QUALIFICATION SPECIFICATION SECTION A							
QUALIFICATION DEVELOPER	Management College of Southern Africa (MANCOSA)						
TITLE	Bachelor of Commerce in Business Information and Technology Management (BCom BITM)			**NCQF LEVEL**	7		
FIELD	Business, Commerce and Management Studies		**SUB-FIELD**	Business Information and Technology Management			
New qualification	**x**	**Review of existing qualification**					
SUB-FRAMEWORK	General Education		TVET		Higher Education	**x**	
QUALIFICATION TYPE	Certificate		Diploma		Bachelor	**x**	
	Bachelor Honours		Master		Doctor		
CREDIT VALUE					**515**		

RATIONALE AND PURPOSE OF THE QUALIFICATION

Rationale

There is still a shortage of skills in information technology management in Botswana and SADC. The shortage of qualified professionals in various sectors of the industry has had significant impacts on both the public and private sectors (HRDC List of Occupations in Demand: Published December 2016, pages12, 18, 19, 25, 29, 31, 33 and 35). This mismatch between the skills demand and skills supply has necessitated the development of Business Information and Technology Management skills. The demand for the Business Information and Technology Management qualification has also been confirmed by the survey conducted by institution. A needs assessment survey was conducted in 2013 to investigate the attractiveness of potential qualifications offered. The survey targeted current and potential students at the institution, as well as public and private sectors. Findings from the survey revealed that IT management skills, teamwork and general management skills were highly sought after.

The Information Booklet published by Human Resource Development Council (HRDC) in December 2016 has listed the Indicative Skills in demand in Botswana and that these indicative skills, are lacking in the market and further, and that those available fail to meet the job requirements of the employers. One such area listed as lacking is Business Information Technology Management, especially in positions such as Data Centre Manager, ICT Security Manager, ICT Service Manager, ICT Sale professional, IT Governance, Information Management, Information Systems Coordination and Business Process Improvement Specialist.

The Bachelor Commerce in Business Information and Technology Management (BCom BITM) will address regional and national priorities as identified by the Botswana government. The qualification

aims to address the scarce and critical Business Information Technology Management knowledge and skills. The qualification will provide the market with the necessary skills to make sure information technology (IT) is professionally and competently managed in government and private sector.

The development of the Business Information Technology Management qualification is also in line with the recommendations of the Government Paper No. 37 of 2008: "Towards a Knowledge Society", Tertiary Education Policy, as approved by the National Assembly (2008, pg 10). Botswana VISION 2036, under Education and Skills Development, states that Botswana society will be knowledgeable with relevant quality education that is outcome based, with an emphasis on technical vocational skills, as well as academic competences (Education with production).

Purpose

Technology is the backbone to all successful, forward-thinking organizations. Each hardware hiccup and software delay can dramatically affect the bottom line. Thus the purpose of this qualification is, to produce graduates with competencies in the following areas: ICT resources management and leadership, business networks and security, information systems management. IT governance, IT auditing and general management.

The BCom BITM qualification is designed to expose candidates to organizational functions and their systems, the technologies that underlie these systems, the use of information systems and technologies to overcome business problems, and the process of information systems development, implementation and management within business. The qualification is of special interest to the working professional in business and private organizations and those who wish to pursue a career in Business Information Technology Management.

Thus, the qualification is designed to provide the learner with an understanding and application of both business management and ICT knowledge. It will also provide them the perfect platform to pursue and succeed in their postgraduate studies.

ENTRY REQUIREMENTS (including access and inclusion)

Candidates will be admitted to this qualification on the basis of one of the following minimum benchmark qualifications:

- A pass in any five relevant subjects at Cambridge, BGCSE, or any relevant equivalent qualification at NCQF Level 4.
- An appropriate Further Education and Training Certificate or equivalent.
- Any relevant qualification at NCQF Levels 5 or 6 may render the candidate eligible for exemptions or credit transfer in accordance with applicable policies.

