

	QUALIFICATION QUALITY ASSURANCE AND CREDENTIALS TEMPLATE	Document No.	DNCQF.P01.F02
		Issue No.	02
		Effective Date	10.04.2022

SECTION A: QUALIFICATION DETAILS					
Name of Applicant (ETP, Awarding Body, or Regulatory Authority)		Botswana International University of Science and Technology			
Title of Qualification	Doctor of Philosophy in Physics			NCQF LEVEL	10
Field	Natural, Mathematical and Life Sciences	Sub-Field	Physical Sciences		
New Qualification		✓	Legacy Qualification		
Sub-Framework	General Education	Credit Value	360	Qualification Type	Doctorate/PhD

SECTION B: QUALIFICATION DEVELOPMENT TEAM, (NAMES AND CREDENTIALS OF MEMBERS.)				
(At a minimum should comprise; Subject Matter Expert, Curriculum Specialist and Instructional Designer)				
Name of Team member: (All members listed)		Area of Expertise (e.g., Curriculum Development)	Relevant academic/professional qualification	Professional Membership (If available)
1.	Prof G. Hillhouse	Applied Nuclear Physics and Technology	PhD (Physics), MSc (Physics), BSc Honours (Physics), BSc (Physics and Mathematics)	American Physical Society, Institute of Physics (UK), South African Institute of Physics, Astronomical Society of Botswana
2.	Mr Mogwera R. Sengalo	Curriculum Specialist and Instructional Designer	MBA, BeD, DSE	Curriculum specialist (DSE & BeD courses) Qualifications specialist (on job training & vast work experience) Educational Management experience (teaching, national curriculum development and

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				qualifications framework development work experience) QMS Lead Auditor
3.	Prof T. Kofane	Complex systems	PhD (Physics), DEA (Physics), Maitrise (Physics), BSc (Physics)	Fellow of the Academy of Sciences for the Developing World (TWAS), Fellow of the African Academy of Sciences (AAS), Fellow of the Cameroon Academy of Sciences (CAS)
4.	Prof C. Tabi	Complex systems	PhD (Physics), DEA (Physics), Maitrise (Physics), BSc (Physics), DIPES II (Physics), DIPES I (Physics and Chemistry)	American Physical Society (APS), Optical Society of America (OSA), Academy of Science of Botswana
5.	Prof R. De Propriis	Astronomy and Astrophysics	PhD (Physics), MSc (Physics), BSc (Physics)	International Astronomical Union, Istituto Nazionale di Astrofisica (Italy)
6.	Prof M. Einax	Materials science	Habilitation (Dr. habil.), PhD (Physics), Diploma (Physics)	German Physical Society
7.	Prof C. Muiva	Materials science, Applied nuclear physics and technology	PhD (Physics), MSc (Physics),	South African Institute of Physics,

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			Education (Physics/Chemistry)	Materials Research Society
8.	Dr L. Lepodise	Materials science	PhD (Physics), MSc (Physics) BEd (Science)	Society for Applied Spectroscopy
9.	Dr C. Kureba	Applied nuclear physics and technology	PhD (Physics), MSc (Physics), BSc Honours (Physics)	South African Institute of Physics
10.	Dr G. Chimowa	Materials science	PhD (Physics), MSc (Physics), BSc Applied Physics Honors	South African Institute of Physics
11.	Dr D. Murape	Materials science	PhD (Physics), MSc (Renewable Energies), BSc Applied Physics Honors	South African Institute of Physics
12.	Dr C. Ulusoy	Astronomy and astrophysics	PhD (Astronomy and Space Sciences), MSc (Astronomy and Space Sciences), BSc (Astronomy and Space Sciences)	International Astronomical Union (IAU), African Astronomical Society Member (AFAS), ESA PLATO mission Consortium Member and WG 16, NASA KASC member, Astronomical Society Botswana, NAEC IAU team member, The Scientific and Technological Research Council of Turkey

