

BQA NCQF Qualification Template

DNCQF.FDMD.GD04

Issue No.: 01

QUALIFICATION SPECIFICATION								SECTION A
QUALIFICATION DEVELOPER			Amistad Education Botswana					
TITLE		Doctor of Philosophy in Business Management			NCQF LEVEL		10	
FIELD	Business, Commerce and Management Studies			SUB-FIELD	Management			
New qualification		X	Review of existing qualification					
SUB-FRAMEWORK		General Education			TVET		Higher Education	
QUALIFICATION TYPE		Certificate			Diploma		Bachelor	
		Bachelor Honours			Master		Doctor	
CREDIT VALUE						360 NCQF credits		
RATIONALE AND PURPOSE OF THE QUALIFICATION								
<p>Today's society rests to a higher and higher degree on scientific knowledge. It has become paramount for a society to be able to produce good research and harness the results of global research efforts in order to keep up with the global advancement in societies around the globe.</p> <p>The purpose of the PhD qualification in Business Management is to enable the student either to work as a scientist within the field of management to the benefit of the surrounding society, or to take on a leading role in developing a large organisation in the public or private sector. In particular, it intends to give the PhD student both general and specific knowledge in the selected subject area and in related application areas; to prepare the student for independent research, i.e., to solve complex theoretic and practical problems using scientific methods, and to critically analyse and compile existing research. The PhD studies are aimed as a preparation for independent very qualified work, in government, research or education, or the private sector. The knowledge obtained is highly useful, both within and outside of the university sector.</p> <p>However skilled the personnel is, the outcome will not be in accordance with the goals and objectives set if the organisation is not properly managed with modern decision making, leadership and management skills, cf. (1). Adequate methods for decision analysis are important to a large number of areas. During the last few decades, the field of decision analysis has developed as a structured approach to formally analysing decision problems. The foundations are based on the research from several disciplines, in particular organisation theory, business administration, psychology, statistics, computer science, and philosophy. Examining the need in Botswana, the need of education in decision making and management is very high. Recent (2,3) HRDC reports shows that there is a strong need of statistical professionals, finance managers and analysts, procurement professionals, energy managers and modelling specialists as well as several other professions in the RIST sector, spanning from energy security to e-government.</p> <p>Overviewing the level of education and the various courses and programmes available today in Botswana, it becomes apparent that there is a need for more competition and for a more professional approach to educating the leaders of the future, and there are no other universities in the region offering a PhD</p>								

programme in Business Management at this level and the overall objective of the qualification is to improve the supply of research trained management scholars and professionals in Botswana, the SADC Region and the Sub-Saharan African continent at large within these areas.

A survey conducted by Amistad Education Botswana indicates that there is a need for management qualifications at all post graduate levels. An online mode of learning has been found favourable especially for people outside of Gaborone, who want to enrol for post graduate studies, not least at the PhD level. Management and Decision Making was one of the qualifications found to be in great demand (4).

The qualification prepares students as scholars and/or leaders, building a thorough understanding of leadership through decision and risk management, addressing social, environmental, economic, and institutional factors that contribute to sustainable development. PhDs from this qualification will work with research or leadership in public organizations, private companies, research institutes and NGOs. Examples of public organizations are governmental agencies and other bodies at the national level that are responsible for national and regional planning and development, regional educational authorities, energy and environmental protection authorities and national transport administrations. The PhD students will have knowledge at the national research frontier in decision theory, risk analysis, procurement, planning and policy formation within sectors selected by the individual student such as energy planning, finance, governance, etc., and, except for getting academic positions, thereby be highly relevant as leaders for the private sector, which includes planning and policy consultancy firms, financial institutes, banks as well as project developers. The curriculum for a PhD student is highly individual (as opposed to studies at the BSc and MSc levels). A PhD student can select to align to the needs of industry or national governmental priorities, or might focus on e.g. entrepreneurship and innovation. The qualification will cater specifically to Botswana MSc graduates, from Amistad as well as from other higher educational institutes. There is an international shortage of highly qualified researches within decision and risk analysts, and this proposed qualification would fill a significant gap in research level education of several management disciplines.

