SECTION A:	***QUALIFICATION DETAILS***															
QUALIFICATION DEVELOPER (S)	*ABM University College*															
TITLE	Diploma in Business Information Systems													***NCQF LEVEL***	***6***	
FIELD	*Information and Communication Technology*		***SUB-FIELD***	*Business Information Systems*										***CREDIT VALUE***	***360***	
New Qualification		√	*Review of Existing Qualification*													
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:

The Fourth Industrial Revolution has been defined as “the anticipated growth and development of global economies, driven mainly by the application of relevant yet rapidly evolving technologies in the digital space”. According to Vision 2036, it has been noted that in contemporary economies, the ICT sector is a major contributor to any economy and is a crucial enabler of efficient product and service delivery across all sectors. As the country moves towards the attainment of Vision 2036 there is need for manpower development, so that there are enough trained people to take up key ICT positions in all industry sectors both public and private. SADC member-states are deliberately working on strategies through which ICTs can drive the fourth industrial revolution within the region, and we as a country need the Business Information Systems program to be implemented so that we can have fully equip manpower to implement the proposed strategies.

Information Systems are the key driver to an internet-based economy, they are used to support business operations and processes, the information is processed to aid decision making and come up with business strategies to give the business a competitive edge. With the datafication of our world, there is need for people who know how to use information and communication technologies to improve both customer service delivery and the company's profitability. The Information systems professionals collaborate to solve problems and then design, analyse, implement, deploy, and evaluate the computing systems that drive modern businesses. The Diploma in Business Information Systems qualification has been designed to equip students with the necessary skills to use information systems practically in the day to day running of businesses enterprises. The graduates will possess in-depth knowledge in information systems and technology, as well as a wide knowledge of business principles including management, accounting, finance, logistics and social ethics. Diploma in Business Information Systems is a qualification that seeks to provide industry ready professionals who can add a competitive edge to their places of employment by the proper and correct use of ICTs in a bid to grow the country's economy. The rationale of this qualification is to cover the gap and meet the demand for entry level skilled personnel such as Systems Analysts, Programmers, Project Managers, Database Administrators and Designers, ICT Sales Professionals, Application programmers, Network Designers and Administrators, Data Centre managers, just to name a few as highlighted under ICT Sector top occupations published by HRDC, 2016.

The National ICT Policy, Maitlamo National ICT Policy (2004), provides a necessary blueprint for the direction that the social, economic, cultural, and political transformation should follow using ICTs. This shows that there is need for highly skilled and qualified ICT personnel in almost every key development area of the country. This implies that there is need for manpower to drive this initiative which would justify the implementation of this qualification.

The National Development Plan 11 (April 2017- March 2023) which was adopted following the launch of Vision 2036 in September 2016 also brings to light the need for this qualification to boost manpower and encourage participation and empowerment of citizens in the sector. ICT plays a very pivotal role in the development and diversification of the country's economy; hence the need to accord ICT personnel training priority to make sure Botswana can harness the full potential of the sector's contribution to social and more especially economic growth.

A survey was conducted amongst the major stakeholders namely; key potential employers, lecturers, students, and curriculum advisors to find out the needs to be addressed in structuring this qualification. This qualification has been tailored based on the feedback from the needs assessment survey, the ICT policy, observations in global and regional digital technology trends and HRDC ICT sector committee recommendations. There is a huge gap that needs to be addressed as there are very few institutions offering Business Information Systems at Diploma level. It is mostly offered at degree level. The Diploma in Business Information Systems qualification provides a range of knowledge and skills needed for entry level employment or a progression point for admission to a

Bachelor's degree in Business Information Systems. The qualification features modules like Entrepreneurship to encourage learners to venture into the industry and open locally owned businesses instead of waiting to be employed thereby creating employment and driving the country's industry growth goals.

