

SECTION A:				QUALIFICATION DETAILS											
QUALIFICATION DEVELOPER (S)				University of Botswana											
TITLE	Mast	er of Ph	iloso	sophy in Neonatology				NCQF LEVEL			9				
STRANDS (where applicable)	N/A														
FIELD	Health and Social Services			SUB-FIELD			Heal Scie		e	CREDIT VALUE			ΙE	630	
New Qualification	on			<b>Y</b>				Legacy Qualification							
SUB- FRAMEWORK			ral E	Education				TVI	ΕT			Higher Education		<b>✓</b>	
QUALIFICATI ON TYPE	Certi	ficate	1	11		<i>   </i>		IV		V		Diplo a	m	Bachel or	
	Bachelor Hon			Post Graduate Certificate						Gı	Post raduate iploma				
			M	Masters X			(		Doctor	ate/ i	PhD				

#### RATIONALE AND PURPOSE OF THE QUALIFICATION

#### RATIONALE:

The Republic of Botswana, a high middle-income country with a population of approximately 2.3 million, about 51,000 children are born every year and the neonatal units in Botswana have the highest number of admissions of all paediatric disciplines. The global "Every Newborn" action plan, which was endorsed by the WHO General Assembly in 2014, sets out an ambitious vision of a world with no preventable stillbirths or neonatal deaths (<a href="https://www.who.int/initiatives/every-newborn-action-plan">https://www.who.int/initiatives/every-newborn-action-plan</a>). The action plan, endorsed in 2014 by 194 member states, articulates a goal that all countries reach the target neonatal mortality rate (NMR) of 12 or less newborn deaths per 1,000 live births by 2030, as well as commit to ongoing work to reduce death and disability. The lockdown period during the COVID-19 pandemic demonstrated that the only way to provide a comprehensive care for neonates is to rely on local facilities in Botswana that can provide adequate care. Neonatal units experience high mortality rates that tentatively may be reduced with experts in neonatology in place. Today Botswana and UB have only 2 subspecialists in Neonatology.



The proposed neonatology MPhil qualification will train the first generation of neonatologists in Botswana and be an important step to improve neonatal health and reduce death rates in Botswana, 22 current Motswana mortality rate is deaths per 1000 live births (https://data.unicef.org/resources/dataset/neonatal-mortality-data/). The MPHIL qualification aims to create a medical specialist cadre in clinical neonatology and neonatology-based sciences, including continuous updates and development of improved care and therapies that may benefit neonatal health, both acutely and impact on later life and reduce non-communicable diseases (NCDs).

In medical science literature NCDs are linked to early life programming in fetal and neonatal life. Environmental factors impact on growth, structure, and metabolism, thereby permanent effects thought to be important in the aetiology of NCDs. Amongst several factors, antibiotic stewardship, neonatal intensive care and resuscitation skills are important, thereby benefiting infant survival, later health and human capital, improved cognitive performance and physical work capacity. An optimized nutrition strategy is highlighted in neonatal care as poor feeding and nutrition is proven to be associated with poor neurological outcomes later in life. The HRDC 2023/2024 mentions nutrition and the quality of pediatricians and neonatal care, including performance skills and knowledge. In line with the government's commitment to tackle the threat posed by NCDs, the Human Resource Development Council of Botswana, 'Priority Skills and Employment Trends Report' (HRDC: 2023/24) support professions that are in demand in the country, like specialists in neonatology. Under the priority areas, training of enough paediatric neonatologists should be one of the top priorities on their list for medical specialists with advanced knowledge.

PURPOSE: (itemise exit level outcomes)

PURPOSE: (itemise exit level outcomes):

**The qualification aims to** produce graduates with advanced knowledge, skills and competences to:

- 1. Evaluate, work-up, diagnose and treat newborns with all varieties of conditions, both in the acute setting and during long-term follow-up.
- 2. Perform specialised neonatal diagnostic procedures to improve neonatal later health and survival.



