BQA NCQF QUALIFICATION TEMPLATE

SECTION A:	QUALIFICATION DETAILS		
QUALIFICATION DEVELOPER (S)	Holmes Institute Botswana		
TITLE	Master of Science in Strategic Information Systems	**NCQF LEVEL**	9
STRANDS (where applicable)	N/A		
FIELD	Information and Communication Technology	**CREDIT VALUE**	240
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:

Countries and modern organisations are constantly under pressure to address and take advantage of the continuous changes in Information and Communication Technologies (ICT). Many economies are at risk of falling further behind due to significant gaps in infrastructure, technology, and skills (DSCAP, 2021).

The MSc in Strategic Information Systems (SIS) has been developed to produce graduates ready to enter employment in any business sector with a deep understanding of how to leverage technology to the advantage of business and of how information systems can be exploited to achieve a business's strategic objectives. The qualification is developed cognisant of Botswana's evolving efforts

communicated through its policies from the Maitlamo National ICT Policy, 2003 which spelled out the ICT policy/strategy for Botswana including implications for computing education and training in the country. In addition, the qualification aligns to the Botswana Human Development Report (BHDR), 2005 which emphasises the quality of digital skills education to support the country's move from a natural resource-driven economy to a knowledge-based one, as articulated in the National Development Plan (NDP11), 2017.

The Botswana HRDC National Priority Skills Report, 2025 highlights critical shortages in ICT, data management, and digital transformation skills. Under its skills forecast section, Appendix 4, the report further projects the need for Master level skills degrees around Information Security Engineers, Architects and Analysts which directly substantiates the need for knowledge in Strategic Information Systems. This is highlighted in the following areas of the Skills Report:

- ICT and Digital Economy Skills Gap: The report highlights that Botswana's economic diversification is constrained by shortages in ICT professionals, particularly in data analytics, cybersecurity, enterprise systems, and digital strategy
- Future Jobs & Global Skills: HRDC identifies AI, cloud computing, big data, and systems integration as critical future skills for Botswana's workforce
- Graduate Unemployment & Skills Mismatch The report notes that ICT graduates are among the top 10 groups facing unemployment, due to outdated curricula and lack of advanced specialization
- Alignment with National Development Plan 12 (NDP 12) The HRDC emphasizes that new qualifications are needed to support Botswana's digital economy targets and Vision 2036
- Recommendations for New Qualifications: The report explicitly advises Education Training Providers (ETPs) and the Botswana Qualifications Authority (BQA) to develop and accredit new postgraduate qualifications in ICT-related fields, including information systems strategy, governance, and innovation management

The qualification is aligned with the ACM Model Curriculum and guidelines for graduate degree qualifications in Information System 2016 report (ACM MSIS Model Curriculum, 2016) which provides a standardised guideline for universities to design graduate qualifications in Information Systems.

The MSc in Strategic Information Systems specifically addresses technology, governance and the strategic use of Information Technology as well as other issues arising from the application of

technology to business to achieve strategic benefits. The qualification seeks to ensure learners graduate with a broad range of skills and competencies required for a successful career in the Information Systems sectors.

Graduates will not only be professionally competent in the theoretical and technical aspects of Information Systems but will also have the well-developed analytical and communication skills necessary to equip them for leadership positions in their professional and business lives.

The proposed qualification covers business analysis and digital transformation, goes into how businesses manage data and information including data analytics, project management, and various enterprise systems. Governance, security and ethics are covered in detail and a research module supports the learner's independence and reflective writing at master's level.

Learners can select one of two electives to complement their studies and enhance their prospects.

The dissertation provides an opportunity to research deeper into a particular aspect of information systems or explore an emerging technology and reflect on emerging ethical implications and impact of information technology.

PURPOSE: (itemise exit level outcomes)

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

1. Monitor the environment to identify, analyse, and resolve Information Systems (IS) problems within organisational contexts.
2. Align IT solutions with long-term business strategies, ensuring that IS initiatives support organisational goals and enhance effectiveness.
3. Evaluate the broader impact of technology on society, demonstrating awareness of sustainability, ethical considerations, and enforcing responsible digital practices.
4. Design, implement, and manage strategic information systems (SIS) that support efficient processes and informed decision-making.
5. Apply effective IS governance and risk management practices to maintain and protect organisational information assets and ensure regulatory compliance.
6. Apply appropriate and strategic project management methodologies and tools to organisational Information Systems projects.

7. Integrate business, technological, and human factors in IS decision-making, ensuring systems are usable, relevant, and supportive of organisational and user needs.
MINIMUM ENTRY REQUIREMENTS (including access and inclusion)
Bachelor Degree, NCQF Level 7 There shall be provision for access through Recognition of Prior Learning (RPL) and Credit Accumulation and Transfer (CAT) Systems in line with ETP policies.

