SECTION A:	***QUALIFICATION DETAILS***																	
QUALIFICATION DEVELOPER (S)	Botswana University of Agriculture and Natural Resources																	
TITLE	Master of Science in Agricultural Education													***NCQF LEVEL***		9		
FIELD	Education and Training		***SUB-FIELD***		Agricultural Education									***CREDIT VALUE***		260		
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 need to reduce the costs incurred by government in training graduates in Agricultural Education abroad as well as the need to increase the rate of training Agricultural Education graduates and upgrading those with degree qualifications to match the growing demand for local Agriculture Educationists, necessitated the establishment of the MSc Agricultural Education.

In 2004, the then Agricultural Economics, Education and Extension department carried out a survey to solicit the opinion of the key stakeholders in Agricultural Education about the need to establish the Master of Science (Agricultural Education) qualification at the then BCA.

The findings, amongst others, showed that stakeholders agreed that graduates of the Bachelor of Science in Agricultural Education qualification need Master of Science (Agricultural Education) to advance their professional career, and that the graduates of the master qualification might have better chances of getting employed by other institutions outside the teaching profession.

Furthermore, the Agriculture Sector Human Resource Development Plan (HRDC, 2015) later on identified some skills in agriculture (of which skills in Agricultural Education are part of) that the Botswana economy still needs, thus cementing the need to continue training Agricultural Education specialists at master level to later spearhead Agricultural Education policies. On its part, the Botswana Education and Training Sector Strategic Plan (ETSSP) 2015-2020 reaffirms the need to improve management of education in the country, develop a responsive tertiary education as well as improve access to the graduate studies where enrolments rates are very low and thus 'jeopardizing any chance for improvement in the country's research and innovation capacity' (p.26). The establishment of this qualification is therefore aimed at addressing the needs with particular reference to the field of Agricultural Education.

PURPOSE:

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

- Plan, design, guide implementation of, and critically evaluate agricultural curriculum.
- Study complex problems within agricultural contexts through research and reflective practices and techniques.
- Analyse critically, contemporary issues related to agricultural education, agricultural situations, and extension works from multiple perspectives.
- Guide teaching and learning of agriculture.

ENTRY REQUIREMENTS (including access and inclusion)

The minimum admission requirement for Master of Science in Agricultural Education shall be one of the following:

1. NCQF Level 7 or its equivalent, i.e., Bachelor of Science in Agricultural Education or related fields from any institution.
2. Admission through Recognition of Prior Learning(RPL) and Credit Accumulation and Transfer (CAT) will also be provided for as per the institutional and national policies on RPL and CAT.

SECTION B	***QUALIFICATION SPECIFICATION***
GRADUATE PROFILE (LEARNING OUTCOMES)	***ASSESSMENT CRITERIA***
1. Demonstrate advanced knowledge of education theories, concepts, principles and laws and how they found the practice in Agricultural Education.	1.1. Explain education theories, concepts, principles, and laws that inform the agriculture teaching practice. 1.2. Apply education theories, concepts, principles, and laws in the agricultural education practice. *1.3.* Provide conducive learning environment when in the classroom
2. Demonstrate advanced knowledge and skills in the application of educational management theories, concepts, principles, legislation and regulations governing practical settings.	2.1. Apply educational management theories, concepts, principles and laws in educational settings e.g. classrooms, schools, etc 2.2. Execute the teaching of agriculture at all levels and guide its learning in the classroom. 2.3. Offer clinical supervision to colleagues at work 2.4. Supervise planning, implementation, and evaluation of the Agricultural Education curricula at all levels. 2.5. Explain regulations and policies governing agricultural education practice (i.e. operations and associated services). 2.6 Apply regulations and policies appropriately in educational settings.
3. Apply advanced educational technology in Agricultural Education.	3.1. Describe Information Communications Technology (ICT) concepts and principles applicable to education practice.

