BQA NCQF QUALIFICATION TEMPLATE

SECTION A:	QUALIFICATION DETAILS														
QUALIFICATION DEVELOPER (S)	Next Generation Aviation Professionals (NGAP) Academy														
TITLE	Diploma in Airline Transport Pilot											**NCQF LEVEL**	6		
STRANDS (where applicable)	1. N/A 2. 3. 4.														
FIELD	Services			**SUB-FIELD**		Transport Services						**CREDIT VALUE**	250		
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: According to the Human Resource Development Council (HRDC) Top Occupation Demand (2023), Pilots with Commercial Pilots Licences and Private Pilot Licences technical skills are in short supply in Botswana. The aviation industry in Botswana is a sector that was been identified with a potential to grow the economy. There is a shortage of qualified pilots in the country and even institutions and qualifications in this area.

The aviation industry provides an effective transportation system in Botswana, in the region and beyond the region and continent. Aviation has a direct impact on other sectors like health, tourism, transport, retail, and security. Through the aviation sector, business can be conducted easily and quickly, aid can be sent to remote places faster to help in disaster situations. This qualification presents the need and demand for highly skilled pilots who will be able to skilfully meet the needs of the profession. Issues of safety are key in the industry and this qualification will result in reduced risk in the aviation industry.

This qualification provides for learners who are pursuing piloting careers with opportunities for development and career advancement within the broader constituencies of the aviation industry. The qualification equips trainees with the skills essential to fly both private and commercial aircrafts. The qualification will enhance safety and

security with the aviation environment, resulting in its growth and prosperity. Furthermore, this qualification contributes to the Botswana aviation industry, which strategically impacts on growth of the economy, security, health and safety, and the development of the Southern African Development Economic Community (SADC) economy.

To obtain this qualification and to get the Commercial Pilot Licence (CPL), there are two main components:

- Passing theoretical knowledge examinations (8 in total)
- Gaining the appropriate amount of experience and flying hours.

This qualification has been generated in accordance with Civil Aviation Authority (CAA) of Botswana framework and also provides a vehicle to bring Botswana piloting standards in line with international best practice. The qualification was developed in light of these requirements and to develop and enhance skill in the aviation industry and close the skills gap in the country and beyond.

Students who undertake this qualification can obtain a private pilot licence (PPL) and a commercial pilot licence (CPL) simultaneously. Upon completing this qualification, students can advance into higher qualifications like an Advanced Diploma or a Degree in Aviation (Pilot Training) and a Bachelor of Technology: Transportation Management, among others.

PURPOSE: (itemise exit level outcomes)

The purpose of the qualification is to equip graduates with specialized knowledge, skills, and competences to:

- Acquire skill, and aeronautical experience necessary to meet the requirements for a private pilot license with an airplane category rating and a single-engine land class rating.
- Apply knowledge of airport operations, undertaking different types of Take-Offs and landings, emergency procedures, and ground reference Manoeuvres.
- Conduct short-field and soft-field take-offs and climbs, approaches, landings, radio navigation, and unimproved airport operations, as well as flight by reference to instruments and night flying.
- Conduct solo cross-country flights.
- Apply aeronautical knowledge and instrument approach procedures.

MINIMUM ENTRY REQUIREMENTS (including access and inclusion)

1. Certificate IV, NCQF level 4 or equivalent.

2. Credit Accumulation and Transfer (CAT)

Applicants with credits earned from other accredited institutions shall be recognised for purposes of placement to the equivalent level and possible exemptions of modules. This will be done with reference to the institution's policy which will aligned to the BQA national CAT policy.

3. **Recognition of Prior Learning Policy (RPL)**

Applicants with relevant experience maybe selected based on recognition of prior learning with reference to the institution's RPL policy which will aligned to the National RPL policy.

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SECTION B	***QUALIFICATION SPECIFICATION***
GRADUATE PROFILE (LEARNING OUTCOMES)	***ASSESSMENT CRITERIA***
1. Demonstrate skill, and aeronautical experience necessary to meet the requirements for a private pilot license with an airplane category rating and a single-engine land class rating.	1.1 Identify pilot training, aviation opportunities, and human factors in aviation. 1.2 Explain policies and procedures applicable to the pilot training program. 1.3 Identify the main airplane components and systems. 1.4 Demonstrate how flight instrument functions and operating characteristics, including errors and common malfunctions. 1.5 Demonstrate knowledge of power-plant and related systems. 1.6 Demonstrated through oral quizzing good understanding of Vectors and Forces principles. 1.7 Demonstrated through oral quizzing good understanding of Moment principles.
2. Apply knowledge of airport operations, different types of Take-Offs and landings, emergency procedures, and ground reference Manoeuvres.	2.1 Demonstrated through oral quizzing and demonstration the ability to determine aircraft limitations. 2.2 Explain the aircraft's normal and emergency procedures. 2.3 Identify procedures by using the Pilot's Operating Handbook for various kinds of aircrafts.
3. Demonstrate Short-field and soft-field Take-Offs and climbs, approaches, landings, radio navigation, and unimproved airport operations, as well as flight by reference to instruments and night flying.	3.1 Identify the four forces of flight, aerodynamic principles of stability, maneuvering flight, and load factor. 3.2 Demonstrate understanding of stall/spin characteristics as they relate to training airplanes.