1. African Leadership Magazine 18/01/2016, <http://africanleadership.co.uk/5-decision-making-steps-for-managers/>. Retrieved 20190109
2. HRDC (2016:1). Top occupations in high demand. https://www.baisago.ac.bw/common_up/isago/pub_1495553138.pdf. Retrieved 20190103
3. HRDC (2016:2). Interim sector skills in demand: http://www.botswanalmo.org.bw/system/files/market_reports/Top%2020%20Skills%20in%20Demand.pdf. Retrieved 20190103
4. Amistad: Educational Needs Assessment Report for Botswana, 2018.

ENTRY REQUIREMENTS (including access and inclusion)

A requirement for the PhD qualification is the possession of a Master's degree from an accredited institution, either from Botswana or an international institution, corresponding to at least five years of full time studies at the undergraduate and graduate levels including two theses.

The major subject (and thesis) of the Master's degree needs to be the same or similar to the chosen specialisation of PhD studies within the management subject. Thus, for a PhD in Business Management



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with a specialisation in decision making, the student needs to have a background in business administration, management, or computers/informatics. In addition, there are English language requirements for being able to follow the individual study plan.

QUALIFICATION SPECIFICATION SECTION B	
GRADUATE PROFILE (LEARNING OUTCOMES)	ASSESSMENT CRITERIA
<p><i>For the PhD qualification, a student shall:</i></p> <p>1. Display advanced knowledge and a thorough understanding of the theoretical foundations and current research frontiers in decision analysis, risk management and leadership.</p>	<p>1.1 Very complex decisions and risks in realistic settings are analysed and solution methods discussed and selected;</p> <p>1.2 Advanced methods are deliberately selected among several and applied to real-life complex decision problems;</p> <p>1.3 Deep knowledge and understanding of software, tools and methods for decision support and risk analyses are discussed;</p> <p>1.4 The relation between theory and practice in decision theory and risk management and the connections and applications to various disciplines is handled;</p> <p>1.5 In-depth insights into the possibilities and limitations of the science, its role in society, and the responsibility of people for how it is used is demonstrated;</p> <p>1.6 Skills required for participation in research in some other qualified capacity are displayed; and</p> <p>1.7 The need for further knowledge is identified.</p>
<p>2. Conduct independent research that contribute meaningfully to the research fields of decision and risk analysis and leadership.</p>	<p>2.1 Research questions are critically and independently identified and formulated;</p> <p>2.2 Limited research work within given time frames conducted;</p> <p>2.3 Advanced tasks using appropriate methods within those predetermined time frames are planned for and executed;</p> <p>2.4 Complexities of decision problems in various settings in relation to the social, economic, environmental and political context are assessed;</p> <p>2.5 Contemporary research problems, opportunities and future needs that contribute to the development of the field of knowledge are articulated;</p> <p>2.6 A broad knowledge within the subjects for the study understanding of the research area, as well as in depth and up-to-date specialist knowledge within a limited section of the research area is discussed;</p> <p>2.7 Extending various paradigms that are invariant of the particular knowledge domains and have the attribute of universal applicability and relevance are identified;</p> <p>2.8 Complex decision problems and methods are orally and written presented;</p> <p>2.9 Adequate familiarity with scientific methods within the field of study displayed;</p>

	<p>2.10 Scientific analysis and synthesis, as well as independent critical review and assessment of new and complex phenomena, questions and situations are discussed; and</p> <p>2.11 Insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used are discussed.</p>
<p>3. Extend critically and systematically current knowledge and adequately deal with complex phenomena, issues and situations even with limited information.</p>	<p>3.1 The merits of theoretical concepts, policies, plans and projects are analyzed and critically evaluated;</p> <p>3.2 Implicit normative assumptions that determine different perspectives on decision problems are detected and evaluated;</p> <p>3.3 Plans, concepts and policies in different temporal, cultural and institutional backgrounds and settings are contextualized and assessed;</p> <p>3.4 The nature and manner of dealing with impending decision problems and analyses are critically evaluated;</p> <p>3.5 Following closely the research frontiers of the discipline and how these may affect practice are analyzed;</p> <p>3.6 Needs for learning opportunities in order to improve the professional capacity of others as well as self are identified; and</p> <p>3.7 The role of educations within the chosen sub-field of study is analysed.</p>
<p>4. Adopt a personal and professional planning ethic in research.</p>	<p>4.1 The personal needs for further knowledge and to take responsibility for own continuous learning are identified;</p> <p>4.2 The possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used is discussed;</p> <p>4.3 The main field of study informed by relevant disciplinary, social and ethical issues and also to demonstrate awareness of ethical aspects of research and development are assessed;</p> <p>4.4 The intellectual independence and scientific probity displayed;</p> <p>4.5 Research ethical assessments performed; and</p> <p>4.6 Needs for further knowledge and to take responsibility for own knowledge development is discussed.</p>