- 3. Apply established and evolving biomedical, clinical, epidemiological, and social-behavioural sciences, to newborn patients and communicate this well to caregivers.
- 4. Assess, evaluate, and treat neonates and infants in an intensive care setting, in accordance with updated and state-of-the-art neonatal procedures and technologies.
- 5. Conduct and supervise research and critically analyse scientific evidence.
- 6. Provide clear communication to healthcare workers and when counselling caregivers, as well as supervise other healthcare workers to provide important and clear communication.

#### MINIMUM ENTRY REQUIREMENTS (including access and inclusion)

- 1. Applicants must hold a NCQF Level 9 (Master of Medicine degree in Paediatrics, speciality certification in Paediatrics & Adolescent Health or Paediatrics & Child Health or equivalent post graduate qualification from a recognized institution.
- 2. The candidate must be registered or registerable with BHPC to be able to practice Medicine in Botswana.
- Entry through Recognition of Prior Learning (RPL) and Credit Accumulation and Transfer (CAT) is accessible to all candidates through institutional policies in line with the national RPL and CAT policies.

SE	ECTION B QUALIFIC	CATION SPECIFICATION			
GRADUATE PROFILE (LEARNING OUTCOMES)			ASSESSMENT CRITERIA		
1.	Apply advanced expert knowledge in the evaluation, work-up, diagnosis and treatment of neonates and infants with congenital and acquired conditions after birth and follow up to 1 year.	1.1.	Use evidence-based guidelines in the diagnosis and the treatment needs of neonates, including foetus and infant of up to 1 year.  Perform and interpret physical examination, laboratory and imaging tests that are appropriate and relevant to the individual neonate's needs.		



Ir-		1	
		1.3.	Identify and prepare patients with
			indications for invasive, peripheral or
			percutaneous catheter-based lines.
		1.4.	Make informed diagnostic and therapeutic
			decisions based on patient information,
			current scientific evidence and clinical
			judgment.
		1.5.	Work, teach and supervise in neonatal
			conditions to provide neonatal patient
			focused care and the necessary follow-up.
2.	Apply knowledge and understanding of the	2.1 Se	lect the correct neonatal procedures for
	basic physiology related to exa <mark>mi</mark> nations	ex	amination of sick newborns.
	and work-up to inform practice.	2.2 M	onitor patients through non-invasive and
		inv	asive catheters.
		2.3 Di	fferentiate strengths and limits associated
		wit	h neonatal monitoring and work-up to
		inf	orm choice of appropriate procedures.
		2.4 Pe	rform and correctly interpret basic
		ec	hocardiography and electroencephalogram
	B()I.5\	in	neonates.
		2.5 Int	erpret a cranial, abdominal and lung
	Qualificatio	ult	rasound in neonates.
	addiiiodiio	2.6 Pe	rform and guide other health personnel on
		ne	onatal procedures such as ultrasound,
		int	ubating for ventilation and insertion of
			rasive catheters.
3.	Apply advanced knowledge of established		
	and evolving biomedical, clinical,	3.1.	Locate, appraise, and assimilate evidence
	epidemiological, and social-behavioural		from scientific studies related to patients'
	sciences to improve outcome and care of		health problems.
	patients		
		IL	



		I -	
		3.2.	Use an analytical approach to solve
			paediatric neonatal problems.
		3.3.	Use a systematic approach of quality
			improvement measures as they relate to
			neonatal practice.
4.	Apply advanced skills in diagnostic	4.1.	Perform advanced neonatal invasive and
	neonatal technologies.		non-invasive neonatal procedures related
			to ventilatory, hemodynamic support and
			various electrographic measures.
		4.2.	Interpret results of measures for advanced
			diagnostic care.
		4.3.	Recognise limitations and strengths of
			various level diagnostic methods to inform
			choice.
		4.4.	Perform, train and supervise procedures to
			other health personnel.
		4.5.	Supervise other health personnel, seek
	DOTO	A /	help from mentors or other disciplines
	R()ISI	$\Lambda I$	when appropriate.
			misi appropriate.
5.	Conduct and supervise health care and	5.1.	Monitor neonates in a compromised
	treatment of neonates and follow up of	119	circulatory and heart failure condition.
	infants after discharge from an intensive	5.2.	Recognise and treat neonates with serious
	care setting.		cardiorespiratory and neurological
	•		conditions.
		5.3.	Supervise undergraduates in assisted
			ventilator care, establishing central venous
			cannulation, and arterial lines for invasive
			monitoring.
		5.4.	Provide and coordinate appropriate and
		J.4.	• • •
			patient-oriented intensive care to neonates
			after surgery.



