BQA NCQF QUALIFICATION TEMPLATE

SECTION A:	QUALIFICATION DETAILS			
QUALIFICATION DEVELOPER (S)	Madirelo Trades and Testing Centre			
TITLE	Certificate V in Information and Communication Technology	**NCQF LEVEL**		5
STRANDS (where applicable)	N/A			
FIELD	Information and Communication Technology	**CREDIT VALUE**		120
SUB FIELD	Information Technology			

New Qualification	✓	Legacy Qualification		Renewal Qualification	
				Registration Code	

SUB-FRAMEWORK	General Education		TVET	✓	Higher Education	

QUALIFICATION TYPE	Certificate	I	II	III	IV	V ✓	Diploma	Bachelor
	Bachelor Honours		Post Graduate Certificate			Post Graduate Diploma		
	Masters				Doctorate/ PhD			

RATIONALE AND PURPOSE OF THE QUALIFICATION

RATIONALE:

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The Botswana Vision 2036 states that development of the human capital and the informal sector and the micro and small enterprises (MSES) are essential in achieving the VISION 2036 pillars, in particular Sustainable Economic Development and Human and Social Development, as well as knowledge based economy.

The Botswana Education and Training Sector Strategic Plan (ETSSP 2015-2020) marks a significant milestone in our collective efforts as a nation to bring about a more diversified, knowledge-based economy. Through a planned and careful development of human capital, the ETSSP seeks to refocus education and training on fulfilment of social and economic aspirations identified in our

Revised National Policy on Education (RNPE) 2004, the National Development Plan 11, Vision 2036 (www.gov.bw/en/Mistries and as well as the Millennium Development Goals. In particular, the ETSSP is intended to strengthen the match between qualifications and labour market requirements, thereby ensuring that education and training outputs are more closely aligned to socio economic development needs of the country.

The Human Resource Development Council (HRDC), in its Annual Report (2020-2021), held a workshop in collaboration with the TVET Pitso, to promote TVET as a sub-sector that has the potential to equip Batswana with employable skills in order to enhance their employability and most importantly promote their significant contributions to the national economy. The report further captures the establishment of sustainable IT solutions that enables the industry to discharge the mandate of the Council, through continuous assessment of organizations operations to identify areas with a potential for service improvement, to ensure HRDC continues to leverage on ICT.

It is to this effect that the TVET ICT Level V qualification is being developed, to achieve the vision by equipping learners with knowledge, skills and competencies of ICT in line with the creation of knowledge based economy. The modules building this qualification cover most areas of organizational requirements with the aim to provide learners with the necessary fusion of technical and innovative skills to qualify them as IT Artisans.

PURPOSE: (itemise exit level outcomes)

The purpose of the qualification is to equip graduates with broad technical knowledge, skills, and competences to:

1. Select and use a range of knowledge and skills to identify everyday ICT problems and plan, design, develop and evaluate appropriate solutions to these problems.

2. Use a range of tools and ICTs, including, where appropriate, new technologies to create digital artefacts.

3. Critically investigate and analyse a problem, using a wide range of sources, and clearly communicate a solution in an appropriate, structured format with supporting evidence.

4. Critically evaluate a solution to a particular problem.

5. Implement sustainable practices into forestry entrepreneurship, considering environmental stewardship and social responsibility, and develop strategies to communicate and market these efforts to stakeholders.

MINIMUM ENTRY REQUIREMENTS (including access and inclusion)

- Certificate IV, NCQF LEVEL 4 (TVET/GE) or equivalent.

- There will be provision for RPL and CAT for entry according to the national RPL and CAT policy

