SECTION A:	***QUALIFICATION DETAILS***		
QUALIFICATION DEVELOPER (S)	University of Botswana		
TITLE	Doctor of Philosophy in Business Information Systems	***NCQF LEVEL***	*10*
STRANDS (where applicable)	*N/A*		

FIELD	Information and Communication Technology	***SUB-FIELD***	Information Technology	***CREDIT VALUE***	360

New Qualification	✓	*Legacy 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:

In common with other countries, Botswana is experiencing the effects of a number of powerful global trends which require advanced skills in anticipating, managing, and initiating change, at the national, institutional, organisational, and individual levels. The levels of data management have also leapfrogged beyond imaginable proportions since the inception of the 4th industrial revolution. The advancement in technology has elevated the rate of data and information usability in decision making to a level of utmost importance. Information is more available at the fingertips of a lot of small screen device users like never before. However in the availability of the vast amounts of data and information, some data is useful while the other is just noise in different settings. Data Analytics techniques can be utilised to sieve the data and categorise t accordingly to enable decision making at different levels of company management.

The Human Resource Development Council [HRDC] (2017) identified Occupations in High Demand in Botswana. These include but not limited to; Research, Innovation, Science and Technology (Research & Development Managers; Research; Data Analysts; Ethical Hackers; Security advisors. The developed PhD in Business Information Systems is designed to produce graduates who will meet the needs of such occupations and create opportunities of the non-traditional professional like bloggers and You tubers, which need to be integrated well into the professional world with the right regulatory protocols in place.

It however takes a certain skillset to come up with research to unearth knowledge, store it and share it with the upcoming generations for it to enable innovation and push the economy forward. Information as a resource also requires security which dictates measures in place to ensure right people have access to the right information.

With Digitization of everything as presented by Internet of Things, Internet of Everything as well as Artificial Intelligence, it is crucial that the University avails a platform and creates programmes like Doctor of Philosophy in Business Information Systems to enable aspiring researchers to explore capabilities of Information systems in different sector of the economy, be it Manufacturing, Agriculture, Tourism and so forth.

This development is increasingly creating career opportunities for PhD graduates in tertiary education institutions and in business organisations which undertake research as a critical function; for example, in Botswana, Botswana Institute for Development Policy Analysis (BIDPA) whose function is to effectively link and harmonise economic policy analysis functions with national development efforts.

Innovation remains the driving force in the 4th industrial revolution, A Doctorate in Business Information systems will enable the researchers to continue innovating and assist the country in diversifying as Botswana strives to become a knowledge economy.

Globalisation of business and intensifying competition for markets are major features of accelerating technological, political, economic, social and cultural change. Governments and organisations are increasingly required to keep up with these trends. In Botswana, policy makers and managers face crucial challenges concerning the management of the national economy, specifically in the areas of regional issues, trade, productivity, entrepreneurship, and national competitiveness. Increasingly, governments are responding to these challenges by recognising the urgent need for advanced intellectual, analytical, and creative skills. As in many countries, the training of professionals at the PhD level is now a major and growing element in meeting these challenges.

With the focus of the government on the transformation of Botswana into a Knowledge Society, many tasks ahead concerning Policy Development and Implementation, Institutional Development and Entrepreneurship, Sustainable Economic Growth, Business Growth and Leadership have to concentrate on national capacity development and change management at all levels of a professional or academic career. In its own plan for the NDP10 period, the Tertiary Education Council of Botswana (TEC) highlights as one the initiatives of Strategy 'A Strengthened and Diverse Institutional Land': "the development of international partnerships and linkages including the possibility of attracting a privately financed Graduate Business School to serve Botswana and the Region as part of the proposed Innovation Hub and to form the nucleus of a Regional Tertiary Education Hub." TEC further adds as an initiative of Strategy 'Improving Capacity and ensuring Quality Outcomes': "Strengthen research and innovation capabilities by promoting curriculum initiatives that integrate active research experiences into teaching and learning and supporting research programmes that train and mentor research students and emerging researchers and which contribute to the transfer of knowledge and skills to Botswana's future research leaders." [TEC2008 16, 20].

To meet this challenges, ETSSP (2015, pp. 94-95) emphasise the need to "enhance knowledge creation through graduate studies and research to drive a knowledge based economy" and "improve the quality, quantity and relevance of research to transform the society to a knowledge base economy" through amongst others "an increased range of graduate studies programme offerings."