		5.5.	Provide patient-oriented respiratory
			support in different modes of ventilations
			and their indications
		5.6.	Perform and correctly interpret arterial
			blood gas analysis and devise appropriate
			interventions.
		5.7.	Perform appropriate imaging studies and
			implement appropriate therapeutic
			measures.
		5.8.	Order and interpret laboratory tests and
			imaging studies including chest X-rays,
			ultrasound, basic cardiovascular CT, and
			MRI studies as indicated.
6.	Evaluate and treat neonates with acquired	6.1.	Generate appropriately focused newborn
	and congenital diseases, and syndromes		patient and family history aligned with
	in a non-intensive care in-patient setting.		relevant physical examinations in newborn
			patients with the goal of appropriate
		A /	diagnosis.
		6.2.	Perform or interpret all organ examinations
			in neonates suspected to have congenital
		ns	anomalies and involve support for decision
			making (including radiography
			examinations, basic electrocardiograms,
			ECG and electroencephalograms, aEEG
			recordings.)
		6.3.	Manage knowledge, skills, and attitudes
			necessary to evaluate, manage, and treat
			congenital anomalies or acquired intensive
			care conditions such as congenital heart
			disease and heart failure.



	6.4.	Collaborate with paediatric cardiologists to
	0.4.	
		evaluate and manage cases, and initiate
		treatment appropriate for neonates with
		pulmonary hypertension.
	6.5.	Lead a team of professionals in
		cardiopulmonary stabilisation and
		resuscitation using principles of neonatal
		international standards and consensus.
	6.6.	Identify community resources for a
		neonate/family with congenital or acquired
		disease and initiate/lead/participate in
		multidisciplinary specialty rounds.
	6.7.	Follow up out-patients and facilitate hand-
\ \		over to other specialists who will follow
		after age 1 year.
7. Apply electrophysical principles,	7.1.	Perform and interpret various forms of
techniques and monitoring to diagnose and	7.1.	basic electrophysical monitoring, ECG and
treat neonatal conditions.		aEEG
	7.2.	
	7.2.	Diagnose and treat common cardiac
		dysrhythmias in neonates – including but
		not limited to counselling and medical
QUAIITICATIC		treatment.
	7.3.	Consult paediatric cardiologists or
		neurologists when appropriate.
Conduct and supervise research and		
critically analyse scientific evidence in the		
treatment and care of neonates.	8.1.	Conduct comprehensive and relevant
		literature review to answer research
		questions.
	8.2.	Select an appropriate study design,
II		proposal development, data collection



			method, data analysis, and compilation of
			clinical and epidemiologic studies.
		8.3.	Lead clinical study projects.
		8.4.	Supervise learners in designing, writing
			and defending research projects to meet
			standard.
		8.5.	Write and defend grant proposals.
		8.6.	Conduct an audit or a systematic review in
			neonatology.
		8.7.	Critique and appraise scientific literature.
		8.8.	Interpret scientific results and make
			conclusions to inform practice.
		8.9.	Produce a fully evaluated and peer
			reviewed publication.
9.	Evaluate and treat neonates with acquired	9.1.	Perform and interpret results on
0.	and congenital infection diseases	0.1.	microbiology samples.
	and congernal infection diseases	9.2.	Keep abreast with new and up-coming
		0.2.	advanced techniques and principles in
	117 11711	$\Lambda$ /	microbiology.
	DVIU	9.3.	Use knowledge of new and up-coming
	Ouglification	0.0.	advanced techniques and principles in
	Andilleallo	115	microbiology to diagnose and treat
			more brone gy to diagnose and treat
			neonates
		9.4.	neonates Use evidence-based literature on
		9.4.	Use evidence-based literature on
		9.4.	Use evidence-based literature on microorganisms (unicellular, multicellular,
		9.4.	Use evidence-based literature on microorganisms (unicellular, multicellular, or acellular, including virology,
		9.4.	Use evidence-based literature on microorganisms (unicellular, multicellular, or acellular, including virology, bacteriology, protistology, mycology,
		9.4.	Use evidence-based literature on microorganisms (unicellular, multicellular, or acellular, including virology,



