No. 4 **9 January 2009**

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Task Team for

Radiography and Clinical Technology

registered by Organising Field 09: Health Sciences and Social Services publishes the following Qualification for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Qualification. The full Qualification can be accessed via the SAQA web-site at **www.saqa.org.za**. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Qualification should reach SAQA at the address below and ***no later than 9 February 2009*** All correspondence should be marked **Standards Setting – SGB for Radiography and Clinical Technology** and addressed to

The Director: Standards Setting and Development
SAQA
Attention: Mr. E. Brown
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pp **D. MPHUTHING**
ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
Doctor of Philosophy: Radiography

SAQA QUAL ID	*QUALIFICATION TITLE*		
65115	Doctor of Philosophy: Radiography		
ORIGINATOR		*PROVIDER*	
TT - Radiography and Clinical Technology			
QUALIFICATION TYPE	*FIELD*	*SUBFIELD*	
Doctoral Degree	9 - Health Sciences and Social Services	Curative Health	
ABET BAND	*MINIMUM CREDITS*	*NQF LEVEL*	*QUAL CLASS*
Undefined	360	Level 8 and above	Regular-ELOAC

This qualification does not replace any other qualification and is not replaced by another qualification.

PURPOSE AND RATIONALE OF THE QUALIFICATION
Purpose:

The learner who successfully completes this qualification will be able to apply high level problem-solving skills and critical, reflective thinking at the most advanced academic levels culminating in the production of a thesis that meets the accepted criteria and ethical principles of the academic institution. In this way they will make an original and meaningful contribution to the existing body of knowledge for science and technology and supervise lower level research students.

Rationale:

The South African government has expressed a need for radiographers who can make a significant and original contribution, through independent research in a specialised area of technology. This qualification has been structured to meet that need and provide for advanced research within technology through the inclusion of a research thesis that complies with the accepted norms, criteria and ethical principles for research at a doctorate level. Learners obtaining this qualification will be able to conduct original research within the field of technology and present their findings at local and international conferences/seminars as well as publish them in accredited publications. This is in keeping with the government's need for highly skilled people who can contribute to the development of science and technology.

RECOGNIZE PREVIOUS LEARNING?
Y

LEARNING ASSUMED IN PLACE
Learners accessing this Qualification must be in possession of a Masters Degree in Radiography or accepted equivalent. Recognition of Prior Learning may be recognized on submission of a suitable portfolio of published research material around a common theme and/or any other evidence deemed as necessary by the institution and/or the relevant ETQA.

Recognition of Prior Learning

Recognition of prior learning will be applied on an individual basis and will be conducted in accordance with the Institutional RPL policies. Providers are required to develop structured and

accredited means of the assessment of individual learners against the exit-level outcomes of the qualification on a case-by-case basis. Recognition of prior learning will be applied on an individual basis and will be conducted in accordance with the Institutions' accredited RPL policy and in agreement with the relevant ETQA. Such procedures and the assessment of individual cases are subject to moderation by independent accredited assessors.

Access to the Qualification:

Successful completion of a Master of Radiography or equivalent qualification in accordance with the selection protocol of the educational institution and the agreement of the relevant ETQA. Evidence of prior learning may be presented in a format agreed to by the institution and the relevant ETQA.

QUALIFICATION RULES

A learner undertaking this qualification will be able to demonstrate the following competencies for a total of 360 credits, at a NQF Level commensurate with that of a Doctoral Degree:

> Apply concepts, knowledge, methods, ethics, theories and analytical processes in relation to a chosen focus area within radiography and associated fields.
> Access, analyse, transform and critically evaluate existing knowledge in relation to the chosen area of radiography and associated fields.
> Access, process, produce and communicate information effectively to colleagues and other groups.
> Demonstrate specialist forefront knowledge and expertise in the chosen field of radiography and the competency to apply these creatively and innovatively within the chosen field.
> Critically analyse and evaluate the outcomes of radiography interventions, techniques, strategies, or processes in the chosen field.
> Demonstrate advanced understanding of radiography values, principles of human rights and social justice and competency in their application in the chosen focus field.

EXIT LEVEL OUTCOMES

1. Conduct independent research into the literature within the broader context of the field/area of investigation to synthesise and critically evaluate existing information and knowledge.

2. Plan, design, motivate, budget for, and conduct an original comprehensive scientific research project to increase the knowledge base of radiography.

3. Critically analyse, evaluate and interpret the findings.

4. Report the findings in a thesis, in a scientific format and publish and publish in an accredited literary format for international consumption.

Critical Cross-Field Outcomes:

These are achieved by the learner through:

> Identifying, analysing and solving problems in the professional, individual and societal environments creatively by investigating and writing up a research proposal and thesis.
> Working effectively with others as a member of a team, group, organisation and/or community in the health care and educational environment through utilising the skills and knowledge of peers and stakeholder during the investigative process.
> Organising and managing oneself and one's activities responsibly and effectively by independently sourcing information and logically presenting a proposal and thesis in liaison with a designated mentor and supervisor.
> Collating and critically evaluating information for developing a proposal and following the accepted research steps to achieve the completion of a thesis.