In addition to the above admission criteria, relevant experience in the business sector will also be considered through recognition of prior learning (RPL).

QUALIFICATION SPECIFICATION SECTION B	
GRADUATE PROFILE (LEARNING OUTCOMES)	**ASSESSMENT CRITERIA**
1.1 Demonstrate knowledge of the key fields and identify the critical success factors of modern business from a technological perspective.	1.1.1 Analyse Information Technology practices and standards in various business systems contexts. 1.1.2 Apply current technical concepts and practices used in core information technologies to business systems. 1.1.3 Evaluate current and emerging technologies in terms of their impact on business systems success and efficiency. 1.1.4 Identify key characteristics of computer network infrastructures. 1.1.5 Plan and conduct a research in the field of IT. 1.1.6 Apply systems life-cycle design criteria in a business solution design.
1.2 Analyse and implement cost effective IT solutions to given or contextual abstract problems related to a business environment.	1.2.1 Analyse the applications of IT systems within various business operations and functions. 1.2.2 Review major Software development methodologies and life-cycles. 1.2.3 Analyse ways in which ICT is able to improve the efficiency of business. 1.2.4 Demonstrate knowledge and understanding of IT systems security in terms of its application to various business processes and functions. 1.2.5 Investigate the financial impact of IT systems on business.
1.3 Assess and evaluate business processes, functions and operations from a technological perspective	1.3.1Investigate business problems, components, operations or processes and devise technology-based solutions for improvements. 1.3.2 Demonstrate an understanding of business processes in relation to how IT systems are able to enhance business process and functions.

	1.3.3 Review potential risks associated with solutions and propose measures to manage the risk. 1.3.4 Produce comprehensive documentation for the proposed IT solutions for business. 1.3.5 Determine IT hardware, software and networking requirements and propose solutions.
1.4 Apply management knowledge and skills in a multi-disciplinary way using management concepts, models, theories, principles and research methods and strategy.	1.4.1 Illustrate the process of functional integration in the pursuit of strategic objectives 1.4.2 Demonstrate the relationship between the organisation and management. 1.4.3 Apply current management theory and principles to decision making 1.4.4 Evaluate the relationship between information systems strategy, business strategy and organisational strategy in terms of the influence of changing strategies on each other. 1.4.5 Formulate Information systems strategies to align and support business and organisational strategy. 1.4.6 Devise IT financing strategies, Implementation and deployment plans for new systems.
1.5 Analyse and interpret financial statements for business process improvements.	1.5.1 Relate the goals of financial management to the pursuit of maximizing wealth. 1.5.2 Evaluate the sources of financing for business functions. 1.5.3 Calculate and interpret financial ratios.
1.6 Propose and Implement business solutions through information and knowledge management techniques.	1.6.1 Outline the application of Information Technology resources to optimise operations; 1.6.2 Demonstrate the use of IT resources within the total business processes of project management for improvement in overall efficiency and productivity; 1.6.3 Describe the role of IT in project management; 1.6.4 Demonstrate familiarity and understanding of a project management software.

1.7 Assess requirements and perform gap analysis to help inform solution design.	1.7.1 Align business objectives to business systems. 1.7.2 Analyse ICT requirements to meet given business requirements. 1.7.3 Identify the requirements and applications of database systems to support business objectives. 1.7.4 Construct business IT requirement documents to specify gaps where ICT systems can be used within business. 1.7.5 Create documents that explain IT systems processes and procedures for IT and business personnel.