	3.2. Apply ICT concepts and principles appropriately in educational settings. 3.3. Integrate ICT into educational processes and operations.
4. Contribute towards the development of professional practice in the field of Agriculture Education through specialised research or reviewing existing knowledge.	4.1. Apply different research methods used in the field of Agricultural Education. 4.2. Conduct research to contribute to solving Agricultural Education related problems. 4.3. Engage in educational debates aimed at reviewing existing knowledge to help influence agricultural education policies. 4.4. Disseminate research findings through seminars, workshops and conferences to help impact practice 4.5. Write and present research papers in conferences, symposiums, workshops and seminars
5. Demonstrate a high level of mastery of Agricultural Education content and ideals as well as retrieve, evaluate, analyze and interpret information to make propositions and judgments.	5.1. Search and sample adequately and appropriately relevant literature to give relevant insights to issues of concern in Agricultural Education. 5.2. Critique literature and establish its contextual relevance to Agricultural Education. 5.3. Evaluate, analyze and interpret gathered data appropriately to make well informed propositions and judgments.
6. Demonstrate advanced critical thinking, problem solving and creativity in the workplace to improve existing practice and make informed decisions	6.1. Detect deviant educational process and practices with the aim of establishing mitigation measures for improvement. 6.2. Undertake an evaluation exercise effectively for existing professional practice from planning up to communication of findings.

	6.3. Analyse both quantitative and qualitative data sets critically in a more organized manner to make sense of them. 6.4. Recommend appropriate professional practice with the aim of initiating reforms for improved education practice 6.5. Formulate relevant concepts on any tabled Agricultural Education issue. 6.6. Develop possible alternative solutions to existing Agricultural Educational problems constructed from different perspectives 6.7. Apply newly identified skills and techniques to help solve variety of problems 6.8. Simulate community agricultural education and development programmes 6.9. Demonstrate awareness of current issues and problems in agricultural education
7. Undertake self-directed study in Agricultural Education to demonstrate autonomy, innovative skills and professional integrity in making informed decisions.	7.1. Describe contexts under which a self-directed study can be done in the field of Agricultural Education. 7.2. Develop possible inventions that could uplift production and/ or quality of services in Agricultural Education. 7.3. Initiate research to solve any identified Agricultural Education related problem. 7.4. Initiate invention decisions within the confines of regulating policies.

	7.5. Engage in inventing prototypes to breed ground for inventing products meant to uplift production and quality of services in Agriculture Education.
8. Demonstrate advanced knowledge of specialised agriculture area.	8.1. Show skills necessary to enhance production in any chosen discipline of agriculture. 8.2. Apply technical knowledge and skills acquired from chosen minor component to improve practice in the field of Agricultural Education.
9. Apply a wide range of 21st Century skills needed to enhance the practice of teaching and learning.in Agricultural Education	9.1. Relate professionally with colleagues and relevant stakeholders from different cultures to achieve cross-cultural fluency. 9.2. Interact and work effectively in teams at the workplace. 9.5. Debate issues critically. 9.7. Generate solutions to even unpredictable and complex learners' related problems. 9.8. Uphold integrity and professional Ethics. 9.9. Demonstrate ability to uphold self-directed and lifelong learning culture. 9.10. Employ relevant ICT skills effectively in Practice.

SECTION C	***QUALIFICATION STRUCTURE***				
COMPONENT	***TITLE:***	***Credits Per Relevant NCQF Level***			***Total*** ***(Per** Subject/ Course/ Module/ Units)*
		Level [8]	***Level [9]***	***Level [10]***	
FUNDAMENTAL COMPONENT *Subjects/ Courses/ Modules/Units*					
	N/A				
CORE COMPONENT *Subjects/Courses/ Modules/Units*	Administration and Supervision of Agricultural Education Programmes		***12***		***12***
	Educational Statistics		***12***		***12***
	Curriculum Studies in Agricultural Education		***12***		***12***
	Research Methods in Agricultural Education		***12***		***12***
	Seminars series in Agricultural Education		***12***		***12***
	Measurement and Testing in Agricultural Education		***12***		***12***
	Adult Education in Agriculture		***12***		***12***

	Thesis Proposal Development		***24***		***24***
	MSc Research and thesis presentation		***98***		***98***
ELECTIVE/ OPTIONAL COMPONENT *Subjects/Courses/ Modules/Units*	Psychology of Learning in Agricultural Education / Agricultural Educational Programme Planning and Evaluation		**12**		**12**
	Comparative Agricultural Education / Educational Communications and Technology		**12**		**12**
	Two modules from either Engineering, Crops or Animals discipline		***30***		***30***
	Total Credit value				***260***

SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL	
TOTAL CREDITS PER NCQF LEVEL	
NCQF Level	***Credit Value***
9	***260***
TOTAL CREDITS	260

Rules of Combination:

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

- The qualification has a total credit value of 260 made of core and elective components.
- 206 credits from the Core component and 54 credits from the Elective component of which 30 credits **must** be from two modules from either engineering, crops or animal discipline treated as minor which counts towards requirement of an award.

