BQA NCQF Qualification Template

QUALIFICATION SPECIFICATION				SECTION A	

QUALIFICATION DEVELOPER	ABM University College				
TITLE	Bachelor of Science in Business Information Systems		NCQF LEVEL		7
FIELD	Information and Communications Technology	SUB-FIELD	Business Information Systems		
New programme	✓		Review of existing programme		
SUB-FRAMEWORK	General Education		TVET	Higher Education	✓
QUALIFICATION TYPE	Certificate		Diploma	Bachelor	✓
	Bachelor Honours		Master	Doctor	

CREDIT VALUE		
		524

RATIONALE AND PURPOSE OF THE QUALIFICATION

Rationale for the Qualification

The qualification is needed as the country is transforming into knowledge-based economy. There is a skill gap in both private and government sectors, these skills are of Entrepreneurship and Technology which is needed to run and operate system designed applications. Human Resource Development Council (HRDC) report of 2019 by analysing Priority Skills and Employment Trends shows that they is still a need to come up with a new qualification which is aligned to market need. According to the report there are certain jobs and skills which will be needed in future as follows

- Data Analysts & Scientists
- Big Data Specialists
- Software & Applications Developers & Analysts
- Cyber Security
- Digital Marketing & Strategy Specialists
- Leadership & Social influence
- Emotional Intelligence

- Complex problem solving

The above future jobs skills needed and, in this qualification, will produce a ready marketable graduates who can able to analyses big data and become a data scientist. Business needs some graduates with skills of information systems. Citizen Entrepreneurial Development Agency (CEDA) it encourages people to run business to create employment and there is a gap in place where by people need to have skills of running business as well a combined Information system to be able to apply knowledge in running business easily without using some consultants as majority of entrepreneurs do. The graduates will be able to apply skills cyber security and digital marketing.

Maitlamo policy

The policy aims to provide communication networks to meet an international standard to ensure that the country has skills on ICT leaders. It promotes Botswana to be sub-Sahara ICT hub, it creates an enabling environment for the growth of an ICT industry and also to provide universal service and access to information and communication facilities in the country. There is still a space for graduate with Business Information Systems to fit into ICT industry with a capability of auditing some ICT industries as the qualification address the shortage of ICT Audit specialised skills. Government is busy coming up with solution to automate some traffic lights, monitor roads and these need people with skills of business intelligence system to operate and monitor traffic lights as there are no trained people to operate such big system in place.

Vision 2036

Botswana set the vision 2036 which comprises of four pillars as follows

Sustainable Economic Development.
Human and Social Development.
Sustainable Environment.
Governance, Peace and Security

Under pillar number one which is Sustainable Economic Development one of the objective of the pillar is to Information and Communications Technology (ICT) which deals with leverage leading information communication technology (ICT) as a key contributor to economic growth and employment whilst also

enabling an efficient and public sector. The qualification is aligned to the Vision 2036 as it will benefits the graduates as the will have skills of Business and information systems.

Local Enterprise Authority (LEA)

Horticulture sector needs a different approach on reduce reliance on importation of horticulture products. LEA drives the initiatives of introducing forty horticulture projects and in their reports it identified that there is lack of or appropriate skills and technology to run this projects to compete with an international horticulture produce. In order to improve the success of these projects minimum technology should be specified to enhance production of high crops. The forth industrial revolution need an expert of running a business online with a knowledge of developing an online application where by this horticultural products can be sell online using a better application and these will enable customers to buy product online. The skills of developing a web application are needed. The country still need professional entrepreneurs with knowledge of running some business and the qualification address such gaps under local market.

Purpose of the Qualification

The purpose of this qualification is to produce graduates who can:
- Apply specialized business information systems knowledge to develop solutions for complex and unpredictable business problems.
- Execute tasks related to the application of software development techniques and methodologies.
- Analyse, monitor, evaluate information systems performance and recommend upgrade requirements to optimize systems functions.
- Apply digital marketing and perform entrepreneurial skills to run newly established business or existing one.

- Develop and manage complex databases according to business requirements.