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				(TUBITAK), Astronomical Society of Botswana.
13.	Dr R. Evans	Astronomy and astrophysics	PhD (Astrophysics), PGCE (Physics), BSc (Physics)	African Astronomical Society
14.	Dr J. Diener	Applied nuclear physics and technology	PhD (Physics), MSc (Physics), BSc Honours (Physics), BSc (Physics and Mathematics)	Astronomical Society of Botswana
15.	Dr A. Duniya	Astronomy and astrophysics	PhD (Physics), PGD (Mathematical Science), BSc (Hons.) (Physics)	International Astronomical Union; Astronomical Society of Botswana
16.	Dr H. Vasco	Materials science	PhD (Physics), MSc (Physics), BEd (Science)	None
17.	Dr S. Mullins	Applied nuclear physics and technology	PhD (Physics), BSc (Hons) (Physics with Astrophysics), PG Diploma (Management)	South African Institute of Physics
18.	Mr C. Ramotoroko	Geophysics	MSc (Physics), BSc (Physics & Geology)	International Union of Geodesy and Geophysics (IUGG)
19.	Mrs T. Pitso	Applied nuclear physics and technology	MSc (Physics), BEd (Physics)	None

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20.	Mr C. Moditswe	Materials science	MSc (Physics), BSc (Physics & Geology)	None
21.	Mr K. Tshwenyego	Materials science	MSc (Physics), BSc General (Physics and Mathematics)	None
22.	Mr B. Thipe	Materials science	MSc (Physics), BSc (Physics)	None

SECTION C: QUALIFICATION QUALITY ASSURANCE STRUCTURES (INTERNAL/EXTERNAL)

(At a minimum should comprise; Subject Matter Expert, Curriculum Specialist and Instructional Designer)

Name of Quality Assurance Structure (Internal/External)		e.g., Curriculum Development Committee		
	Name of quality assurance structure and roles	Names of team members	Relevant academic qualifications	Professional Membership (if available)
1.	Curriculum Development and Accreditation Committee of the Department of Physics and Astronomy (All members listed)	Dr M. Chimowa (Chair)	PhD (Physics), MSc (Physics), BSc Applied Physics Honors	South African Institute of Physics
		Dr S. Mullins (Secretary)	PhD (Physics), BSc (Hons) (Physics with Astrophysics), PG Diploma (Management)	South African Institute of Physics
		Prof C. Tabi	PhD (Physics), DEA (Physics), Maitrise (Physics), BSc (Physics),	American Physical Society (APS), Optical Society of America (OSA), Academy of Science of Botswana

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			DIPES II (Physics), DIPES I (Physics and Chemistry)	
		Prof R. De Propriis	PhD (Physics), MSc (Physics), BSc (Physics)	International Astronomical Union, Istituto Nazionale di Astrofisica (Italy)
		Prof M. Einax	Habilitation (Dr. habil.), PhD (Physics), Diploma (Physics)	German Physical Society
		Prof C. Muiva	PhD (Physics), MSc (Physics), Education (Physics/Chemistry)	South African Institute of Physics, Materials Research Society
		Dr J. Diener	PhD (Physics), MSc (Physics), BSc Honours (Physics), BSc (Physics and Mathematics)	Astronomical Society of Botswana
		Dr H. Vasco	PhD (Physics), MSc (Physics), BEd (Science)	None
2.	Board of the Department of Physics and Astronomy (All members listed)	Prof G. Hillhouse, Head of Department	P PhD (Physics), MSc (Physics), BSc Honours (Physics), BSc (Physics and Mathematics)	American Physical Society, Institute of Physics (UK), South African Institute of Physics, Astronomical Society of Botswana
		Prof T. Kofane	PhD (Physics), DEA (Physics),	Fellow of the Academy of Sciences for the

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		Maitrise (Physics), BSc (Physics)	Developing World (TWAS), Fellow of the African Academy of Sciences (AAS), Fellow of the Cameroon Academy of Sciences (CAS)
	Prof C. Tabi	PhD (Physics), DEA (Physics), Maitrise (Physics), BSc (Physics), DIPES II (Physics), DIPES I (Physics and Chemistry)	American Physical Society (APS), Optical Society of America (OSA), Academy of Science of Botswana
	Prof R. De Propris	PhD (Physics), MSc (Physics), BSc (Physics)	International Astronomical Union, Istituto Nazionale di Astrofisica (Italy)
	Prof M. Einax	Habilitation (Dr. habil.), PhD (Physics), Diploma (Physics)	German Physical Society
	Prof C. Muiva	PhD (Physics), MSc (Physics), Education (Physics/Chemistry)	South African Institute of Physics, Materials Research Society
	Dr L. Lepodise	PhD (Physics), MSc (Physics) BEd (Science)	Society for Applied Spectroscopy
	Dr C. Kureba	PhD (Physics), MSc (Physics), BSc Honours (Physics)	South African Institute of Physics