	3.3 Discuss the importance of prompt recognition of stall indications.
4. Conduct solo cross-country flights.	4.1 Analysis and performance of the maneuvers listed for review, including the completion of a cross-country flight. In addition, the applicant will apply the correct emergency procedures. 4.2 Demonstrate how situational awareness is maintained during cross-country flight by effectively using resources, proper communication skills, and workload management principles. 4.3 Analysis and performance of the elements associated with night flight operations and basic instrument maneuvers. 4.4 Communicating with Air Traffic Service (ATS) and organising the flight in cognisance to other air traffic. 4.5 Organising and managing oneself and one's activities responsibly and effectively.
5. Apply technical and non-technical skills to fly a multi engine aircraft solely by reference to instruments in a variety of weather conditions.	5.1 Demonstrated through practical and knowledge tests, and records, of instrument rating airmen knowledge test. 5.2 Demonstrate understanding of IFR instrument requirements as well as instrument flight systems, instrument operations, and instrument errors during oral quizzing by instructor at completion of lesson. 5.3 Describe the basic principles of attitude instrument flying, including the fundamental procedures related to instrument cross-check, instrument interpretation, and aircraft control. 5.4 Demonstrate understanding of basic attitude instrument flight during oral quizzing by instructor at completion of lesson. 5.5 Explain the use and limitations of radio equipment navigation aids (NAVAIDs).

	5.6 Demonstrate understanding of the use and limitations of navigation systems during oral quizzing by instructor at completion of lesson. 5.7 Demonstrates understanding of the resources and regulations related to instrument flight during oral quizzing by instructor. 5.8 Access pre-flight and in-flight sources of weather information and interpret and use weather information for planning and in-flight purposes. 5.9 Recognize and understand the effect of instrument systems and equipment malfunctions.
6. Apply aeronautical knowledge and instrument approach procedures and experience necessary to meet the requirements of a flight instructor license with an airplane category rating and a single-engine class rating.	6.1 Explain basic principles of effective communication. Identify barriers to communication and how to avoid them during instruction. 6.2 Demonstrate knowledge, skill, and experience requirements necessary for a flight instructor license with an airplane category rating and a single-engine class rating. 6.3 Demonstrate knowledge of teaching methods, including how to organize material, the typical steps in a ground training lesson, and the various teaching methods, In addition, the applicant will learn about the integrated method of flight instruction, computer-based training, various instructional aids, and common obstacles to learning. 6.4 Discuss how to evaluate the performance of a student. 6.5 Analysing and performing the listed flight maneuvers and procedures and become familiar with the new visual perspectives used when flying in the right seat of the airplane. 6.6 Discuss how the use of checklists is an essential element of effective resource use and workload management.

	6.7 Perform and analyse the proper procedures for conducting the airplane and systems pre-flight inspection, basic airport operations, and ground reference maneuvers. 6.8 Demonstrate the correct entry and execution techniques for the listed maneuvers including the basic instrument maneuvers.

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SECTION C	***QUALIFICATION STRUCTURE***				
COMPONENT	***TITLE***	***Credits Per Relevant NCQF Level***			***Total Credits***
		Level [4]	***Level [5]***	***Level [6]***	
FUNDAMENTAL COMPONENT *Subjects/ Courses/ Modules/Units*	Student Pilot License		20		***20***
	Multi-Engine Turbine – Theory			10	***10***
	Multi-Engine Turbine – Flight Training			10	***10***
CORE COMPONENT *Subjects/Courses/ Modules/Units*	Private Pilot License – Theory		20		***20***
	Private Pilot License – Flight Training		20		***20***
	Instrument Rating – Theory		20		***20***
	Instrument Rating – Flight Training		20		***20***
	Instrument Rating – Cross Country Navigation		20		***20***
	Commercial Pilot License – Theory			40	***40***

	Commercial Pilot License - Flight Training			20	***20***
	Certified Flight Instructor Rating – Theory			40	***40***
	Certified Flight Instructor Rating – Flight Training			10	***10***
STRANDS/ SPECIALIZATION	*Subjects/ Courses/ Modules/Units*	***Credits Per Relevant NCQF Level***			***Total Credits***
		Level [ ]	***Level [ ]***	***Level [ ]***	
1.					
2.					
Electives					

SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL	
TOTAL CREDITS PER NCQF LEVEL	
NCQF Level	*Credit Value*
5	*120*
6	*130*
TOTAL CREDITS	*250*

Rules of Combination:

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

Leaners should complete qualification using the following combinations.

Module 1: Private Pilot License which covers the following subjects/courses; Student Pilot License, Private Pilot License – Theory, and Private Pilot License – Flight Training. Total credits for this module are 60.