	0.5	Involve assessed in a site (also in the Course
	9.5.	Involve experts in pediatric infectious
		disease when facing complicated cases to
		discuss diagnoses and treatment.
10. Evaluate and treat neonates with	10.1.	Use principles of haematology and
haematology and coagulation disorders.		coagulation disorders to diagnose and
		treat neonates.
	10.2.	Interpret results on haematology and
		coagulation disorders to evaluate and treat
		neonates.
	10.3.	Use common indications and thresholds
		for neonatal blood product transfusion for
		treatment of neonates.
	10.4.	Use principles related to haematological
	10.4.	and coagulation disorders to diagnose and
		treat neonates.
	10.5.	
	10.5.	Use scientific studies on haematological
		and coagulation disorders to evaluate the neonate's condition.
	40.0	$\wedge$
B(JI.5)	10.6.	Involve experts in paediatric
		haematological and coagulation disorders,
Qualificatio	ns	if appropriate and when facing complicated
Q d d l l l d l l l d l l d l l d l l d l l d l l l d l l d		cases.
11. Conduct and supervise transport of sick	11.1.	Safely prepare for and manage transport
neonates		of sick neonates.
	11.2.	Use expertise and knowledge to avoid
		adverse events that may evolve during
		transport of sick neonates.
	11.3.	Supervise other health personnel on safe
		transport of neonates and possible pitfalls
		during transport.
		daming transport.



	1	
	11.4.	Overview a transport check list to secure
		safe transport.
12. Recognize limitations and seek help	12.1.	Assess and recognize limitations of own
appropriately for optimised treatment of		capability and seek help appropriately.
complex conditions in newborns.	12.2.	Collaborate with nursing staff, paediatric
		surgeon, anaesthesiologist and radiologist
		in the care of neonatal patients after
		surgery.
	12.3.	Discuss treatment and collaborate with
		other specialties and units and provide
		comprehensive care to neonates with
\		congenital or acquired disorders that are
		under the care of other specialists.
13. Provide clear communication when	40.4	Desired and a second state of the basis of the size
counselling caregivers.	13.1.	Provide neonatal care to babies and their
3 14 15		families that is compassionate,
	13.2.	appropriate, inclusive and effective.
ער זוכז		Establish and demonstrate an expert-level
		communication with caregivers, with the
		goal of providing effective counselling.
QUAIITICATIO	13.3.	Provide appropriate counselling to
		parents/caregivers related monitoring,
		procedures and treatment planned and
		done, and tentative outcomes.
	13.4.	Provide information to caregivers on
		limitations, benefits and possible risks of
		diagnostic or therapeutic interventions
	13.5.	Evaluate patient/parent preferences in
		work-up and treatment of neonatal
		problems



SECTION C	G	QUALIFICA	TION STRUC	CTURE	
	TITLE	Credits F	Per Relevant	Total Credits	
COMPONENT	TITLE	Level [9]	Level [ ]	Level [	
FUNDAMENTAL COMPONENT					
Subjects/ Courses/ Modules/Units	Introduction to Clinical Neonatology	160			160
CORE COMPONENT	Intermediate Clinical Neonatology	180			180
Subjects/Courses/ Modules/Units	MPHIL Neonatology Research	94			94
	Advanced Clinical Neonatology	180	NI	Λ	180
	CMSA Exam Preparation	16	NI VI	dith /	16
Electives		ЛЮГ	MUITIO	ПУ	
STRANDS/ SPECIALIZATION	Subjects/ Courses/ Modules/Units	Credits Per Releva nt NCQF Level	Total Credits	STRAN DS/ SPECI ALIZAT ION	Subjects/ Courses/ Modules/Units



SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL					
TOTAL CREDITS PER NCQF LEVEL					
NCQF Level	Credit Value				
9	630				
TOTAL CREDITS excl electives	630				
Rules of Combination:  (Please Indicate combinations for the different constituent components of the qualification)					
This minimal qualification of award comprises:					
Fundamental Courses – 180 Credits					
Core Courses – 450 Credits					
TOTAL CREDITS: 630					



#### ASSESSMENT ARRANGEMENTS

Assessment will include both formative and summative modes. Assessment will be carried out by BQAregistered and accredited assessors.

#### 1. Formative Assessment

Formative assessment will contribute 60 % to the overall grading for the qualification.

#### 2. Summative Assessment

Summative assessment will contribute 40 % of the overall grading for the qualification.

Both internal and external assessors must have an NCQF Level 10 qualification and/or subspecialty certification in the field of Paediatric Neonatology or related fields and be registrable by BQA or other relevant bodies.

#### **MODERATION ARRANGEMENTS**

There will be internal and external moderation as a quality assurance measure, in line with the national and Educational Training Provider's policies.

Both internal and external moderators must have an NCQF Level 10 qualification and/or subspecialty certification in the field of Paediatric Neonatology or related fields and be registrable by BQA or other relevant bodies.

#### RECOGNITION OF PRIOR LEARNING

Based on the Recognition of Prior Learning (RPL) Policy of the institution, candidates may be granted exemption from applicable components of the qualification. This will be done in consultation with the institution's policies in alignment with national RPL policy.

#### CREDIT ACCUMULATION AND TRANSFER

A learner may transfer academic credits towards the award of the qualification as determined by the provider in line with institutional policies and national policies on Credit Accumulation and Transfer.

### PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Learning Pathways



Vertical (Doctoral or applicable Level 10 qualifications in cognate study areas):

- Doctor of Philosophy in Clinical Epidemiology/Neonatal Epidemiology
- Doctor of Philosophy in Neonatal Physiology
- Doctor of Philosophy in Neonatal Pathology

Horizontal (Master's Degrees or applicable Health Care qualifications at NCQF Level 9)

- Master of Science in Perinatal Medicine
- Master of Philosophy in Biomedical Sciences (with extension of the research studies

#### **Employment Pathways:**

- Subspecialist in Paediatric Neonatology
- Medical Researcher
- Medical Administrator
- Advisor (e.g., in medical boards, medical insurance, drug company or medical device boards)

#### QUALIFICATION AWARD AND CERTIFICATION

The minimal condition for award of the qualification Master of Philosophy in Neonatology is passing the fundamental and core components, attaining 630 credits.

#### Certification

Candidates meeting the prescribed requirements for award of the qualification will be issued with a certificate.

#### SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

This MPhil in Neonatology qualification was developed by taking regional and international qualification as benchmarks. Regionally, the University of Witwatersrand (Wits), University of Stellenbosch (US) and University of Cape Town (UCT) all from South Africa, SA, which have similar titled qualifications, have been used as benchmarks. The corresponding title in the SA benchmarked institutions is *CMSA Paediatrics Certificate Neonatology (SA)*.

International benchmarked institution is the Childrens Hospital of Philadelphia (CHOP), United States of America, where the requirements and qualification to Subspecialist in Neonatology-Perinatology is outlined in the ACGME document



(https://www.acgme.org/globalassets/pfassets/programrequirements/329\_neonatalperinatalmedicine\_202 0.pdf).

