

 BOTSWANA Qualifications Authority	BQA NCQF QUALIFICATION TEMPLATE	Document No.	DNCQF.QIDD.GD02
		Issue No.	01
		Effective Date	04/02/2020

SECTION A:	QUALIFICATION DETAILS
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QUALIFICATION DEVELOPER (S)	WOO International skills Development and Assessment Academy											
TITLE	Certificate III in Lifting Equipment Operations									NCQF LEVEL	3	
FIELD	Manufacturing, Engineering and Technology			SUB-FIELD	Lifting Equipment Operations			CREDIT VALUE	44			
<i>New Qualification</i>					✓	<i>Review of Existing Qualification</i>						
SUB-FRAMEWORK		<i>General Education</i>				<i>TVET</i>			✓	<i>Higher Education</i>		
QUALIFICATION TYPE	<i>Certificate</i>	<i>I</i>	<i>II</i>	<i>III</i>	✓	<i>IV</i>	<i>V</i>	<i>Diploma</i>	<i>Bachelor</i>			
	<i>Bachelor Honours</i>			<i>Post Graduate Certificate</i>				<i>Post Graduate Diploma</i>				
	<i>Masters</i>					<i>Doctorate/ PhD</i>						


RATIONALE AND PURPOSE OF THE QUALIFICATION

RATIONALE:

HRD Sector Skills Plans (2017) indicators identify demand for people with Lifting Equipment Operations at this level, to support productive safe work that contributes to the economic growth of this sector that is dependent on skilled human resources domain

Labour statistics analysis list Lifting Equipment Operations as one of the occupational trades which are in high demand; on the other hand Government NDP 11 has identified various mega-development projects that will require lifting operations. This thus raises demand for human resources with lifting equipment operations competencies and qualified with a suite of skills required in these jobs.

This qualification will contribute to addressing the national problem of unemployed youth and increase the employability of graduates in certain vocational areas with the acquisition of welding and fabrication skills.

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This qualification will further serve the needs of society and the economy by providing personnel with the knowledge, skills and attributes required to work in the lifting and moving of loads using a variety of lifting equipment.

It will help in producing competent learners who are able to contribute to improved productivity and efficiency within the mining construction engineering environment. They will be able to work according to legislative, regulatory, quality assurance requirements and industry standards.

PURPOSE:

The purpose of this qualification is to provide learners with knowledge, skills, and competence to:

- a) Demonstrate and apply knowledge of lifting equipment operations.
- b) Carry-out start and shut down procedures and checks.
- c) Operate a lifting machine to lift and move loads safely and competently.
- d) Carry out basic maintenance of lifting equipment.
- e) Apply communication techniques and hand signals during lifting and slinging operations.

ENTRY REQUIREMENTS (including access and inclusion)

Entry to this qualification is open to the following criteria:

- a) Certificate II in General Education (NCQF Level 2) or equivalence
- b) There shall be a consideration for RPL and CAT according to national RPL and CAT policies

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SECTION B QUALIFICATION SPECIFICATION	
GRADUATE PROFILE (LEARNING OUTCOMES)	ASSESSMENT CRITERIA
<p>1. Demonstrate knowledge of major components and functions of lifting equipment.</p>	<p>1.1 Select the correct types of lifting machines for the appropriate job</p> <p>1.2 Apply knowledge of the functions of major components during inspection and operation of lifting equipment.</p> <p>1.3 Select and use appropriate attachments to lift and move the load.</p> <p>1.4 React to warning systems, gauges, instruments and use controls to effectively optimize machine utilization.</p>
<p>2. Apply principles of machine and load stability and capacity when lifting and moving load</p>	<p>2.1 Use Load and capacity information to stabilize loads when working with lifting equipment.</p> <p>2.2 Apply principles of stability and handling loads during the operation of a lifting machine.</p>
<p>3. Operate lifting equipment to lift and move the load.</p>	<p>3.1 Conduct pre-start as per manufacturer's instructions.</p> <p>3.2 Use different attachments for lifting equipment according to the manufacturer's instructions.</p> <p>3.3 Operate lifting equipment as per manufacturer's instructions.</p> <p>3.4 Use communication techniques and hand signals during lifting and slinging operations.</p> <p>Shut down and park lifting equipment in a safe manner according to the manufacturer's manual</p>
<p>4. Carry out basic maintenance of lifting equipment.</p>	<p>6.1 Conduct routine inspection and maintenance of lifting equipment according to the manufacturer's manual.</p> <p>6.2 Load and secure plant for transportation from worksite according to manufacturer's instructions</p> <p>6.3 Prepare and inspect lifting gear, loads and slung in accordance with industry standards.</p> <p>Record all inspections and maintenance using technical writing skills made in accordance with industry standard</p>

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<p>5. Demonstrate knowledge and use requirements of current legislation impacting on Health, Safety, and environmental issues in the workplace.</p>	<p>5.1 Current legislation, regulations and standard practices are applied to the right SHE incident and scenario to meet set targets.</p> <p>5.2 Apply Legislation that affects one occupational SHE context is to handle all incidents and scenarios.</p> <p>5.3 Use workplace safe work procedures as identified</p>
<p>6. Demonstrate rigging techniques to lift and handle loads with different lifting equipment as per industry standards.</p>	<p>4.1 Plan and prepare to sling and lift a load according to drawings and specifications.</p> <p>4.2 Apply rigging techniques and methods to secure and lift loads in accordance with equipment specifications.</p> <p>4.3 Determine slinging method for a regular load after ascertaining the load weight</p> <p>4.4 Apply mechanical handling harnessing techniques and processes to safely move heavy loads.</p> <p>4.5 Operate lifting machinery to lift heavy loads, in accordance with manufacturers' specifications and safety procedures</p>