SECTION B	QUALIFICATION SPECIFICATION
GRADUATE PROFILE (LEARNING OUTCOMES)	**ASSESSMENT CRITERIA**
1. Perform computer fundamental maintenance skills as per job specification.	1.1 Demonstrate understanding of computer system unit components 1.2 Prepare tools, materials and equipment to assemble a computer system unit. 1.3 Assemble a computer system unit 1.4 Perform troubleshooting of a computer system unit 1.5 Perform routine maintenance of computer system as per job requirements
2. Apply computer networking principles to install a network as per organizational requirements.	2.1 Apply appropriate techniques and strategies to perform a security risk assessment 2.2 Design and construct modern database systems for business problems, through the understanding and practical application of end user's requirements. 2.3 Understand the underlying concepts of methodologies for completing a successful wireless network installation. 2.4 Demonstrate adequate understanding of fundamental principles and functions of an operating system and install, configure and administer an operating system or components to support an organisation's Information Technology (IT) infrastructure. 2.5 Design a routed and switched network infrastructures and services involving Local Area Network (LAN), Wide Area Network (WAN), and broadband access for businesses and organisations
3. Develop a simple website using graphics tools for a specific purpose.	3.1 Create an Information Architecture document for a web site. 3.2 Construct a web site that conforms to the web standards of today and includes e-commerce and web marketing 3.3 Publish the website to a remote server using FTP. 3.4 Perform regular web site maintenance (test, repair and change) using appropriate tools

4. Demonstrate skills on development of multimedia products for a specific purpose	4.1 Understand fundamentals of multimedia concepts in a personal computer system.
	4.2 Demonstrate knowledge of hardware and software components of a multimedia system
	4.3 Explore multimedia applications in the business environment
	4.4 Design a multimedia produce in the business context
	4.5 Apply presentation skills of a multimedia product
5. Create a software information system to manage information at the workplace.	5.1 Apply knowledge on the creation of the components and properties of a user interface.
	5.2 Design a user interface according to user requirements.
	5.3 Write a programming code and integrate it with the user interface
	5.4 Apply knowledge of documentation of an information system.
6. Autonomously assess the viability of a chosen venture and develop its business plan and implementation schedule for submission to potential financiers.	6.1 Identify and assess a venture of interest
	6.2 Conduct a market survey to assess the viability of the project in its target area.
	6.3 Develop a plan for the chosen venture including an overview of the business, operations, marketing, human resources and financial projections adequate for funders.
	6.4 Schedule for implementation of the business plan in the form of a gantt chart (or any suitable presentation technique).
7. Apply effective fundamental and problem solving skills while performing assigned duties/tasks according to the set industry standards in an actual work environment..	7.1 Communicate and Negotiate and with stakeholders to initiate a industrious work based learning experience
	7.2 Perform assigned vocation related tasks to the required standards
	7.3 Apply effective fundamental (core) skills throughout the duration of the work based learning program.
	7.4 Adhere to health and safety requirements at all times
	7.5 Demonstrate problem solving skills as and when problems are encountered during the work process
	7.6 Contribute effectively to team work initiatives within the work environment

	Evaluate the work based learning experience, to determine its benefits and or limitations

SECTION C		QUALIFICATION STRUCTURE			
COMPONENT	**TITLE**	**Credits Per Relevant NCQF Level**			**Total Credits**
		Level [ ]	**Level [ ]**	**Level [ ]**	
FUNDAMENTAL COMPONENT *Subjects/ Courses/ Modules/Units*	Entrepreneurship	18		18	18
CORE COMPONENT *Subjects/Courses/ Modules/Units*	Maintenance of Computer Systems	11		11	11
	Network Technologies	11		11	11
	Web Development	11		11	11
	Multimedia Applications	10		10	10
	System Development	11		11	11
	Work-Based Learning	48		48	48
STRANDS/ SPECIALIZATION	*Subjects/ Courses/ Modules/Units*	**Credits Per Relevant NCQF Level**			**Total Credits**
		Level [ ]	**Level [ ]**	**Level [ ]**	
1.					
2.					

Electives					

SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL	
TOTAL CREDITS PER NCQF LEVEL	
NCQF Level	*Credit Value*
NCQF Level V	120
TOTAL CREDITS	120

Rules of Combination:

(Please Indicate combinations for the different constituent components of the qualification)

The qualification is made up of fundamentals and core components.

A candidate is required to achieve the stipulated total of 120 credits of which 11 credits for fundamentals, 109 credits inclusive of 48 credits for work based learning and 6 credits for a chosen elective, to be awarded the qualification.