QUALIFICATION STRUCTURE			
			SECTION C
FUNDAMENTAL COMPONENT Subjects / Units / Modules /Courses	Title	Level	Credits
	Scientific Writing	10	15
CORE COMPONENT Subjects / Units / Modules /Courses	Philosophy of Science	10	15
	PhD Thesis	10	270
ELECTIVE COMPONENT Subjects / Units / Modules /Courses	<i>Electives depending on prior knowledge:</i>		
	Advanced Research Methodology	10	15
	Advanced Decision Modelling	10	15
	Operational Risk Management	10	15
	Decision Support Modelling	10	15
	Logic for Doctorate Studies	10	15
	<i>Electives depending on research direction:</i>		
	Analysis of Arguments	10	15
	Participatory Decision Making	10	15
	Current Topics in Risk or Decision Analysis	10	15
Rules of combinations, Credit distribution (where applicable):			
<p>90 credits of coursework are required and must be completed together with a successfully defended PhD thesis (270 credits) in order to obtain the PhD degree. The 90 credits of coursework consists of 30 credits of mandatory courses and 60 credits depending on the prior knowledge and research direction of each student according to his or her individual study plan.</p>			



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ASSESSMENT AND MODERATION ARRANGEMENTS

ASSESSMENT

In each course the responsible professor is responsible for ensuring that the students are treated in a fair manner and that each student has an updated individual study plan that is revised yearly. Throughout the qualification all course examination is done using internal resources, while the PhD thesis which will be subject to assessment from an international grading committee to ensure world-class quality and consistency. The qualification will go through periodic quality evaluation and screening for quality insurance. Students will have access to course evaluations and PhD students are represented in all decision-making bodies of the university. This ensures that the students' voice and opinions are listened to and considered.

Formative assessments done multiple times during a course give the educators a feedback mechanism so that instructional approaches, teaching materials, and academic support can be modified accordingly and the teaching techniques and material can be improved. This gives naturally a good ground for the summative assessments of the learners' learning. The latter are the usual graded tests, assignments, or projects that are used to determine whether learners have accomplished the stipulated goals. Performance assessments requiring learners to complete more complex tasks, such as assignments that produce write-ups and reports, scientific experiments, performances, including work on larger or term projects. Group and team work that represents ability to cooperate and collaborate and Collaboratively developed common assessments, authentic scoring guides, rubrics, and other methods to evaluate whether the work produced by learners shows that they have learned what they were expected to learn shall be used.

Individual study courses are often examined by writing a paper which is then graded by teacher together with the PhD student's supervisor. Those papers can often be included as background material in the student's subsequent thesis. The thesis is examined as follows: The main supervisor determines, in dialogue with the assistant supervisors, when a PhD thesis is ready for examination. The content of a thesis should preferably be published in well recognized conference proceedings or journals. However, not everything has to be published. If nothing is previously published, one may use the heuristic that the core of the thesis has to be judged to be of a quality that is on par with recent publications of the above-mentioned form. The form of the thesis should normally be a compilation thesis, i.e. a collection of papers preceded by an introductory summary. Only in special cases it may be a monograph. The size of a thesis in our subject may vary greatly. As a rule of thumb the following figures are given. A thesis of average length may range from 100-200 pages (including papers). Less than 100 pages is considered 'short' and more than 200 pages is considered 'long'.