ENTRY REQUIREMENTS (including access and inclusion)

1. **Direct Entry Scheme**
   A minimum entry requirement
   • Certificate IV, NCQF level 4 (BGCSE or equivalent)

2. Other Entry Scheme
- RPL and CAT will be applicable and considered for entry into this qualification.

QUALIFICATION SPECIFICATION	SECTION B
GRADUATE PROFILE (LEARNING OUTCOMES)	**ASSESSMENT CRITERIA**
3.1 Apply advanced skills in installing, maintaining ICT equipment and peripherals in an organization.	3.1.1 Install computer hardware and software in Local Area Network 3.1.2 Troubleshoot computer and apply relevant software and hardware updates in an organisation 3.1.3 Connect, configure Local Area Network computers and peripherals devices in an organisation
3.2 Demonstrate accountability and responsibility for work output when leading others in an organization.	3.2.1 Develop organisation mission statement, values, vision to guide its mandate 3.2.2 Use project management software for managing project and its execution 3.2.3 Use Gantt chart for project scheduling 3.2.4 Estimate project cost using cost techniques methods 3.2.5 Develop company policies
3.3 Apply advanced business consulting skills and Entrepreneurship in business environment to enhance business viability and competitiveness.	3.3.1 Develop business proposal for finance in an organisation 3.3.2 Analyse the supply and demand in the economy for establishment of market needs 3.3.3 Calculate inflation and unemployment rate to decide on business approach to make profit 3.3.4 Analyse organisational risks and apply mitigation for identified risks in workplace

	3.3.5	Develop social media links for digital marketing of organisational services and product
3.4 Apply advance research skills to determine business operation flow.	3.4.1	Develop appropriate instruments to conduct research
	3.4.2	Analyse data gathered from research
	3.4.3	Use Statistical Package for the Social Sciences to analyse data
	3.4.4	Generate report findings
	3.4.5	Interpretation data collection
	3.4.6	Compiling reports to inform decision making
3.5 Use advance skills to develop and maintain database for managing organisational information.	3.5.1	Use structural Query Language to maintain and managed database
	3.5.2	Link database to web application system
	3.5.3	develop a database using a relevant software for organisational information
	3.5.4	Create database users, apply access rights to specific tasks for database management services
	3.5.5	Apply security to database to guard against organisation information lost or attacked
3.8. Develop online processing web application for an organisation.	3.8.1	Develop a website for a company using PhP
	3.8.2	Develop mobile application system using java programming language for selling company product online
	3.8.3	Manage online transaction processing system using mobile application server service
3.9 Maintain Organisational server management for effective network performance.	3.9.1	Install Windows Server, configure Active directory services, DNS, DHCP, Proxy server and Firewall in an organisation
	3.9.2	Install and configure Internet Information Service (IIS)

	3.9.3 Apply web server security services to protect company information against information loss or damage
	3.9.4 Install and configure network devices
3.10 Conduct Internal and external Auditing in a company for business compliance and standard practices.	3.10.1 Prepare documents for internal auditing
	3.10.2 Conduct interviews for auditing
	3.10.3 Close auditing and compile evidence gathered during auditing
	3.10.4 Analyse auditing findings
	3.10.5 Produce evidence gathered for auditing finding reports
	3.10.6 Present auditing report to relevant stakeholders

QUALIFICATIONSTRUCTURE			SECTION C
FUNDAMENTAL COMPONENT Subjects / Units / Modules /Courses	**Title**	**Level**	**Credits**
	Computer Appreciation & Applications	5	15
	Principles of Marketing	6	11
	Business Law	6	11
	Business Environment	7	12
	Self-Realisation and Emotional Intelligence	7	12
	System analysis and Design	7	12
	Entrepreneurship Development 1	6	12
	Modelling in UML	7	12
	Leadership Development	7	12
	Introduction to Economics	6	12
	Introduction to Business	5	11
	Social Informatics	7	12
	Communication and Study Skills	5	12
	Introduction to Basic Mathematics	6	12
	Statistics for Business	7	11
	Undergraduate Major Project 1	7	12

CORE COMPONENT Subjects / Units / Modules /Courses	Undergraduate Major Project 2	7	12
	Object Oriented Programming in Java	7	13
	Entrepreneurship Development 2	7	15
	Cyber and IT Laws	7	12
	Decision Support System	7	11
	Internet Server Management	7	12
	Global Marketing & E-Commerce	7	12
	Introduction to Computer Architecture and Networking	6	11
	Project Management	6	12
	Web Design	7	12
	Fundamentals of Information system	6	11
	E-Business, E-Government & E-Learning Fundamentals	7	12
	Accounting for Information System	7	12
	Research Methodologies	7	12
	Data Warehousing and Business Intelligence system	7	12
	Internal Auditing	6	11
	Industrial Attachment	7	45
	Risk Management	6	12
	Professional Ethics & Responsibility	6	12
	Computerised Statistical Analysis	7	12
	Database Design and Development	7	12
	Management Information System	7	12
	Electronic Money and Online Transaction Processing	7	12
	Information and Network Security	7	12
	Principles of Programming	6	12