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SECTION B	**QUALIFICATION SPECIFICATION**
GRADUATE PROFILE (LEARNING OUTCOMES)	**ASSESSMENT CRITERIA**
1. Apply advanced strategic and analytical skills to identify information systems opportunities in contemporary digital business environments	1.1 Analyse external and internal digital business environments to identify trends, drivers, and opportunities for innovation. 1.2 Apply data-driven and systems-analytic methods to diagnose organisational needs and assess IS solutions 1.3 Evaluate alternative IS solutions and technologies for organisational fit, feasibility, and effectiveness 1.4 Develop an implementation plan for IS adoption, integration, or transformation
2. Apply up-to-date specialist knowledge in Information Systems to design and improve IS solutions within organisational contexts.	2.1 Compare and evaluate IS applications and their potential application in organizations 2.2 Solve managerial and organizational problems using appropriate IS techniques

	2.3 Devise new ways to use computing technologies to gain strategic advantage in organizations.
3. Apply advanced research techniques to critically analyse, evaluate, generate, and interpret knowledge at the core of Information Systems practice, scholarship, and research.	3.1 Select and justify appropriate research design and methodology for data analysis aligned with IS research objectives. 3.2 Apply rigorous and advanced data collection and analysis tools 3.3 Communicate research findings effectively, using academic conventions and ethical standards.
4. Evaluate the impact of Information Systems on corporate governance, organisational strategy and performance	4.1 Explain relationships between IS, governance frameworks, compliance, transparency, and accountability 4.2 Demonstrate an understanding of digital ethics, data governance, and risk management 4.3 Apply knowledge of digital ethics, data governance and risk management to organisational IS processes
5. Apply advanced Information Systems theories, models, and frameworks to real-world contexts, demonstrating consideration of impacts, sustainability, ethics, and outcomes for diverse stakeholders	5.1 Apply key IS theories, models, and frameworks and explain relevance to organisational or societal contexts. 5.2 Apply appropriate theories or models to analyse and solve real-world IS problems. 5.3 Identify and justify positive, negative and trade-offs in terms of outcomes in IS implementation

6. Work autonomously and collaboratively in professional settings, demonstrating responsibility, integrity, proper governance and ethical conduct in complex and unpredictable environments	6.1 Recognise diverse stakeholder needs and perspectives in IS analysis and decision-making 6.2 Apply the ethical principles associated with research and knowledge production in the discipline. 6.3 Lead by example in promoting a culture of ethical digital practices and responsible technology use within an organisation 6.4 Resolve conflicts between stakeholder interests by applying transparent, fair, and principled decision-making processes.
7.Apply advanced IS knowledge to demonstrate proficiency in fundamental project management.	7.1 Use tools and software techniques in Project Management 7.2 Apply professional management skills to the design and management of IS projects. 7.3 Conduct post-project evaluations to measure outcomes against objectives and recommend improvements for future initiatives. 7.4 Adapt project management approaches in response to unforeseen challenges or changing organisational priorities.

SECTION C	QUALIFICATION STRUCTURE		
COMPONENT	TITLE	Credits Per Relevant NCQF Level	Total Credits
		Level 9	
CORE COMPONENT Subjects/Courses/ Modules/Units	Business Analysis	15	15
	Digital Transformation	15	15
	Enterprise Systems	20	20
	Business Data, Information and Knowledge	15	15
	Project Management	15	15
	IS Governance, Security and Ethics	20	20
	Research Process and Practice	15	15
	Business Intelligence and Data Analytics	20	20
	Dissertation	80	80
Electives	Cyber Security	25	25
	Artificial Intelligence for Business	25	25

SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL	
TOTAL CREDITS PER NCQF LEVEL	
NCQF Level	**Credit Value**
9	**240**
	240
TOTAL CREDITS	**240**

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

Research Process and Practice is a pre-requisite for students to progress on to the dissertation module. This qualification requires the completion of 215 core credits and 25 elective credits. All modules are at NCQF Level 9.

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ASSESSMENT ARRANGEMENTS
Assessment will consist of both formative and summative assessments and should be aligned with learning outcomes and sub-outcomes. Assessment will be conducted by BQA registered and accredited assessors. Assessors and moderators should possess a doctoral qualification in Information Systems or related field. Formative Assessment The formative assessment of course work shall contribute 60% of the final grade. Summative Assessment Summative assessment of course work shall contribute 40% of the final grade. Assessment of dissertation shall be based on internal and external examiners report.
MODERATION ARRANGEMENTS
The qualification shall have both Internal and External Moderation, in accordance with applicable institutional and national policies and regulations. Assessors and moderators shall be registered and accredited by BQA or its equivalent. Moderation will be conducted by persons with a doctoral degree in information systems or related field.
RECOGNITION OF PRIOR LEARNING
There shall be provision for award of credits towards this qualification through RPL
CREDIT ACCUMULATION AND TRANSFER
There shall be provision for award of credits towards this qualification through CAT
PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)
Vertical Graduates of this qualification will have the following options for postgraduate education: Doctor of Philosophy in Computer Information Systems Doctor of Philosophy in Information Technology Horizontal Learners in this qualification will have the following options for horizontal articulation: Master of Science in Information Technology

Master of Science in Information Systems

Employment Opportunities

Graduates of this qualification will be able to take up the following jobs:

Systems Analysts

Project Managers

ICT Consultants

Database Managers

Business Analysts

QUALIFICATION AWARD AND CERTIFICATION

Learners are required to complete 240 credits to be awarded the Master of Science in Strategic Information Systems.

SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

Two qualifications were used for comparison: MCom Information Systems at the University of Cape Town (South Africa); and MSc Information Systems with Computing at Dublin Business School (Ireland).

1. Title

- Master of Commerce in Information Systems (University of Cape Town)
- MSc Information Systems with Computing(Dublin Business School)

Both comparator qualifications use Information Systems as the main title of their award. This qualification deliberately includes the word ***Strategic*** Information Systems to differentiate its orientation from the more general "Information Systems" qualifications offered by the University of Cape Town and Dublin Business School, because this qualification:

- integrates advanced IS knowledge with strategic management, governance, ethics, and sustainability;
- prepares graduates not only to use and research information systems, but to lead and influence IS-driven organisational strategies; and
- signals a higher-level orientation than the other two qualifications, aligning with Botswana's need for strategic digital leadership in both public and private sectors.

2. NQF Level

- Level 9 (Masters) on the South African Qualifications Framework (**University of Cape Town)**
- Level 9 (Masters) on the Irish National Framework of Qualifications (**Dublin Business School)**

Both comparator qualifications are set at Level 9 (Masters) on their respective qualifications frameworks. This matches the level of the MSc in Strategic Information Systems.

3. Credits and Duration

- **University of Cape Town:** NQF Level 9, 180 Credits (the typical number of credits for a Masters qualification in South Africa). The duration is one year.
- **Dublin Business School:** 90 European Credit and Accumulation System (ECTS) credits (Approx 225 NCQF credits).

Both comparator qualifications offer the typical number of credits for a Masters level qualification in their respective countries. The MSc in Strategic Information Systems offers the minimum number of credits for a Masters qualification in Botswana. The duration of the MSc is two years, fitting in with the norms expected in Botswana.

4. Exit Outcomes

- **University of Cape Town:** Designed as a research degree, preparing students for doctoral study or academic careers. Emphasis on critical reading, writing, and analytical skills. Focuses on deepening expertise in IS theory and management. Less emphasis on direct workplace application.
- **Dublin Business School:** Designed as a professional degree, preparing students for industry roles. Emphasis on technical mastery (programming, databases, networks, security). Strong workplace orientation with applied projects.

The comparator qualifications each have a different focus. This qualification is positioned as a hybrid qualification that bridges the gap between a research-intensive model (academic progression, scholarly expertise), and the applied-technical model (workplace readiness, industry skills).

5. Subjects Covered

- **University of Cape Town:** Narrower coursework scope (management, knowledge management, project management). Heavy reliance on dissertation as integrative research output. Curriculum depth is academic and managerial rather than technical.
- **Dublin Business School:** Broad technical curriculum (programming, databases, networks, security, analytics, web/mobile). Includes applied research methods and dissertation/project. Curriculum depth is technical and applied, preparing for hands-on IT/IS roles.

Reflecting their differing learning outcomes, the comparator qualifications have differing focus points and depth. The MSc Strategic Information Systems balances strategic IS knowledge, governance, ethics, sustainability, and project management, with a stronger emphasis on strategic application and leadership than either of the comparator qualifications.

6. Assessment Strategy and Weightings

- **University of Cape Town:** Traditional academic assessment (exams, essays, class contribution, presentations). 50% of marks are based on a final examination.
- **Dublin Business School:** 100% continuous assessment — no final exams. Practical pedagogy: projects, portfolios, technical demonstrations.

The MSc Strategic Information Systems qualification offers a blended approach of 60% formative assessment and 40% summative assessment. The qualification combines research techniques assessment with applied strategic projects, reflecting both academic and professional demands.

7. Qualification Rules

- **University of Cape Town:** Students must complete all coursework and the dissertation to be eligible to graduate.
- **Dublin Business School:** Students must complete all modules to be able to graduate

Like the two comparator qualifications, the MSc Strategic Information Systems qualification requires students to complete all modules (including one of two electives) in order to graduate.

8. Graduate Pathways

University of Cape Town: Graduates positioned for PhD study, academic careers, or research-intensive roles. Less direct alignment with industry job titles.

• Dublin Business School: Graduates positioned for immediate employment in IT/IS roles (software engineering, data analytics, systems support, project management).

This MSc combines prospective pathways from both of the comparator qualifications. Graduates are positioned for strategic leadership roles in IS governance, corporate performance, and digital transformation, while also capable of pursuing further academic study.

Overall, the proposed qualification is comparable to the examined qualifications in terms of level, scope, outcomes, learning and employment opportunities. It articulates well with both academic and professional pathways, aligning with international standards while offering distinctive emphases, in particular in the proposed elective modules. The proposed qualification demonstrates breadth and balance, preparing students for further study whilst also producing graduates equipped for professional practice.

REVIEW PERIOD

This qualification will be reviewed no later than five (5) years following the date of registration of the qualification with the BQA.

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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**	