#### **Regional Comparability**

This qualification has been prepared using institutions in South Africa, SA, the University of Witwatersrand, University of Stellenbosch, and University of Cape Town as benchmarks. The content, the entry requirements, the 2 year- duration of the qualification and the exit level outcomes are very similar, but in South with somewhat less emphasis on research outputs and training than the proposed qualification and international universities; the fellow in South Africa is only required to participate in a research project. To enter the program in fellowship neonatology, the benchmarked SA universities and education institutions, require completed specialization in paediatrics, The University of Witwatersrand, allow an option that; a candidate can complete the qualification without necessarily writing a dissertation, whereas the clinical part competency requirements of the SA universities will be similar to this proposed qualification. The University of Witwatersrand do not specifically calculate credits, whereas University of Stellenbosch and University of Cape Town do offer credits and these institutions offer a MPHIL Neonatology degree (basically thesis and research). The SA qualifications are based on notional hours the candidates must spend which is similar to the proposed MPhil in Neonatology.

#### International Comparability

This qualification has been compared to the Subspeciality Neonatology – Perinatology offered by the Children's Hospital of Philadelphia, US. The fellow must have completed core training in paediatrics, a minimum of 3 years before commencing subspecialist training in Neonatology. The training in Neonatology has a similar 3-years clinical training and research component as this proposed MPhil in Neonatology. The Fellowship programme content, entry requirements, competency measures, most of the exit level outcomes, and research requirements are similar. However, the ETN programme is purely professional training and further not associated with a MPhil degree. Another area of difference is that the ETN has a lot of facilities and infrastructure, and fellows have the opportunity for a deeper training in advanced neonatology and other high-tech areas of paediatric neonatal medicine. Some of these facilities are not available in Botswana or the region.

Therefore, referring to the above regional and international programmes, in the proposed MPhil, there is a plan for 10% of neonatology training within 3 years in another neonatal unit that can provide high-tech areas of neonatal medicine.



#### Qualification titles

The SA awarded qualification title is *CMSA Paediatrics Certificate Neonatology (SA)*. The corresponding title in the proposed qualification is Master of Philosophy in Neonatology. In SA registration as a neonatologist does not require a MPhil Neonatology degree. Only the CMSA exam and two years approved neonatology training in university-supervised and HPCSA-approved training centres is required. The qualification title of the benchmarked international institution of US (Children's Hospital of Philadelphia), corresponding to the proposed qualification MPhil in Neonatology is (sub)Specialist in Neonatology and Subspecialist in Neonatology-Perinatology, respectivelyThe University Cape Town (UCT) also offer MPhil in Neonatology as a subspecialty grade of Paediatrics, however the other 2 benchmarked SA institutions do not. The MPhil Neonatology in UB will have a similar design as the MPhil Neonatology at UCT and consists of 2 parts exemplified by the MPHIL Neonatology at UCT below. The degree will be awarded when both Part 1 and Part 2 are passed.

#### Minimum requirements

Requirements for the CMSA Paediatrics Certificate Neonatology are the same in all 3 institutions and defined by the College of Medicine of South Africa NPC (CMSA). The qualification requirements are similar (exams, courses and clinical logbook) to the proposed MPhil in Neonatology. The RSA minimal requirements are described in the "SPECIAL REGULATIONS FOR THE FS 2020 MODIFIED CLINICAL/PRACTICAL/ORAL EXAMINATIONS OF THE SUB-SPECIALTY CERTIFICATE IN NEONATOLOGY Cert Neonatology (SA)" published by the CMSA. Requirements in the international benchmarked institution in the US CHOP the minimal requirements for the subspeciality in Neonatology-Perinatology is defined in the ACGME document:

(https://www.acgme.org/globalassets/pfassets/programrequirements/329\_neonatalperinatalmedici ne\_2020.pdf. For the proposed qualification, the minimum requirements are an NCQF Level 9 (Master of Medicine degree in Paediatrics, speciality certification in Paediatrics & Adolescent Health or Paediatrics & Child Health or equivalent post graduate qualification from a recognised institution.