QUALIFICATION STRUCTURE SECTION C			
FUNDAMENTAL COMPONENT Subjects / Units / Modules /Courses	**Title**	**Level**	**Credits**
	English Language Skills	**5**	10
	End User Computing	**5**	10
	Accounting & Finance	**6**	10
	Fundamentals of Project Management	**5**	10
	Microeconomics	**7**	15
	Macroeconomics	**7**	15
	Basic Economics	**5**	10
	Business Mathematics	**6**	10
CORE COMPONENT Subjects / Units / Modules /Courses	Networking Fundamentals	**6**	10
	Fundamentals of Operations Management	**6**	10
	Computer Hardware and Architecture	**6**	10
	Principles of Management	**6**	10
	Analytical Techniques	**7**	15
	Business Communication	**7**	15
	Introduction to Programming (Java)	**7**	15
	Organisations and Management	**7**	15
	Financial Accounting	**7**	15
	Introduction to Data Structures (Java)	**7**	15
	Business Law	**7**	15
	Database Design	**7**	15
	Management Accounting	**7**	15
	Advanced Business Statistics	**7**	15
	Information Systems	**7**	15
	Project Management	**7**	15
	E-Commerce & E-Business	**7**	15
	Auditing	**7**	15
	Systems Analysis And Design	**7**	15
	Organisation-wide Information	**7**	15
	Software Engineering Management1	**7**	15

	Research Methods	**7**	15
	Work Integrated Learning (WIL)	**7**	40
	Software Engineering Management 2	**7**	15
	IT Governance	**7**	15
	IT Management	**7**	15
	Capstone Project	**7**	15
ELECTIVE COMPONENT Subjects / Units / Modules /Courses	Information Security	**7**	15
	Strategic Management	**7**	15
	Financial Management	**7**	15
	Operational Risk Management	**7**	15

Rules of combinations, Credit distribution (where applicable):

Level 5 consists of 40 Credits
Level 6 consists of 60 Credits
Level 7 consists of 415 Credits

Total Credits = 515
The credit combination for this qualification is from 90 fundamental components, 410 core components and the remaining 15 is from elective components where candidates will select one.

Core Module	**Pre-requisite**
Analytical Techniques	Business Mathematics
Organisations and Management	Principles of Management
Macroeconomics	Microeconomics
Introduction to Data Structures (Java)	Introduction to Programming (Java)
Management Accounting	Financial Accounting
Advanced Business Statistics	Analytical Techniques
E-Commerce & E-Business	Information Systems
Systems Analysis And Design	Information Systems or Project Management
Organisation-wide Information	Information Systems
Software Engineering Management 1	Systems Analysis and Design
Research Methods	Business Statistics
Software Engineering Management 2	Software Engineering Management 1

IT Governance	IT Auditing
IT Management	Organisation-wide Information
Capstone Project	Research Methods

ASSESSMENT AND MODERATION ARRANGEMENTS

Assessment strategies, requirements and weightings
All assessments, formative and summative, leading/contributing to the award of credits or a qualification should be based on learning outcomes and/or sub-outcomes.

Formative assessment
Formative assessment or continuous assessment contributing towards the award of credits should be based on course outcomes.
The assessment methods for this qualification are by:
1. Test and
2. Assignment.

The contribution to the final mark are as follows:
1. Test – 10%
2. Assignment - 40%

The contribution of formative assessment to the final grade is 50%

Summative assessment
Candidates may undergo assessment including written final examination for each module, which contributes 50 % of the final mark for that module.

To pass a module, a final combined mark of 50% is required.

Internal moderation requirements
The following shall apply for both internal and external moderation in accordance with applicable policies and regulations:

Documentation
All necessary documents including: qualification document, alignment matrices, assessment instruments and Assessment criteria/rubrics should be available. The following shall apply for both internal and external moderation in accordance with applicable policies and regulations:

Pre-assessment Moderation
Before administering any assessments that contribute towards the award of credits, moderation must take place. This should entail but not limited to the following:

- ascertaining that the assessment strategy to be used is appropriate for the learning outcome to be assessed;
- ascertaining that the assessment instrument adequately captures the learning outcomes against which assessment is to be carried out;
- ascertaining whether the assessment tasks or questions can enable the assessor to collect sufficient evidence that is typical of relevant exit level descriptors;

- checking if the cover page contains all necessary information;
- Checking if the assessment instrument layout is appropriate and that wording of assessment tasks or questions is appropriate.
- checking if the assessment criteria or a rubric is consistent with the learning outcomes against which assessment is to be done.