Rules of combinations, Credit distribution (where applicable):

4. Rules of Combination and Composition

  Fundamental Modules
Level 7 = 83 credits
Level 6 = 58 credits
Level 5 = 38 credits

  Core Modules
Level 7 = 264 credits
Level 6 = 81 credits
No elective Modules

  Total credits = 524

ASSESSMENT AND MODERATION ARRANGEMENTS

The moderator and assessor must be registered and accredited by Botswana Qualification Authority.
They must conform to BQA quality standards.

Assessment

This will have summative assessment (final examination) and formative assessment (test, practical, Quiz and assignment).

- Formative assessment = 60%
- Summative assessment = 40 %

 Moderation

There will be a provision of internal moderation which will be done for quality assurance of assessments. An external moderation will verify moderation and quality of assessments

RECOGNITION OF PRIOR LEARNING (if applicable)

RPL and CAT will be considered or applicable for award of this qualification

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

1. LEARNING

1. **Horizontal Pathways**
   Other related NCQF Level 7 programmes, including, but not limited to:
   - Bachelor of Science in Computer Science
   - Bachelor of Science in Software Engineering
   - Bachelor of Science in Cyber Security
   - Bachelor's degree in business administration
   - Bachelor's degree in Entrepreneurship
   - Bachelor's degree in marketing

2. **Vertical Pathways**
   a) *NCQF Level 8 programmes, including, but not limited to:*

   - Post Graduate Diploma in Marketing
   - Post Graduate Diploma in Computer Science
   - Post Graduate Diploma in Business Studies
   - Post Graduate Diploma in Computer Network Administration

2. EMPLOYMENT

After completion of this program the candidate should be able to work as, among others:

- Applications Developer
- Business Technology Analyst
- Cloud Security Manager
- Cloud Systems Developer
- Computer Programmer
- Business Consultant
- Customer Service/Sales
- Database Administrator
- Entrepreneur
- Help-Desk Manager
- Information Systems Manager
- Information Technology Auditor

- Project Manager
- Information Technology Manager
- Information Technology Security Officer
- Information Technology Technical Support
- Network Administrator
- Network Installer
- Security analyst
- Systems Analyst
- Systems Operations Officer

QUALIFICATIONAWARD AND CERTIFICATION

The Bachelor of Science in Business Information Systems shall be awarded for the whole qualification and not individual modules. The awarding body will issue a certificate to each successful graduate.

The candidate has to earn all 524 credits in order to be considered successfully completed a qualification. There will be a Certification after completing the qualification.

REGIONAL AND INTERNATIONAL COMPARABILITY

This qualification compares well with the Bachelor of Commerce in Business Information Systems qualification offered regionally by the Independent Institute of Education (South Africa). It also compares favourably with the Bachelor of Science in Information Systems offered internationally by the Technische Hochschule Ingolstadt (Germany). The qualifications have similar exit level outcomes and duration even though the German qualification is stated in terms of semesters (7) and the South African one in minimum credits (365). All the qualifications have a significant amount of compulsory Information Systems and Business related modules and none of them have electives modules. This qualification has higher credits (524) compared to the South African qualification because of the following additional modules:

- o Internal Auditing
- o Business Law
- o Computerised Statistical Analysis
- o E-Business, E-Government & E-Learning Fundamentals
- o Entrepreneurship Development 2
- o Internal Auditing
- o Leadership Development

        o   Project Management

        o   Risk Management

The above modules make this qualification to stand out because in industries and organisation business should be audited and risks should be taken into consideration this are skills needed by global world. Another key factor module are leadership development and entrepreneurial skills needed to produce fully qualified graduates under Business Information Systems and it should be well vested with computerised statistics and project management. Specialised in both business skills-sets and possess expert technical knowledge, skills and competence in research for business needs, as comparing with other universities is shows that research is vital skill and even in this qualification is impacted on. Government is moving into digitalisation and the module like E-Business, E-Government & E-Learning Fundamentals is a critical path in this qualification.

REVIEW PERIOD

The qualification will be reviewed after five years in line with the NCQF.