PURPOSE:

The qualification is meant to equip students with knowledge, skills and competences to:

- Develop excellent knowledge and perspective on key commercial and business practices and how information systems drive competitive strategies and organisational change.
- Master a combination of technology skills, core business knowledge, business, and data analysis techniques to develop meaningful business solutions in the real world.
- Build hands on skills in terms of both technological and organisational issues in systems analysis, design methodologies and project management in Information Systems solutions.
- propose, and implement solutions using information and communication technologies.
- Develop and/or enhance actual production applications using world class software technologies.

ENTRY REQUIREMENTS (including access and inclusion)

Entry Requirement to Diploma in Business Information Systems:

- Certificate IV, NCQF level 4 with at least 20 credits at NCQF level 5
  - Recognition of Prior Learning Scheme, the candidate may be eligible for exemptions or credit transfer in accordance with applicable institution policies.

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

SECTION B	***QUALIFICATION SPECIFICATION***
GRADUATE PROFILE (LEARNING OUTCOMES) *On successful completion of the Qualification, learners shall be able to:*	***ASSESSMENT CRITERIA*** *Learners' ability to:*
1. Demonstrate proficiency in the use of state-of-the-art IT tools for computing and programming purposes.	1.1. Explain the fundamental components of a computer system. 1.2. Use basic computer packages for data capture and processing.
2. Analyse existing business systems to identify and define operational problems.	2.1. Explain the major System Analysis and Design (SAD) concepts. 2.2. Explain activities associated with each stage of the System Development Life cycle. 2.3. Apply various Systems Development Lifecycles (SDLC) techniques to solve real life business problems.
3. Create a computer-based system to address specific user defined needs/ performance requirements.	3.1. Apply the concepts of software development modelling techniques, software processes, software process models and software development activities to create a computerised business system. 3.2. Create a computer-based database system to store organisation's information. 3.3. Administer the computerised database to ensure its security and consistency.
4. Describe the various communication networks used in Business Information Systems and their main components.	4.1. Define the terminology associated with Business Information Systems networks.

	4.2 Identify the components associated with computer networks. 4.3. Explain network management in a business environment.
5. Analyse the financial performance of a business entity for reporting and decision making.	5.1. Compile company periodic accounting/financial statements. 5.2 Present financial statements that reflect the company's financial performance. 5.3 Analyse financial statements and make informed business decisions.
6. Apply business management principles to ensure business best practices.	6.1. Identify sector specific business management principles. 6.2. Use business management principles in each business set up to ensure business best practices. 6.3. Develop an Information System Strategic Plan for the achievement of business goals. 6.4. Implement the Information System Strategic Plan to ensure that the best return on Information Communication Technology investment is realised in the business.
7. Maintain a safe and healthy work environment with a good understanding of professional and ethical responsibilities.	7.1. Display professional and ethical behaviour in interaction with all business stakeholders. 7.2. Apply business best practices in the workplace. 7.3. Explain the use of legal and regulatory standards in Information Communication Technology.

	7.4. Recognize health hazards in the IT work environment. 7.5. Outline the use of appropriate safety procedures and controls in the IT work environment.
8. Demonstrate knowledge of communication skills and techniques to effectively communicate within and without the workplace.	8.1. Describe principal communication theories. 8.2. Apply communication theories in a business setup. 8.3. Produce high quality internal communication documents appropriate to the business discipline.
9. Evaluate the use of E-Commerce and E-business infrastructure and trends to enhance and sustain business opportunities.	9.1. Analyse how E-Commerce and E-business in general are being used in business organizations. 9.2. Analyse the advantages and disadvantages of using E-Commerce and E-business in an organisation. 9.3. Explain how to employ E-Commerce and E-business to gain a competitive advantage.
10. Interpret the linkage between business strategy and IT Solutions.	10.1. Identify the role played by information strategy in business information systems. 10.2. Explain the function of Internet technology in strategic information systems. 10.3. Discuss the different levels of integration of information technology in modern business organizations.
11. Design applications software systems using modern technology and methods.	11.1. Identify software development methodologies. 11.2. Develop a business software application using one of the development methodologies.