- Training, period for the qualification of CMSA Paediatrics Certificate Neonatology (SA) is 2 years in all 3 institutions, as opposed to 3 years for the proposed MPhil in Neonatology as well as 3 years in the benchmarked international institutions. For the MPhil in Neonatology up to 10% of the training time will be in institutions outside Botswana where they presently offer neonatal technologies proved efficient for improved outcome and saving neonatal lives (cooling for hypoxic ischemic encephalopathy, ventilation with NO gas and high frequency ventilation, dialysis and ECMO). These technologies are unavailable in Botswana, but when available in Botswana, the out-of-Botswana period will not be necessary. In the benchmarked institution the whole training period is in the specific institution where these technologies are practised.
- The Exit Learning Outcomes are similar in the MPhil in Neonatology qualification compared to the benchmarked SA and US institutions, as described in the RSA CMSA document of special regulations for the sub-speciality certificate of Neonatology ("Special regulations for the FS 2020Modified Clinical/Practical /Oral examinations of the subspeciality certificate in Neonatology Cert Neonatology (SA) (<a href="https://cmsa.co.za/document/cert-neonatologysa-special-regulations/">https://cmsa.co.za/document/cert-neonatologysa-special-regulations/</a>) and the US Training Requirement and <a href="https://www.acgme.org/globalassets/pfassets/programrequirements/329\_neonatalperinatalmedicine\_2020.pdf">https://www.acgme.org/globalassets/pfassets/programrequirements/329\_neonatalperinatalmedicine\_2020.pdf</a>, respectively). These exit level outcomes cover clinical neonatology (conditions in all organ systems, procedure and technology training), research education and thesis, and exams, except for more emphasis on prenatal conditions in the US (CHOP) qualification of subspeciality in Neonatal-Perinatology in US.
- Research: The CMSA Paediatric Certificate Neonatology qualification in RSA requires a research
  report and some research training with documented courses, but the research requirement for the
  qualification in RSA institutions is less ambitious than the proposed MPhil in Neonatology, where
  the qualification includes conducting an audit or a systematic review within the 3-year period,
  submitting a thesis, in addition to supervising other healthcare givers. For the MPhil Neonatology
  qualification, the candidate must submit a fully evaluated dissertation before the degree is earned,
  similar to MPhil Neonatology requirements at UCT.
- Main Modules are quite similar for MPhil in Neonatology compared to the structure of the benchmarked regional and international institutions, especially the UCT qualification of MPhil in Neonatology. The 3 SA institutions/universities have identical qualifications for CMSA Paeds



Certificate Neonatology, and all modules are passed under the Colleges of Medicine, South Africa, regulations. The main structures may be divided into **Clinical Neonatology** (Introduction, Intermediate and Advanced courses in Clinical Neonatology), **Research (excl dissertation)**, and **Dissertation** for the proposed qualification. The latter module is not relevant for the CMSA Paeds Cert Neonatology qualification in SA, but in UCT and US the candidate may adopt to a MPhil (clinical and theory) exit exam if a research dissertation is submitted. The **CMSA exam** and preparation module (in the proposed qualification courses).

Assessment and weightings: The qualifications are assessed through both Formative and Summative assessment. The assessment and weightings have components of Formative assessment, Formal Training, Presentations, Logbook and Research. The Evaluation of overall competence of the MPHIL candidate is based on a) an appraisal by the Head of Unit/ Department of the institution where training is undertaken b) an examination under the auspices of the Colleges of Medicine of South Africa (CMSA). The portfolio/logbook is a mandatory requirement for entry to the examination and will include six-monthly formative assessments made by the Supervisor/Departmental head, signed by both candidate and trainer. The proposed MPhil in Neonatology qualification will follow the CMSA Paeds Certificate Neonatology exam which is a Written Examination and Clinical/Oral/OSCE Examination.

#### Comparability and articulation of the proposed qualification with the ones examined

This qualification enables articulation possibilities with the following qualifications:

Horizontal Articulation:

Master's Degrees or applicable Health Care qualifications at Level 9.

Vertical Articulation:

Doctoral or applicable Level 10 qualifications in cognate study areas.

These articulation options are similar with the regional programmes that are compared.

### 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	
REVISION DATE:		NAME OF PROFESSIONAL BODIES/REGULATO RY	