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		Dr G. Chimowa	P PhD (Physics), MSc (Physics), BSc Applied Physics Honors	South African Institute of Physics
		Dr D. Murape	PhD (Physics), MSc (Renewable Energies), BSc Applied Physics Honors	South African Institute of Physics
		Dr C. Ulusoy	PhD (Astronomy and Space Sciences), MSc (Astronomy and Space Sciences), BSc (Astronomy and Space Sciences)	International Astronomical Union (IAU), African Astronomical Society Member (AFAS), ESA PLATO mission Consortium Member and WG 16, NASA KASC member, Astronomical Society Botswana, NAEC IAU team member, The Scientific and Technological Research Council of Turkey (TUBITAK), Astronomical Society of Botswana.
		Dr R. Evans	PhD (Astrophysics), PGCE (Physics), BSc (Physics)	African Astronomical Society
		Dr J. Diener	PhD (Physics), MSc (Physics), BSc Honours (Physics), BSc (Physics and Mathematics)	Astronomical Society of Botswana

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		Dr A. Duniya	PhD (Physics), PGD (Mathematical Science), BSc (Hons.) (Physics)	International Astronomical Union; Astronomical Society of Botswana
		Dr H. Vasco	PhD (Physics), MSc (Physics), BEd (Science)	None
		Dr S. Mullins	PhD (Physics), BSc (Hons) (Physics with Astrophysics), PG Diploma (Management)	South African Institute of Physics
		Mr C. Ramotoroko	MSc (Physics), BSc (Physics & Geology)	International Union of Geodesy and Geophysics (IUGG)
		Mrs T. Pitso	MSc (Physics), BEd (Physics)	None
		Mr C. Moditswe	MSc (Physics), BSc (Physics & Geology)	None
		Mr K. Tshwenyego	MSc (Physics), BSc General (Physics and Mathematics)	None
		MSc (Physics),	MSc (Physics),	None
3.	Industrial Advisory Board for the Department of Physics and Astronomy	Dr B. Tacheba (Chairperson), Director, Science and Technology /Capacity Development, The Southern African Science Services Centre for Climate Change and	PhD (Environmental Science), MSc (Remote Sensing)	Member of the Institute of Directors South Africa, Botswana Academy of Sciences

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(All members listed)	Adaptive Land Management		
	Mr T. Kajane, Manager Laboratory Services (Industrial Metrology) at the Botswana Bureau of Standard	BSc (Physics and Mathematics)	None
	Mr T. Otukile, Director: Chemical, Biological, Nuclear and Radiological Weapons Management Authority; Ministry of Defence, Justice and Security	MSc (Clinical Ultrasound), BSc (Radiological Technology), PG Certificate (Enterprise Risk Management)	None
	Mr D. Mongatane, Head Processing, DEBSWANA	Meng (Hon) in Materials Science and Engineering	None
	Prof G. Hillhouse	PhD (Physics), MSc (Physics), BSc Honours (Physics), BSc (Physics and Mathematics)	American Physical Society, Institute of Physics (UK), South African Institute of Physics, Astronomical Society of Botswana
	Prof T. Kofane	PhD (Physics), DEA (Physics), Maitrise (Physics), BSc (Physics)	Fellow of the Academy of Sciences for the Developing World (TWAS), Fellow of the African Academy of Sciences (AAS), Fellow of the Cameroon Academy of Sciences (CAS)
	Dr L. Lepodise	PhD (Physics),	Society for Applied Spectroscopy