Module 2: Instrument Rating which covers the following subjects/courses; Instrument Rating – Theory, Instrument Rating – Flight Training, and Instrument Rating – Cross Country Navigation. Total credits for this module are 60.

Module 3: Commercial Pilot License which covers the following subjects/courses; Commercial Pilot License – Theory, and Commercial License - Flight Training. Total credits for this module are 60.

Module 4: Multi-Engine Turbine which covers the following subjects/courses; Multi-Engine Turbine –

Theory, and Multi-Engine Turbine – Flight Training. Total credits for this module are 20.

Module 5: Certified Flight Instructor Rating which covers the following subjects/courses; Certified Flight Instructor Rating – Theory, and Certified Flight Instructor Rating – Flight Training. Total credits for this module are 60.

Duration

This qualification will be offered over a period of two (2) years. The flying hours required to complete this qualification and to pursue a career as a Private Pilot Licence (PPL) and Commercial Pilot Licenced (CPL) is two hundred and eight hours (208hrs).

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ASSESSMENT ARRANGEMENTS

All assessments which are leading to the award of the qualification should be based on learning outcomes and associated formative and summative assessment.

Formative assessments

The weighting of formative assessment is 65% of the Final assessment mark.

Summative assessments:

The weighting of summative assessment is 35% of the Final assessment mark.

MODERATION ARRANGEMENTS

There shall be internal and external moderation of all assessments, which shall be conducted by assessors and moderators registered and accredited by appropriate regulatory and or professional bodies. This shall be done to ensure that all assessments are at the right standard for the type and level of the qualification.

RECOGNITION OF PRIOR LEARNING

There shall be provision for awarding the qualification through RPL means according to National RPL policy.

CREDIT ACCUMULATION AND TRANSFER

There shall be provision for awarding the qualification through CAT, in line with the National CAT Policy.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Learning Pathways

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;

- Airline and Flight Operations Commercial Pilot (Fixed-Wing) Diploma
- National Diploma: Aircraft Piloting
- Diploma of Aviation (Commercial Pilot License - Aeroplane)
- Diploma in Professional Pilot Science
- Diploma in Aviation

Vertical Articulation (qualifications to which the holder may progress to) Graduates may progress to higher level qualifications such as:

- Bachelor of Aviation (Pilot Training)
- Bachelor of Technology: Transportation Management
- BSc Aviation Management
- Bachelor of Administration: Aviation Management

Employment Pathways

Graduates will have requisite competencies and attribute to work as:

- Commercial Pilot,
- Co–Pilot,
- Private Pilot
- Ground instructor
- Certified flight instructor
- Drone Pilot
- Sightseeing and Tour Pilot
- Air Ambulance Pilot

QUALIFICATION AWARD AND CERTIFICATION

Candidates meeting the prescribed requirements will be awarded the qualification in accordance with the qualification composition rules and applicable policies. Upon obtaining a minimum of 250 credits, candidates shall be awarded with a Certificate.

SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

This qualification was benchmarked with the following:

- Airline and Flight Operations Commercial Pilot Diploma – (Canada)
- National Diploma: Aircraft Piloting - (South African)

The proposed diploma qualification has similarities especially in scope with the regional and international qualifications. There is similarity in terms of the main exit outcome as all the qualifications have been designed to develop students into highly skilled and knowledgeable pilots and forms part of a learning and career pathway towards obtaining endorsements and licensing. On the Canadian Qualifications Framework (CQF) this diploma is on level 5, which is the equivalent level 6 on the NCQF and on the SAQA framework. In terms of assessments the mode of assessments is similar, with differences being in the assessment weights as this qualification gives 65% weightage compared to 70% for the summative assessments. Furthermore, the assessment strategies, which includes flight tests and assessments are very similar with those of the institutions used in the benchmarking exercise. The qualification rules and minimum standards for the award of the qualification which require high level of competence and passing all modules is the same for this qualification and those used in the benchmarking. Lastly the all the qualification used in the comparison and this qualification have similar employment pathways.

Despite the similarities noted, there are differences in the number of credits and duration amongst these qualifications. It was noted that the National Diploma: Aircraft Piloting (South African Qualifications Authority) offered in South Africa was not presented in modules but rather Unit Standards with most of the outcomes similar to the outcomes in this qualification. Whilst the Airline and Flight Operations Commercial Pilot (Fixed-Wing) Diploma offered by the British Columbia Institute of Technology (BCIT) in Canada has minimum credit value of 127.5 credits done over 64 weeks in four (4) terms with most modules having a credit value ranging from 1 to 8. It was also noted that the names of the diploma qualification are different in each of the comparison made, there is no standard naming of the qualifications.

It can be concluded that this qualification compares well with other similar qualification regionally and internationally.

REVIEW PERIOD
This qualification will be reviewed after five (5) years upon registration. However, the qualification can still be reviewed any time sooner than 5 years as and when a need arises.

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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**	