the worksite.	5	5	-	-
	PC2: Monitor compliance with PPE requirements for lifting and rigging operations.	5	5	-	-

	PC3: Conduct regular health assessments to ensure fitness for duty.	4	4	-	-
	PC4: Identify environmental hazards such as heat, noise, and air pollution.	4	4	-	-
	PC5: Implement controls to mitigate environmental risks during operations.	4	4	-	-
	PC6: Monitor compliance with waste management and pollution control procedures.	4	4	-	-
	PC7: Identify early signs of stress, fatigue, and burnout in workers.	4	4	-	-
	PC8: Provide access to mental health support and counseling services.	4	4	-	-
	PC9: Promote a work-life balance to maintain mental well-being.	4	4	-	-
	PC10: Organize regular health and safety briefings to raise awareness.	4	4	-	-
	PC11: Provide training on handling emergencies related to health and environmental risks.	4	4	-	-
	PC12: Prepare document and review health-related incidents to improve future protocols.	4	4	-	-
	NOS Total Marks	50	50	-	-
DGT/VSQ/N0102: Employability Skills	PC- 1 Identify employability skills required for jobs in various industries	0.5	0.5	-	-
	PC- 2 Identify and explore learning and employability portals	0.5	0.5	-	-
	PC- 3 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.	0.5	0.5	-	-
	PC- 4 Follow environmentally sustainable practices	0.5	0.5	-	-
	PC- 5 Recognize the significance of 21st Century Skills for employment	1.5	1.5	-	-
	PC- 6 Practice the 21st Century Skills such as Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness,	1.5	1.5	-	-

	emotional awareness, learning to learn for continuous learning etc. in personal and professional life				
	PC- 7 Use basic English for everyday conversation in different contexts, in person and over the telephone	1	1	-	-
	PC- 8 Read and understand routine information, notes, instructions, mails, letters etc. written in English	1	1	-	-
	PC- 9 Write short messages, notes, letters, e-mails etc. in English	1	1	-	-
	PC- 10 Understand the difference between job and career	0.5	0.5	-	-
	PC- 11 Prepare a career development plan with short- and long-term goals, based on aptitude	1	1	-	-
	PC- 12 Follow verbal and non-verbal communication etiquette and active listening techniques in various settings	1	1	-	-
	PC- 13 Work collaboratively with others in a team	1	1	-	-
	PC- 14 Communicate and behave appropriately with all genders and PwD	0.5	0.5	-	-
	PC- 15 Escalate any issues related to sexual harassment at workplace according to POSH Act	0.5	0.5	-	-
	PC- 16 Select financial institutions, products, and services as per requirement	0.5	0.5	-	-
	PC- 17 Carry out offline and online financial transactions, safely and securely	1	1	-	-
	PC- 18 Identify common components of salary and compute income, expenses, taxes, investments etc.	0.5	0.5	-	-
	PC- 19 Identify relevant rights and laws and use legal aids to fight against legal exploitation	0.5	0.5	-	-
	PC- 20 Operate digital devices and carry out basic internet operations securely and safely	1	1	-	-
	PC- 21 Use e- mail and social media platforms and virtual collaboration tools to work effectively	2	2	-	-
	PC- 22 Use basic features of word processor, spreadsheets, and presentations	1	1	-	-
	PC- 23 Identify diverse types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	1	1	-	-

PC- 24 Develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	1	1	-	-
PC- 25 Identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	1	1	-	-
PC- 26 Identify diverse types of customers	0.5	0.5	-	-
PC- 27 Identify and respond to customer requests and needs in a professional manner.	0.5	0.5	-	-
PC- 28 Follow appropriate hygiene and grooming standards	0.5	0.5	-	-
PC- 29 Create a professional Curriculum vitae (Résumé)	-	0.5	-	-
PC- 30 Search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	0.5	-	-	-
PC- 31 Apply to identified job openings using offline /online methods as per requirement	0.5	0.5	-	-
PC- 32 Answer questions politely, with clarity and confidence, during recruitment and selection	0.5	-	-	-
PC- 33 Identify apprenticeship opportunities and register for it as per guidelines and requirement	-	0.5	-	-
Total Marks	25	25	-	-
Grand Total	525	525		-

Annexure: Assessment Strategy

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

Mention the detailed assessment strategy in the provided template.

<1. Assessment System Overview:

- Batches are assigned to the assessment agencies for conducting the assessment on SIP/Portal or email.
- Assessment agencies send the assessment confirmation to VTP/TC looping Awarding Body(AB)
- Assessment agency deploys the ToA certified Assessor for executing the assessment.
- AB ensures the assessment process & records.

2. Testing Environment:

- Check the assessment location, date, and time.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.

3. Assessment Quality Assurance levels/Framework:

- Question bank is created by the AA/Subject Matter Experts (SME) are verified by the other SME.
- Questions are mapped to the specified assessment criteria.
- Assessor will be ToA certified & trainer will be ToT Certified

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location
- Centre photographs with signboards and scheme specific branding

5. Method of verification or validation:

- Surprise visit to the assessment location.
- Method for assessment documentation, archiving, and access
- Soft/Hard copies of the documents are stored.

On the Job:

1. The candidate works for all modules.
2. The candidate must score 50% in assessment to successfully complete the OJT.
3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills, understanding needs & requirements.
 - Report prepared by trainees during OJT.
4. Assessment of task ensure that the candidate can perform all tasks of the job role required:

Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities based on their main economic function, product, service, or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year or above. https://ncvet.gov.in/sites/default/files/NCVET.pdf

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