Post-assessment Moderation

Moderators must verify that the assessment has been done in compliance with assessment principles. This should include the following:

- checking if all scripts have been assessed using the same criteria;
- verifying if assessment judgments and decisions have been done consistently and that principles such as validity, authenticity, currency and sufficiency have been considered;
- checking if calculation of marks has been done correctly;
- checking if necessary records and reports have been completed.

Sampling Procedure for Moderation

The total number of scripts to be sampled depends on the total number of candidates. If the number of candidates is 20 or less, the moderator should go through all the papers. For more than 20 candidates, the sample shall be 30% of the total number of Scripts. The sample should be representative of the population of candidates in relation to performance, gender, etc.

Moderation reports

A moderation report shall capture, but not limited to the following:

- Sample size and sampling procedures;
- observations about the performance of candidates;
- consistency of assessment judgments and decisions;
- assessment instruments and alignment to learning outcomes;
- recommendations for improvement

RECOGNITION OF PRIOR LEARNING (if applicable)

Recognition of Prior Learning (RPL) shall be acceptable for academic admission purposes to ensure that candidates who possess skills acquired through life or work experience and non-formal education are catered for. The RPL assessment will focus on ways of evaluating a person's lifelong experiences (formal and informal) against a set of pre-determined criteria as detailed in the **RPL Policy.**

Candidates shall submit evidence of prior learning and current competence and/or undergo appropriate forms of RPL assessment for the award of credits towards the qualification in accordance with applicable RPL policies and relevant national-level policy and legislative framework. Implementation of RPL shall also be consistent with requirements, if any, prescribed for the field or sub-field of study by relevant national, regional or international professional bodies.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Horizontal Articulation (related qualifications of similar level that graduates may consider)
Graduates of this qualification may consider pursuing related qualifications (at this level) such as Bachelor of Business Administration; Bachelor of Commerce in Marketing Management; Bachelor of Commerce in Supply Chain Management; Bachelor of Commerce in Project Management and Bachelor of Commerce in Human Resource Management for purposes of multi skilling, retooling, etc.

Vertical Articulation (qualifications to which the holder may progress to)
Graduates who wish to further study the integration of technology and business may pursue a Post Graduate Diploma in Business Management (PGDBM) and other various Postgraduate qualifications, The Bachelor of Commerce (Honours) in Information Technology Management, Masters in Information Technology Management. Those who want to focus on advanced business concepts may consider a Master of Business Administration that has a concentration in information technology.

Employment
Graduates will have requisite competencies and attributes to work as:

i) IT Services Officer
ii) Data Center Manager
iii) Information manager / Security Manager
iv) Knowledge manager
v) Business intelligence worker
vi) Business Process Analyst
vii) Information consultant
viii) Information Technology Management Specialist/ Management Consultant.
ix) IT Marketing Officer

QUALIFICATION AWARD AND CERTIFICATION

Minimum standards of achievement for the award of the qualification
A candidate is required to achieve the stipulated 515 total credits inclusive of the fundamental, core and elective components (if any), to be awarded the qualification.

Certification
Candidates meeting prescribed requirements will be awarded the qualification in accordance with standards prescribed for the award of the qualification and applicable policies.

REGIONAL AND INTERNATIONAL COMPARABILITY

This qualification compares with the following:
University of South Africa (UNISA)'s Bachelor of Commerce in Business Informatics (NQF Level 7), is a three year qualification which produces graduates with competences in general methods and practical knowledge in Information Systems, Information Technology, Business Studies, and Computer Sciences. In particular, students are acquire competencies in neighboring disciplines in

order to obtain well-founded knowledge. This will enable them to link up operational applications and the implementation of processes in their work and hence fulfill their future role in a company.