The finished thesis is defended and discussed at a public defence act. The roles at this public defence act are as follows: a chairman, a respondent, an opponent, and an evaluation committee. An extra backup, usually a person from the department, is often assigned, prepared to stand-in should any member of the committee be unable to serve. The opponent has a PhD degree, and the evaluation committee members each have a habilitation ('docent' grade) or a professor's title/chair. The chairman at the defence act is often the supervisor. One advantage on using another senior staff member as chairman is that this person can cut the discussion short as necessary, without being accused of trying to protect the respondent. The chairman has only a formal procedural role at the act

The opponent is an expert in the specific field of the thesis, and is usually an internationally well-known researcher who lacks formal professional relations with the respondent. The opponent has only an advisory role in the sense that he/she does not take active part in the formal decision meeting following the public defence act. However, the opponent bears the brunt of the defence act. It is also supposed that the evaluation of the thesis presented by the opponent should be given a heavy weight in the evaluation committee's judgement.

Normally the defence act has four parts.

In the first part (very short) the respondent comments on errata (such as formal errors)

In the second part (normally 30-45 mins):

- a) the opponent positions the thesis within the field and gives a personal view on its contributions, or
- b) the respondent is presenting his or her work.

In the third part, (normally 45-60 mins, but might run longer), the opponent systematically discusses the strengths and weaknesses of the thesis on all levels of detail. This part is typically carried out in 'Questions and Answers' interaction with the respondent.

In the fourth part the evaluation committee and the audience may pose questions. It is normal for each committee member to ask one or two questions, but more questions are acceptable and are not seen as an indication of low thesis quality.

The evaluation committee attends the defence act and has a formal decision meeting immediately afterwards. The supervisors and the opponent are allowed to be present at this meeting but have no votes. A thesis is judged 'pass' or 'fail'.

The opponent and the evaluation committee should get a printed copy of the final version of the thesis at least three weeks before the public defence act. On average the time to print the thesis is three weeks. This means that the final version of the thesis must be available six weeks before the public defence act, and hence an electronic version of the final thesis should also be made available at that time.

Each respondent has to carry out a pre-defence act to which an opponent is assigned. The pre-defence is normally attended by the supervisors, plus some fellow graduate students and faculty. After the pre-defence act, there is an informal discussion about what should be corrected before the final version of the thesis goes to print, typically involving several senior faculty members. This is a pragmatic form of quality control, and the department believes that the pre-defence protocol, together with the quality control by the senior faculty members, helps increase the quality level of theses in general.

All assessments for all the courses except the individual reading courses shall be done by BQA accredited assessors.

Internal moderation

All assessment instruments shall be internally moderated before administration by a colleague in the same field. The preparation of the moderation shall be accompanied by the Marking Key. Reports and associated documents include: Assessment Instrument, Marking key, Internal Moderation report and a List of candidates and scores attained.

Internal Moderation shall be done by BQA accredited Moderators.

External Moderation

External moderation shall be done by external subject experts to verify that the examination instruments and marking are at the right standard for the type and level of the qualification. External moderation may result in an adjustment of the allocated scores. Moderators used will be accredited by BQA as such.

GRADING

The grading system of the core courses shall be based on the following:

C (fail), B (lowest passing grade), A

The grading system of the individual reading courses shall contain Pass and Fail only.

The grading system used by the grading committee for the PhD thesis shall contain Pass and Fail only.

RECOGNITION OF PRIOR LEARNING (if applicable)

N/A

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Learning Pathways

If completing the three years of full time studies, a Doctor of Philosophy degree (360 credits) is awarded. The next step in the learning progression is for the successful PhD to continue his/her studies and work toward a Docent/Reader degree. A Docent/Reader accomplishment consists of four years of independent research on top of the PhD, where the Docent/Reader candidate should demonstrate independent research results of a high international quality, published in recognised international publications (journals and conference proceedings). A Docent/Reader accomplishment further consists of one-two years of independent teaching at master's and/or PhD level with good course evaluations. Both of these requirements are assessed by a Docent/Reader committee that is assembled on request.