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			MSc (Physics) BEd (Science)	
		Dr G. Chimowa	PhD (Physics), MSc (Physics), BSc Applied Physics Honors	South African Institute of Physics
		Dr H. Vasco	PhD (Physics), MSc (Physics), BEd (Science)	South African Institute of Physics
		Mrs T. Pitso	MSc (Physics), BEd (Physics)	South African Institute of Physics
		Mr Mabaka	MSc Applied Instrumentation, BSc (Hons) Medical Physics, BSc Physics	None
4.	Quality Management Directorate	Dr Phetolo Malau-Modiega Accountability: BIUST Compliance to QA	PhD (Assessment and Quality Assurance in Education and Training) MeD, BeD	HAQAA International Expert Quality Assurance specialist HE – Assessment specialist
		Mr Mogwera R. Sengalo Responsibility: Internal Quality Assurance of Qualifications; Accountability: Quality of feedback, and accuracy of findings	MBA BeD, DSE	Curriculum specialist (DSE and BeD courses) Qualifications specialist (on job training & vast work experience) Educational Management experience (teaching, national curriculum development and qualifications framework development work)

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				experience) QMS Lead Auditor
		Ms Emmah Sethibe Responsibility: Stage 1 quality assurance of qualifications completeness Accountability: accuracy of packaging and follow up to close gaps and areas for improvement with faculty	MeD, BA ISO 9001:2015 Auditor	Educational Management Specialist QMS Auditor
		Ms Elizabeth Otsogile Responsibility: Document controls and filling of versions of qualifications submitted by Faculty Accountability: accuracy of document controls and filling (the business process)	BBA ISO 9001:2015 Auditor	QMS Auditor
		Mrs Dorah Boy Responsibility: Administrative coordination of received Faculty qualifications, feedback dissemination and liaison for qualifications records maintained. Accountability: Qualifications development records and schedules updating	DSS ISO 9001:2015 Understanding	None
5.	Faculty Curriculum Committee	Prof. Fulvio Franchi, (Chairperson)	PhD Earth Science	Ordine Nazionale dei Geologi (Italy) [until 2022]
		Dr. Pogisego Dinake	PhD (Chemistry)	African Academy of Science Chemical Society of Botswana
		Dr. George Chimowa	PhD (Physics), MSc (Physics),	South African Institute of Physics

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			BSc Applied Physics Honors	
		Dr. Gaolathe Rantong	PhD Biology	The Canadian Botanical Association
		Dr. Oteng Tabona	PhD-(Big Data and digital forensics)	IEEE
6.	Board of the Faculty of Sciences (Sample of members listed)	Prof. Wellington Masamba (Chairperson)	PhD (Chemistry)	American Chemical Society Society for Applied Spectroscopy
		Prof. Amare Gessesse	PhD (Biotechnology)	Fellow, Ethiopian Academy of Sciences
		Prof. Venumadhav Kuthadi	D.Ing -EEE	Computer Society of South Africa-CSSA, K030109
		Prof. Loago Molwalefhe	PhD (Hydrogeology)	American Geophysical Union, Geological Society of America
		Prof Gregory Hillhouse	PhD (Physics), MSc (Physics), BSc Honours (Physics), BSc (Physics and Mathematics)	American Physical Society, Institute of Physics (UK), South African Institute of Physics, Astronomical Society of Botswana
		Prof Jean Baptiste Gatsinzi	PhD (Mathematics)	American Mathematical Society
		Prof C. Tabi	PhD (Physics), DEA (Physics), Maitrise (Physics), BSc (Physics), DIPES II (Physics),	American Physical Society (APS), Optical Society of America (OSA), Academy of Science of Botswana

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			DIPES I (Physics and Chemistry)	
		Prof R. De Propriis	PhD (Physics), MSc (Physics), BSc (Physics)	International Astronomical Union, Istituto Nazionale di Astrofisica (Italy)
		Prof M. Einax	Habilitation (Dr. habil.), PhD (Physics), Diploma (Physics)	German Physical Society
		Prof C. Muiva	PhD (Physics), MSc (Physics), Education (Physics/Chemistry)	South African Institute of Physics, Materials Research Society
7.	University Curriculum Development Committee	Prof J.-B. Gatsinzi (chairperson)	PhD (Mathematics)	American Mathematical Society
		Prof E. Lungu	PhD (Mathematics)	Society for Mathematical Biology
		Prof G. Malumbela	PhD (Civil Engineering)	Pr Eng, ERB
		Prof B. Makubate	PhD (Statistics)	None
		Prof P. Makepe	PhD (Economics)	Economics Research Consortium, Collaborative MA in Agricultural Economics, Botswana Economics Association, Association of African Agricultural Economists, Botswana Trust for Harnessing Science and Technology for Economic