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SECTION C	QUALIFICATION STRUCTURE				
COMPONENT	TITLE	Credits Per Relevant NCQF Level			Total (Per Subject/ Course/ Module/ Units)
		Level [3]	Level []	Level []	
FUNDAMENTAL COMPONENT <i>Subjects/ Courses/ Modules/Units</i>	Safety, Health And Environmental Conservation	3			2
	Rigging & Slings Methods	3			2
	Scaffolding, working at heights	3			2
	Team and Interpersonal Skills	3			2
CORE COMPONENT <i>Subjects/Courses/ Modules/Units</i>	Lifting Equipment fundamentals	3			2
	Operator Compartment	3			2
	Electronic Monitoring System	3			2
	Operating Controls	3			2
	Lifting Equipment Inspections		4		2
	Lifting Equipment Components		4		3

	Equipment Stability and capacity		4		3
	Load handling and Load Chart		4		3
	Hand Signals and Responsibilities of Signal Person.	3			2
	Lifting Equipment Maintenance & Service	3			3
	Lifting Equipment Safety	3			3
	Lifting Equipment Tools	3			2
ELECTIVE/ OPTIONAL COMPONENT <i>Subjects/Courses/ Modules/Units</i>	Operate Counterbalance Lift Truck ≤15 tons		4		7
	Operate rough terrain lift truck		4		7
	Operate a counterbalanced lift truck ≥ 15 tons		4		7
	Operate defined purpose lift trucks		4		7
	Operate Tower Cranes		4		7
	Operate Mobile Cranes		4		7
	Operate Truck Mounted Cranes		4		7
	Operate Pendant Control Overhead Crane		4		7

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SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL	
TOTAL CREDITS PER NCQF LEVEL	
NCQF Level	Credit Value
3	26
4	18
TOTAL CREDITS	44
Rules of Combination: (Please Indicate combinations for the different constituent components of the qualification)	

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ASSESSMENT ARRANGEMENTS

- Assessment will include both formative and summative modes.
- Formative assessment will contribute 50% to the overall course grade.
- Summative assessment will constitute the other 50% of the overall course grade.
- Assessment shall be carried out by BQA accredited Assessors and in accordance with the institutional policies and in line with the national policy.

MODERATION ARRANGEMENTS

The sole purpose of moderation is to make sure that assessment and marking across all courses are fair, valid, and reliable. It also aligns the assessment tool to the outlined learning outcomes, that it is set at an appropriate level of study and that the process of marking is consistently done.

There will be both Internal Moderation and External moderation

Moderation for assessment shall be carried out by BQA accredited moderators in accordance with the institutional policies and in line with the national policy

RECOGNITION OF PRIOR LEARNING

This qualification is designed to enable award through RPL assessment, in accordance with NCQF policy.

CREDIT ACCUMULATION AND TRANSFER

This qualification is designed to enable award through CAT assessment, in accordance with NCQF policy.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Holders of this qualification may progress in employment and grow through work experience and continuous professional/personal development. They may progress in learning to access learning at this level in one of the domains in a horizontal learning pathway. They may also progress vertically to access qualifications at higher levels in this vocation.

Horizontal Pathways

- Certificate III in Heavy Plant Operations

Vertical Pathways

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- Certificate IV in Lifting Equipment Operations

Employment Pathways

- Truck Mounted Crane Operator

QUALIFICATION AWARD AND CERTIFICATION

Candidates are required to achieve a minimum of 44 credits to be awarded Certificate III in Lifting Equipment Operation qualification.

Certification

Graduates will be issued a certificate and an official transcript at award.


REGIONAL AND INTERNATIONAL COMPARABILITY

The Proposed Qualification was compared with the following.

1. Diversity Technology Training Institute. (NQF Level 3) National Certificate: Lifting Machine Operation (122 Credits) South Africa
2. New Zealand Qualifications Authority (Level 5) National Certificate in Cranes – Advanced Crane Operation (113 Credits) New Zealand

The development of this qualification was informed and guided by comparison with other similar qualifications nationally, regionally and internationally, against common criteria feature of qualifications and their uses. The criteria used included but were not limited to:

- i) Naming by subfield or domain of the vocation, and fit to a level of competence
- ii) Credits outcomes expression and presentation of qualification
- iii) Exit and specific learning outcomes and their nature in terms of type
- iv) Rules of combination for the qualification in terms of contribution of weighting of outcomes
- v) Prescribed contribution of modules such as core, fundamental, elective and the type of domains packaged
- vi) Delivery strategies and assessment methods, together with type of assessment decisions made
- vii) Availability of moderation as quality assurance of the assessment to increase trust on results and credibility of results

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The comparability was done as a desk research task of comparing similar level qualifications from Botswana, South Africa, New Zealand and the UK. The aim of the comparison was to inform this design and attain parity of the esteem of this with similar benchmarks.

A detailed comparability matrix has been attached as evidence of the comparison undertaken, see attachment.

Similarities: the similarities across the surveyed qualifications are in the levels, credits, domains, subfields, and fields of learning under which Lifting Equipment Operation is classified. Other similarities were found in the component courses or modules, where the following are common across all surveys: lifting equipment technology theory and practical applications

Differences: the only differences identified relate to the packaging of relevant courses or modules, wherein in some countries' contexts, where there is working in freezing temperatures.

The proposed qualification is a hybrid that incorporates training in various lifting machines and not on strands or specialisations. The Qualification contains many generic competencies and will allow the learner to study for a qualification at a higher NQF level and thereby increase the learner's opportunities to varied job opportunities in the industry.

REVIEW PERIOD

The qualification shall be reviewed every five years, and or as and when the need arises.

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