> Using science and technology effectively and critically to contribute to new knowledge and understanding in the field of radiography.
> Thinking critically and creatively in designing, executing and reporting on a specialised area of Radiography.
> Demonstrating an understanding that problem-solving contexts do not exist in isolation by utilising the knowledge and skills of others and seeking assistance in achieving the intended out come.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

> Evaluate, Analysed and justify the research topic in a research report.
> Gather relevant and recent information on the research area from a wide variety of accredited sources.
> Analyse, evaluate and discuss the research topic in a detailed literature review.

Associated Assessment Criteria for Exit Level Outcome 2:

> Select, describe, justify and defend appropriate research design and methodology in terms of the research topic.
> A research proposal is compiled and presented in accordance with the institutional research policies and procedural criteria.
> Reflect on medical and research ethics pertinent to research in radiography, included in the proposal and adhered to during the research process.
> Conduct the experimental research responsibly and ethically.

Associated Assessment Criteria for Exit Level Outcome 3:

> Analyse data using the relevant statistical tools.
> Interpret data to reflect clear understanding of the relationship between facts in the study and the ability to evaluate contradictory information.

Associated Assessment Criteria for Exit Level Outcome 4:

> Write up the dissertation according to the institutional research policies and procedural criteria.
> Apply information technology skills effectively in the production of the thesis.
> Apply language and numerical skills effectively and correctly in clearly communicating the research problem, its investigation, the outcome, and the recommendations.
> Publish new knowledge, or technology or solution to a problem in appropriate accredited journals and present these at appropriate conferences.

Integrated Assessment:

Continuous assessment will be used to assess the learner's performance. The learner will be afforded opportunities to improve performance through formative assessment before summative assessment is performed.

INTERNATIONAL COMPARABILITY

The Qualification has been designed to meet the needs of the South African population as well as international standards. The qualification has been compared with qualifications countries that are leaders in the field of radiography, such as the United Kingdom, Australia and Finland.

United Kingdom:

Sheffield Hallam University in London offers a Doctorate Professional Studies (Health and Social Care). The degree is open to senior practitioners and managers in the fields of nursing,

midwifery and therapist consultant roles. It is offered on a part-time basis and takes a minimum of four years. The course has been designed to focus on the workplace so that it can influence practice and service development in the context of organisational need. The course meets the professional development needs of senior practitioners or junior ones with an ambition to progress in their respective professions.

The first two years are taught and comprise three modules:

> Review of learning and professional experience. This allows the students to evaluate their professional capabilities.
> Research for the working world which focuses on designing and implementing work-based projects.
> Project planning allows the students to develop a detailed plan for systematic work-based research that is academically valid and relevant to the professional field.

In addition to the taught modules, the students go through the seminar scheme which prepares them to carry out the work-based inquiry. This is done in the second year of study.

The last two years are mainly for the research project. This is equivalent to the standard research thesis. It is however termed a research project to emphasise the professionally orientated and practice-based nature of this professional doctorate qualification.

Entrance requirements:

A master's degree with a subject in health care sciences. Applications with Master's Degrees from other fields are considered individually. In addition, the learner, to be accepted into the Doctoral programme, should have at least three years of clinical experience post qualification.

Australia:

Monash University offers a PhD (Doctor of Philosophy) within the Faculty of Medicine, Nursing and Health Sciences. The course is presented over eight semesters as a full-time programme or 16 semesters for part-time. During this period, the learner is required to conduct a prescribed programme of research for a set period, under guidance and direct supervision. The outcome is a research thesis. This implies that this PhD is a research degree. The thesis submitted should have approximately 100,000 words.

Successful learners should present a high quality written work suitable for publication in accredited journals. They will also be able to critique their own work and the work of their colleagues or subordinates.

Finland:

Oulu University started with the doctoral programme in radiography in 2000. To date, more that seven radiographers have graduated with the qualification. The main focus of the qualification is research and professional development. The university or the professionals at this institution have seen the need to develop radiography as justifiable independent profession.

Candidates registering for the Doctorate in Radiography are encouraged to conduct research that focuses on foundations of a radiographer's work, patient care or treatment or more specifically, medical imaging of a patient. The course is offered in a way that separates it from other fields of radiography like ultrasound, radiation therapy and nuclear medicine. These fields are likely to develop separate doctoral programmes.

In comparing the above qualifications with what has been developed for SA, it can be seen that the Course Work doctoral programme offered in the UK differs greatly from that developed for

SA. In Australia, a full research doctoral programme is offered which is similar to that developed for SA. The main difference lies in the fact that the study time is prescribed in Australia. Neither the UK nor the Australian qualifications are offered by radiography departments. They are offered as a Doctor of Philosophy degree as is the case with SA and thus differs from the Doctorate of Radiography offered in Finland.

It may thus be concluded that this SA Doctoral qualification compares favourably with those existing internationally.

ARTICULATION OPTIONS
Any other related registered Doctoral degree within the medical or para-medical fields.

MODERATION OPTIONS
Assessment and moderation will be conducted by specifically appointed accredited internal/external assessors/moderators in accordance with institutional policy and procedures in agreement between the relevant Professional Council and ETQA.

NOTES
N/A

UNIT STANDARDS
This qualification is not based on Unit Standards.

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION
None