SECTION C	***QUALIFICATION STRUCTURE***				
COMPONENT	***TITLE***	***Credits Per Relevant NCQF Level***			***Total*** ***(Per** Subject/ Course/ Module/ Units)*
		Level [5]	***Level [6]***	***Level [7]***	
FUNDAMENTAL COMPONENT *Subjects/ Courses/ Modules/Units*	Computer Appreciation and Applications	10			
	Principles of Marketing	10			
	Introduction to Business Communication	10			
	Introduction to Business Law	10			
	Fundamentals of Business Management	10			
	Microeconomics	10			60
	Principles of Accounting		10		
	Business Ethics and Responsibility		10		
	Entrepreneurship and Innovation		11		
	Fundamentals of Information Systems		11		
	Mathematics and Statistics for Business		11		

CORE COMPONENT *Subjects/Courses/ Modules/Units*	System Analysis and Design		10		
	Principles of programming		11		
	Introduction to Computer Architecture and Networking		11		
	Information System Project Management		12		
	Internet and Web Design Technology		10		
	Research Methodologies		12		
	Information System Strategy Management and Acquisition		12		
	Project		22		
	Work Related Learning		20		173
	Object Oriented Programming			12	
	Web Application Development in .Net			11	
	E-Commerce and E-Business			11	
	Management Information Systems			11	
	Information System Security and Risk Management			11	

	Computerised Statistical Analysis			11	
	Data Structures and Algorithms			12	
	Business Process Modelling			12	
	Data Warehousing and Business Intelligence System			12	
	Database Systems			12	
	Advanced Object-Oriented Programming			12	127

SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL	
TOTAL CREDITS PER NCQF LEVEL	
NCQF Level	***Credit Value***
5	***60***
6	***173***
7	***127***
TOTAL CREDITS	***360***
Rules of Combination: ***(Please Indicate combinations for the different constituent components of the qualification)***	
To graduate, students shall be expected to successfully complete **all** the modules in the Qualification, as there are no electives or optional modules.	

The qualification is worth a total of **360** credits with credits distributed as follows:

- Fundamentals **113** credits
- Core modules **247 credits**, of which 20 credits are for Project and 22 are for Work Related Learning.

ASSESSMENT ARRANGEMENTS

Continuous Assessment
This qualification is made up of taught modules, project modules and industrial training. An Outcomes-Based assessment approach is used to assess the exit outcomes for this qualification as follows:

Formative / Continuous Assessment: Continuous formative assessment will be carried out which constitutes **40 %** weighting of the final mark.

Summative Assessment: Summative assessment which constitutes **60 %** of the final mark.
Assessment will be administered by accredited by BQA registered Assessors for all the courses.

MODERATION ARRANGEMENTS

Both internal and external moderation to be done by BQA accredited and registered moderators. They should have relevant qualifications in the disciplines being assessed and at a level higher than what they are assessing or moderating.

RECOGNITION OF PRIOR LEARNING

Candidates may apply for recognition of prior learning (RPL) to assess whether such learning has been gained through workplace learning, or through any other formal study or any other informal means. Any candidate applying for recognition of prior learning (RPL) will be expected to provide evidence of such learning that must be valid, verifiable, and authentic. Also, the candidate may be interviewed by member of staff or must take a formal test which may include demonstration of skills and competencies to assess competence.

The students will be subjected to a practical assessment and a Reference letter would be required from previous employer as proof.