Therefore, Doctor of Philosophy in Business Information Systems qualification provides a robust, systematic research training for scholars who wish to pursue in-depth PhD studies in particular Information Systems disciplines in line with the Education & Training Sector Strategic Plan. This aim

will be achieved by providing resources and facilities at the cutting edge of teaching, learning, researching, monitoring and assessment. This aim is also consistent with the University's strategic context of creating a Knowledge economy and advancing Botswana into a Knowledge society, contained in A Strategy "CREATING A FUTURE FOR THE KNOWLEDGE GENERATION" from 2020-2029.

PURPOSE: (itemise exit level outcomes)

The purpose of this qualification is to produce graduates with the most advanced knowledge, skills, and competence to.

1. Contribute to inquiry, development, and synthesis of new knowledge in the theory and practice of management of business information.
2. Perform as strategic leaders, managers, intellectual leaders, mentors and role models in the practice and study of business information systems.
3. Advance new methods and techniques of research in disciplines of business.
4. Independently carry out internationally recognised original research that contributes to the frontiers of knowledge in business disciplines and defend research output to a critical audience.

MINIMUM ENTRY REQUIREMENTS (including access and inclusion)

Admission into the PhD Business Information Systems: The minimum admission requirement is:

- A Master's Degree in the same or a cognate field of study (NCQF Level 9).
- Recognition of prior learning will be applicable as per the ETP policy on the same which is aligned with National/BQA policy.

SECTION B	QUALIFICATION SPECIFICATION
GRADUATE PROFILE (LEARNING OUTCOMES)	***ASSESSMENT CRITERIA***
1. Demonstrate originality in the practical application of highly advanced research knowledge, as well-rounded practitioners, in business Information Systems disciplines and professional competencies.	1.1 Carry out independent and original academic research in Business Information Systems. 1.2 Proof through service, the value of their discipline to the academy and community at large. 1.3 Present a mastery of skills and knowledge at a level required for university.
2. Contribute to inquiry, development, and synthesis of new knowledge in the theory and practice of management of business information.	2.1 Master the analytical and methodological skills required to evaluate and conduct research in their area of specialization and related areas. 2.2 Add to the body of Knowledge a new Information Systems concept/idea derived from the research. 2.3 Prove the relevance and business value in implementing the new concept/idea being proposed.
3. Perform as managers, intellectual leaders, mentors and role models in the practice and study of business information systems.	3.1 Critically evaluate their own and others' research. 3.2 Interact productively with people from diverse backgrounds as both leaders/mentors and team members with integrity and professionalism. 3.3 Develop substantive knowledge in their area of specialization.

	3.4 Continually develop substantive knowledge in their area of specialisation.
4. Advance new methods and techniques of research in disciplines of business.	4.1 Perform research by applying scientific research methodology and place the results in a broader context. 4.2 Critically apply theories, methodologies, and knowledge to address fundamental questions in their primary area of study. 4.3 Present a conclusion that clearly shows how the research adds to the body of knowledge.
5. Develop internationally /regionally/nationally recognized independent research that contributes to the frontiers of knowledge in business disciplines.	5.1 Pursue research of significance in the discipline or an interdisciplinary or creative project. 5.2 Cooperate effectively in cross-disciplinary research groups through an open attitude to other scientific fields. 5.3 Design and conduct original research in Business Information Systems.
6. Present and defend research output to a critical audience.	6.1 Perform oral and written presentations sufficient to publish and present work in their field and to prepare grant proposals. 6.2 Conduct research effectively in line with the principles of ethics in their field and in academia. 6.3 Present high ethical standards in research, teaching, and service.

LO 7 Demonstrate Strategic leadership and mastery of professional practice in resource management.	7.1 Commit to full responsibility and accountability for resource management on the work output of the research as well as work output for others. 7.2 Show commitment in the development of new ideas and processes at the forefront of the Information Systems profession. 7.3 Exercise high level of initiative, authority and autonomy, scholarly and professional integrity.