(Note: Please use Arial 11 font for completing the template)

ASSESSMENT ARRANGEMENTS

The weightings for the assessment will be as follows:

a)   Formative assessment

The weighting of formative assessment is 60% of the final assessment mark.

b)   Summative Assessment

The weighting of summative assessment is 40% of the final assessment mark

MODERATION ARRANGEMENTS

Internal and external moderators perform assessments of the qualification. Both internal and external moderators are done in-line with the national assessment policy. Anyone moderating a learner against this qualification must be registered as an moderator from any relevant regulatory body

RECOGNITION OF PRIOR LEARNING

There shall be provision for award of the qualification through Recognition of Prior Learning (RPL) in accordance with institutional policies in line with the national RPL policy.

CREDIT ACCUMULATION AND TRANSFER

Credits Accumulated and Transfer will be administered in line with the national and institutional policy and will be administered towards the award of qualification

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Horizontal Articulation (related qualifications of similar level that graduates may consider)
- Certificate V in Computer Graphics or equivalent.
- Certificate V in Multimedia Applications or equivalent.
- Certificate V in Software Development or equivalent.
- Certificate V in Infographic or equivalent.

Vertical Articulation (qualifications to which the holder may progress to)
- Diploma in Information and Communication Technology in Communication Networks
- Diploma in Information and Communication Technology in Multimedia Applications
- Diploma in Information and Communication Technology in Applications Development
- Diploma in Information Technology in Network Design and Administration

EMPLOYMENT PATHWAYS
- System Maintenance Officer
- IT Support Assistant.
- Web Development Assistant.
- Network Administration Assistant.
- Program Developer Assistant
- System Administrator Assistant

QUALIFICATION AWARD AND CERTIFICATION

Minimum standards of achievement for the award of the qualification

A candidate is required to achieve the stipulated total of 120 credits, 109 credits for core units and 11 credits for fundamental to be awarded Certificate V in Information and Communication Technology.

Certification

Candidates meeting prescribed requirements will be awarded Certificate in addition to transcript.

SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

Below is a summary of both regional and international comparability carried out;

Regional qualifications from Stellenbosch Institute of Learning in South Africa (Higher Certificate in End User Computing) compares well to international qualification of Institute of Technology (National Certificate in Computer Engineering) as they have similar main exit outcomes which is to prepare graduates to develop competence in the Information and Communication Technology. The qualifications are structured for graduates to have global perspective on ICT. Modules are similar as graduates gain skills in Concepts of Science and Technology related to computer engineering, materials and tools used in installation processes and maintenance, Web Design, Networks and Hardware/Software support.

Total credits for regional Stellenbosch Institute of Learning in South Africa (Higher Certificate in End User Computing) and international qualification Institute of Technology (National Certificate in Computer Engineering) are similar at 120 credits.

In all qualifications assessments are done through practical work and portfolio. Work based learning is integrated as part of learning regionally and internationally to prepare graduates for the world of work.

The developed Certificate V in Information and Communication Technology qualification, is therefore designed to allow for entry into the job market by providing knowledge, skill and competence in the world of industrial revolution. Total credits for this qualification is 120 and this makes it to compare well regionally and internationally.

Differences

The differences observed when comparing regional and international qualifications above, is in naming of some modules. For example the following module have alternative titles - Concepts of Science and Technology related to computer engineering Introduction to Computers

On successful completion of this qualification graduates can progress horizontally to Diploma in System Maintenance and IT Support and Diploma in Web Design and Networks amongst others.

For Employment pathways graduates can become employed as: System Administrator, System Analyst, Network Administrator and Web Developer Learning pathways of the proposed qualification therefore compares well with regional and international qualifications benchmarked on.

Conclusion:

From the information it is evident that the proposed qualification compares favorably with the regional and international qualifications.

REVIEW PERIOD

The qualification will be reviewed every 5 years as per NCQF regulations, or earlier should the need arise.

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CODE (ID)			
REGISTRATION STATUS	**BQA DECISION NO.**	**REGISTRATION START DATE**	**REGISTRATION END DATE**
LAST DATE FOR ENROLMENT		**LAST DATE FOR ACHIEVEMENT**	
REVISION DATE:		**NAME OF PROFESSIONAL BODIES/REGULATORY**	