University of Southern Queensland's (USQ) Bachelor of Business and Commerce (Information Technology Management) is a three year qualification offered in Australia focusing on Information Systems (IS) as a key strategic enabler of business success and teaches how to leverage IS to identify and solve business problems. Learners will have skills in business analysis, information analysis and management, project management, security, network management, service management and managing enterprise systems. Graduates of this qualification bridge the gap between business and information technologies, help solve business problems and develop business strategies; and improve organizational processes and performance by using state-of-the-art technology and methodologies.

The Bachelor of Commerce in Business Technology Management, (B Com BTM) from Ryerson University provides graduates with skills that help drive business strategies using ICT solutions, making ITM a leading contributor to Canada's ICT economy. Graduates are employable in virtually every conceivable industry, including banking, healthcare, transportation, government, retail, commerce, manufacturing, education and art. The qualification combines Management and IT to help learners understand and manage the very vital interaction of Business and Technology. This 3-year degree qualification comprises of courses primarily from Business and IT. Courses span the areas of computer science, management, economics, mathematics and statistics. Graduates of this program bridge the gap between business and information technologies; help solve business problems and develop business strategies; and improve organizational processes and performance by using state-of-the-art technology and methodologies.

The Bachelor of Commerce in Information and Technology Management NQCF level 7 from YK Business School is a 3 year qualification offered in Mauritius. The qualification develops applied competence in analysing, interpreting and applying information technology (IT) management principles and methods. It further develops the intellectual, research and professional skills of the student. The qualification prepares students to meaningfully participate in the management of information technology in organisations and contribute to the well-being of the organisation. A secondary purpose is to provide a convenient and appropriate avenue into information technology management studies and eventually gainful employment for students coming straight out of school

The qualifications compared are similar in the sense that they are all Bachelor of Commerce, They are all level 7 qualification and have almost similar learning outcomes. The qualifications all have a combination of business and science courses. Although the qualifications examined generally follow similar structures and standards, there are differences. The major difference is the duration, where other institutions like University of Ryerson, Unisa, USQ, YK Business School and others, offer the qualification in three years while our qualification is four years. All qualifications are NQF level 7. All qualifications offer courses from both the science and business field and most of the courses are inclined to management. The Bachelor of Commerce in Business Technology Management, (B Com BTM) from Ryerson University has modules that are inclined to technology management and it does not have modules prevalent in information management such as databases, information systems and others.

As noted above, this qualification generally compares well with all the qualifications studied since the exit outcomes, cover similar scope and depth and are aligned to exit-level descriptors typical of

this level and type of qualification as done within the region and beyond. Furthermore, the qualification produces competencies required for registration and accreditation with professional bodies such as Information Systems Audit and Control Association (ISACA). However, what differentiates our qualification from the qualifications examined is that our qualification has, research work, capstone project and practical experience (work related attachment) which are critical in this competitive world for a graduate with qualifications in business information and technology management. The qualification has also made provision for development of attributes such as knowledge management, software application management. For details refer to comparability matrix annexure attached.

REVIEW PERIOD

The qualification will be reviewed after 5 years, after running its full cycle. However, ad-hoc reviews will be done in line with environmental changes.

Other information – please add any supplementary information to help the application for this qualification for NCQF Registration.

Selection of Moderators

Qualification(s) required

- A minimum of Master's degree in a relevant field plus evidence of competence in assessment and moderation

Professional work experience required

- At least two years of academic experience plus work experience in a relevant field.

Professional registration and accreditation

Assessors and moderators must have valid registration and accreditation with all or some of the relevant bodies such as:

- Botswana Qualifications Authority (BQA)
- Information Systems Audit and Control Association (ISACA)
- Certified Information Systems Security Professional (CISSP)
- Computing Technology Industry Association (CompTIA)

Rules: Upon the recommendation of the Assessment, Verification and Certification Committee and the approval of the Academic Executive Committee, a qualification will not be awarded or conferred until:

1. All modules have been successfully completed and the qualification requirements have been met.
2. All other rules and requirements have been met.
3. A qualification may not be awarded for early exit from the qualification.