SECTION C	***QUALIFICATION STRUCTURE***

COMPONENT	***TITLE***	***Credits Per Relevant NCQF Level***			***Total Credits***
		Level [ ]	***Level [10]***	***Level [ ]***	
FUNDAMENTAL COMPONENT *Subjects/ Courses/ Modules/Units*	Research Methods for Business		***36***		**36**
	Theories in Information Systems		***36***		**36**
	Thesis for Master Philosophy (Mphil) in Business Information Systems		***48***		**48**
CORE COMPONENT *Subjects/Courses/ Modules/Units*	Research Methods for Business		***36***		**36**
	Theories in Information Systems		***36***		**36**
	Thesis for Doctorate in Business Information Systems		***168***		**168**
STRANDS/ SPECIALIZATION	*Subjects/ Courses/ Modules/Units*	***Credits Per Relevant NCQF Level***			***Total Credits***
		Level [ ]	***Level [ ]***	***Level [ ]***	

1.	***N/A***				
2.	***N/A***				
Electives	***N/A***				

SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL	
TOTAL CREDITS PER NCQF LEVEL	
NCQF Level	*Credit Value*
10	*360*
TOTAL CREDITS	*360*
Rules of Combination: *(Please Indicate combinations for the different constituent components of the qualification)*	

- Theories in Information Systems and Theories in Information Systems are core and compulsory to all areas of specialization, some of which do not carry any credits.
- Each graduate should do 312 credits for PhD in Business Information Systems specifically.

A learner will graduate with a qualification of Doctor of Philosophy in Business Information Systems.

ASSESSMENT ARRANGEMENTS
The qualification shall be comprised of summative assessments. Assessments shall be carried out by assessors registered and accredited by BQA or an equivalent body. All the assessments, formative and summative, leading/contributing to the award of credits or a qualification should be based on learning outcomes and/or sub-outcomes.
MODERATION ARRANGEMENTS
• All assessments shall be subjected to both internal and external moderation processes • All moderation exercises shall be undertaken in accordance with both institutional and national policies. • All moderation exercises shall be undertaken by BQA accredited moderators or moderatos accredited by equivalent bodies.
RECOGNITION OF PRIOR LEARNING
There is provision for award of part credits towards the PhD qualification through RPL in line with institutional and national policies.
CREDIT ACCUMULATION AND TRANSFER
There is provision for award of credits towards graduation through Credit Accumulation and Transfer in line with institutional credit accumulation policy, aligned to the national policy.
PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)
Vertical Articulation (qualifications to which the holder may progress to): The PhD is a terminal qualification; hence there is no vertical articulation into other qualifications. **Horizontal Articulation** (related qualifications of similar level that graduates may consider)

- Doctor of Business Analytics
- Doctor of Computer Science
- Doctor of Business Administration in Data Science
- Doctor of Business Administration in Data Analytics
- Doctor of Information Technology
- Doctor of Business Leadership

EMPLOYMENT PATHWAYS:

- Market Research Analysts,
- Data Science Specialist,
- Security Analytic Researcher,
- Information Policy formulators,
- Knowledge Economy Drive Specialists,
- Business analysts.

QUALIFICATION AWARD AND CERTIFICATION

QUALIFICATION AWARD

Candidates will be awarded Doctor of Philosophy in Business Information Systems upon attaining minimum credits of 360 as prescribed in the rules of combination.

CERTIFICATION

Upon completion candidates are issued a certificate and an official transcript.

SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

The PhD in Business Information Systems qualification has been benchmarked against:

- PhD in Information Systems from University of Cape Town (South Africa),
- PhD in Information Systems from WITS School of Business (South Africa),
- PhD in Business Information Systems from Cork University Business School (Ireland),
- PhD in Information Systems and Technology Management from University of South Wales (Australia).

From the four institutions benchmarked with, the name of the qualification is exactly the same with 1 institution, and similar to the other 3, which did not specifically mention the word business in the title but called it PhD in Information System.

In terms of credits and NQF level, it has been set at NDF level 10 in one institution, and had the same credits of 360 with the other institution; other institutions did not divulge information on the level and the number of credits.

Most institutions did not mention the exit learning outcomes, those who did made them quite general making it a little challenging to compare outcome by outcome.

For the modules, all the institutions had taught modules just like in the proposed qualification, the module which appeared ion all the institutions is advanced research methods, and 2 other institutions also had Theories of Information Systems.

All the institutions uses the same assessment methods of at least 2 examiners, with some enforcing 3 examiners, 2 being international external examiners, which is in line with what this proposed programme also proposes.

REVIEW PERIOD

The qualification will be reviewed after every five years (5 years).

For Official Use Only:

CODE (ID)			
REGISTRATION STATUS	**BQA DECISION NO.**	**REGISTRATION START DATE**	**REGISTRATION END DATE**

LAST DATE FOR ENROLMENT		**LAST DATE FOR ACHIEVEMENT**	