Employment Pathways

Graduates from this qualification can be employed as any of the following but not limited to:

- Assistant Professor
- General Manager
- Decision Analytic Specialist
- Advanced Business Consultant
- Advanced Risk Manager
- Government Officer

QUALIFICATION AWARD AND CERTIFICATION

A Degree of Doctor of Philosophy is awarded after the student has completed the courses required, including a PhD thesis examined by an international grading committee and defended orally at a PhD dissertation seminar. They must have successfully completed the 360 credits allocated to the qualification.

Candidates meeting prescribed requirements will be awarded the qualification in accordance with standards prescribed for the award of the qualification and applicable policies. Candidates who do not meet the prescribed minimum standards may, where applicable, rework the thesis and resubmit a second time. A second failure to successfully defend the thesis at a dissertation seminar leads to a termination of the doctorate studies without a degree. Before the second defence, the doctorate candidate should receive special advice by a professor not belonging to the supervision committee.

REGIONAL AND INTERNATIONAL COMPARABILITY

The PhD qualification proposed here and its courses have been developed and given at Stockholm University for many years. It uses traditional and well-established methods for examination at the PhD level, such as written exams, papers, etc. This qualification is modelled after the traditional very well-tested way of educating PhD students through a semi-apprenticeship model in use in the Western world for centuries. This model combines efficient and rational learning with the individual instruction necessary for developing the PhD students into researches capable of producing independent research of very high quality. Essentially all universities on the top-100 list in the world (of which Stockholm University is one) use the same teaching and learning model at the PhD level.

This instance of the PhD qualification is a unique in many ways, starting from the results from many international and national projects across various knowledge domains which range from energy efficiency, public decision making, building communication infrastructure and services, selection of the best methods for security and digital investigations, and cybersecurity strategies. The cross-over to and cross-fertilization with other disciplines have been extremely profitable by creating numerous opportunities for the students to work on real-life applications and problems, a fact that has enormously increased their attraction on the employability market. Universities all over the world have naturally some courses in decision theory and risk analysis as well as research methodology, but we have a unique position to provide frontier research and research education supervised by world-class researchers. Many universities around the world have programmes in business management of various categories since the field is very large. However, none has the unique combination of leadership and rational tool-based decision making in a realistic setting with a large variety of real-life application and an enormous international research network. UB has a PhD education in business management of a more standard nature. In the region, North West University, University of the Witwatersrand, Stellenbosch University, and University of Pretoria have some PhD educations within business management and administration, such as entrepreneurship, logistics, and similar, which are thus of another character compared to the current qualification. There are also several international PhD programmes in business management and, e.g., (5) provides a ranking of such programmes. Typically, they are either more qualitative in

nature, as in sociologically oriented, such as Harvard University, or administration or organizational behaviour oriented, such as Stanford University, and do not handle quantitative actual decision-making aspects in a prescriptive or normative way. There are quantitative based programmes, for example some more operationally oriented ones, such as Carnegie Mellon University, but the focus there is more on quantitative modelling and automation.

Thus, there is an evidenced lack of a PhD education that combines business management with decision and risk analysis in the unified and comprehensive (“Stockholm”) way. The matrix given below is a standard one to compare and enumerate the existing courses distributed in various institutions. What is really important is to underline the important feature of intrinsic interdependencies between the courses in the qualification that translates to an integrative and holistic approach to management and decision making.

Content	Amistad	UCT,SA	WITS,SA	UB	BAC	SU,SA	UP,SA	HU,US	SU,US	CM,US
Normative decision theory	X						(X)			(X)
Selected Current Topics in Risk or Decision Analysis	X							(X)	(X)	(X)
Decision support tools	X									(X)
Theory and Research in Decision Analysis	X									
Theory and Research in Risk Analysis	X									(X)
Scientific Writing	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
Philosophy of Science	X	X	X	X	X	X	X	X	X	X
Research Methodology	X	X	X	X	X	X	X	X	X	X
Selected Current Topics in Risk or Decision Analysis	X									

5. <https://www.topmanagementdegrees.com/rankings/best-doctorate-business-management/>.
Retrieved 20190116

REVIEW PERIOD

This qualification will be reviewed after five years upon registration as per the review policy.

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

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		