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				Development, Organization for Social Science Research in Easter and Southern Africa
		Prof F. Ntuli	PhD (Chemical Engineering)	MCIWEM C.WEM CSci
		Prof T. Bineli-Betsi	PhD (Geology)	Society of Economic Geology (SEG), Geochemical Society (GS), European Association of Geochemistry (EGA), International Association of Geology Applied to Ore Deposits (IAGOD), Botswana Geoscience Association (BGA)
		Dr T. Motsamai	PhD (Geochemistry)	Member of Geological Society of South Africa (GSSA)
		Dr K.R. Mumo	PhD in Finance MSc. in Actuarial Science, BSc in Actuarial Science	American Risk & Insurance Association (ARIA)
		Dr G. Buru	Doctoral Degree in Administration and leadership; Masers Degree in Teaching English to Speakers of Other Languages	African Regional and Continental Integration and Cooperation in Higher Education
		Ms B. Montshiwa	Master of Business Administration (MBA)	Accredited BQA Assessor and Moderator
8.	Senate Academic Evaluation and Standards	Prof. Boikanyo Makubate	PhD (Statistics)	None
		Dr. Phetogo Malau-Modiega	PhD (Assessment and Quality Assurance in	HAQAA International Expert, Quality Assurance Specialist,

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	Committee (Sample of members listed)		Education and Training)	HE – Assessment Specialist
		Prof. Foster Mbaiwa	PhD (Chemistry)	American Chemical Society, Royal Society of Chemistry
		Prof Asfawossen Asrat Kassaye	PhD in Earth and Planetary Sciences	African Academy of Sciences (AAS); Geological Society of Africa (GSAf); Eastern African Quaternary Research Association (EAQUA); International Association of Geomorphologists (IAG); International Quaternary Union (INQUA); American Geophysical Union (AGU); Young Academy of Sciences for the Developing World (TYAN); Ethiopian Academy of Sciences (EAS); Ethiopian Geosciences and Mineral Engineering Association (EGMEA)
		Me Kenalemang	Masters of Education (work and learning studies)	None
		Mr Phemelo Koswane (undergraduate student representative)	Botswana General Certificate of Secondary Examination (BGCSE)	None
9.	Senate (Sample of members listed)	Prof. Wellington Masamba (Chairperson)	PhD (Chemistry)	American Chemical Society; Society for Applied Spectroscopy
		Dr Phetolo Malau-Modiega	PhD (Assessment and Quality)	HAQAA International Expert; Quality

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		Accountability: BIUST Compliance to QA	Assurance in Education and Training) MeD, BeD	Assurance DSpecialist; HE – Assessment Specialist
		Prof. Amare Gessesse	PhD (Biotechnology)	Fellow, Ethiopian Academy of Sciences
		Prof. Venumadhav Kuthadi	D.Ing -EEE	Computer Society of South Africa-CSSA, K030109
		Prof. Loago Molwalefhe	PhD (Hydrogeology)	American Geophysical Union, Geological Society of America
		Prof Gregory Hillhouse	PhD (Physics), MSc (Physics), BSc Honours (Physics), BSc (Physics and Mathematics)	American Physical Society, Institute of Physics (UK), South African Institute of Physics, Astronomical Society of Botswana
		Prof Jean Baptiste Gatsinzi	PhD (Mathematics)	American Mathematical Society
		Prof C. Tabi	PhD (Physics), DEA (Physics), Maitrise (Physics), BSc (Physics), DIPES II (Physics), DIPES I (Physics and Chemistry)	American Physical Society (APS), Optical Society of America (OSA), Academy of Science of Botswana
		Prof R. De Propriis	PhD (Physics), MSc (Physics), BSc (Physics)	International Astronomical Union, Istituto Nazionale di Astrofisica (Italy)

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		Prof M. Einax	Habilitation (Dr. habil.), PhD (Physics), Diploma (Physics)	German Physical Society
		Prof C. Muiva	PhD (Physics), MSc (Physics), Education (Physics/Chemistry)	South African Institute of Physics, Materials Research Society