ASSESSMENT ARRANGEMENTS

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Formative and summative assessments will be applied with this qualification.

Formative assessment (Course work) will contribute 53% of the final credit value

Summative assessment (Thesis and its proposal) shall contribute **47%** of the full credit value for the qualification. Assessment of the thesis will be in accordance with respective ETP's regulations and procedures.

All assessment processes shall be conducted by assessors who are registered with Botswana Qualifications Authority or any relevant and recognised body.

MODERATION ARRANGEMENTS

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There shall be both internal and external moderation arranged as a quality assurance measure to ensure the validity, reliability, and fairness of the overall assessment process. This quality assurance exercise shall be carried in accordance with respective ETP's internal regulations and procedures.

All moderation processes will be conducted by moderators who are registered with Botswana Qualifications Authority or any relevant and recognised body.

RECOGNITION OF PRIOR LEARNING

Recognition of Prior Learning (RPL) shall be used to award the qualification for candidates who have shown relevant knowledge and skills previously acquired in accordance with institutional and national policies on RPL

CREDIT ACCUMULATION AND TRANSFER

Credit Accumulation and Transfer (CAT) shall be used to award the qualification for candidates who have shown evidence for the credits accumulated in accordance with the ETP and national policies on CAT.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Vertical Progression

Holders of this qualification meets the requirement for vertical progression and admission to NCQF Level 10 qualifications such as:

- Doctor of Philosophy (Agricultural Education).
- Doctor of Philosophy (Agricultural Extension).

- Doctor of Philosophy (Agricultural Economics).
- Doctor of Philosophy in Education.
- Doctor of Philosophy (Agriculture/Agronomy/Horticulture).
- Doctor of Philosophy (Animal Science).
- Doctor of Philosophy (Crop Science).

Horizontal progression:

Candidates could divert to NCQF level 9 qualifications such as:

- Master of Science in Education.
- Master of Science in Agricultural Extension.
- Master of Science in Agricultural Economics

Employment Pathways

A graduate of this qualification could become:

- Agricultural Education Lecturer.
- Agricultural Education Officer (Inspectorate and in-service training).
- Curriculum Design, Development and Evaluation Officer (Agriculture).
- Agriculture Examination Officer.
- Agricultural Education Consultant.
- Self-employment in agri-business enterprises.
- Researcher in the field of Agricultural Education.

QUALIFICATION AWARD AND CERTIFICATION

For a learner to graduate with a Master of Science in Agricultural Education, they should have attained a full complement of 260 credits.

A certificate shall be issued to a learner who has met all the requirements for the award of the qualification**.**

REGIONAL AND INTERNATIONAL COMPARABILITY

Benchmarking has been done against qualifications offered by reputable institutions within the region and beyond to appreciate similar qualifications in relation to graduate profiling, scope, and depth of content, to ascertain regional and international comparability and articulation of the proposed qualification. The outcomes of this process are highlighted in the comparability matrix.

This qualification is similar to that of the University of Eswatini in terms of title, duration, and general composition of courses. It has a comparative advantage in that it has more coverage (13 versus 12 modules) and it comparably offers flexibility in selecting modules by candidates thus standing a chance of attracting and satisfying students' varying needs and interests.

Whereas this qualification and that offered by Iowa State university of Science and Technology, Master in Agricultural Education and Studies, and Land Grant University in the USA provide 24 to 30 credits which include educational modules and 9 credits of electives from the technical agriculture. This qualification has one option of which students are expected to write a thesis/ dissertation at the end of the program whereas that of Iowa State University offers 3 options.
REVIEW PERIOD
The programme will be reviewed every 5 years.