CREDIT ACCUMULATION AND TRANSFER

The candidate may be eligible for exemptions or credit transfer in accordance with applicable institution policies. A clear framework through which students can accumulate learning credits and transfer such credits towards appropriate qualifications helps to validate and recognize, learning gained through formal and informal means, provides flexibility to students, and allows students to progress with relative ease through their learning.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

1. LEARNING

i. Horizontal Pathways

Other related NCQF Level 6 qualifications, including, but not limited to:

- Diploma in Computer Studies
- Diploma in Information Technology
- Diploma in Computer Networking
- Diploma in Electronic Commerce
- Diploma in Electronic Marketing

ii. Vertical Pathways

a) ***NCQF Level 7 qualifications, including, but not limited to:***

- Bachelor's in Information Systems
- Bachelor's in Business Information Systems
- Bachelor's in Information Technology
- Bachelor in Information Studies
- Bachelor in Electronic Marketing

2. EMPLOYMENT

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

- Programmer
- Business Technology Analyst
- Database Designer
- Information System Analyst
- Information System Designer
- IT Administrator
- Systems Designer
- Network Support
- Technician
- Customer Service/Sales
- Entrepreneur
- Information Technology Technical Support
- Network Administrator support
- Software installer
- Help Desktop Support Officer
- Database Administrator
- Risk Officer
- IS Project Manager

QUALIFICATION AWARD AND CERTIFICATION

The learner will be awarded Diploma in Business Information Systems after attaining 360 credits as specified in the rules of combination and credit distribution. The Diploma in Business Information Systems award shall be issued for the whole programme and not individual modules. The awarding body will issue a certificate to each successful graduate. The certificate awarded will then be the property of its recipient.

Candidates who do not meet the prescribed minimum standards may, where applicable, be considered for appropriate exit awards in accordance with applicable policies. The candidate must earn all 360 credits to be considered to have successfully completed a programme.

REGIONAL AND INTERNATIONAL COMPARABILITY

The Qualification was compared with three (3) reputable institutions internationally, all running similar Diploma qualification in the field of Information Technology. These institutions which were considered for benchmarking are Republic Polytechnic Singapore, Saskatchewan Polytechnic Canada, and Asia Pacific International College Australia. The Diploma in Information Systems offered at all the afore mentioned institutions are focused on producing a graduate who has all the practical skills necessary to implement technology-based solutions to business problems. The proposed diploma qualification provides similar modules and outcomes related to qualifications offered internationally. The diploma shares more than 87% similar modules overally which shows that the proposed diploma is in line with international requirements thereby making it easy for our graduates to penetrate the international market for work or for further studies. The 13% difference between our offered modules and the other institutions is there because the diploma has some modules which have been added based on the needs of the domestic market. This makes the proposed diploma very necessary here in Botswana as it addresses local needs, for example the Entrepreneurship and Innovation module, E-Commerce, and E-Business, as well as Business Law. The duration varies from 1 to 3 years depending on the number of modules being offered as well as content and depth.

Therefore, our qualification compares favourably with the other qualifications internationally in terms of purpose and content covered. Below is a comparative review:

Comparative review	Republic Polytechnic Singapore	Saskatchewan Polytechnic Canada	Asia Pacific International College
Computer Appreciation & Applications	√	√	√

Principles of Marketing	√			
Business Communication	√		√	
Introduction to Business Law				
Mathematics and Statistics for Business	√	√	√	
Principles of Accounting	√	√	√	
Fundamentals of Management		√		
Business Ethics and Responsibility			√	
Entrepreneurship and Innovation				
Microeconomics	√	√		
Fundamentals of Information Systems		√	√	
System analysis and Design	√	√		
Object oriented programming		√		
Principles of Programming	√		√	
Web Application Development in .Net	√	√		
Introduction to Computer Architecture and Networking				
Information System Project Management	√			
E-Commerce and E-Business				
Management Information Systems	√			
Information Systems Security and Risk Management	√	√		

Internet and Web Design Technology	√	√		
Computerised Statistical Analysis			√	
Data Structures and Algorithms	√			
Business Process Modelling	√			
Data Warehousing and Business Intelligence system	√			
Research Methodologies		√		
Information Systems Strategy, Management and Acquisition			√	
Database Systems	√	√		
Advanced Object-Oriented Programming	√			
Project	√	√		
Work Related Learning	√	√		

REVIEW PERIOD

The programme will be reviewed after 5 years to maintain its relevance to market needs.