CONTENTS

GOVERNMENT NOTICES

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

No. 271   14 March 2008

SAQA

PUBLIC NOTICE BY ORGANISING FIELD 11, SERVICES, TO RE-REGISTER A STANDARDS GENERATING BODY (SGB) FOR MARITIME OPERATIONS

The Directorate for Standards Setting and Development hereby re-registers the SGB for Maritime Operations for NQF Levels 1 - 8

BRIEF OF THE SGB

1. Identify transformation, development and equity issues relevant to the sub-field Transport and Logistics Operations in Organising Field 11 and develop mechanisms to include these issues within qualifications and unit standards as envisaged in 3 below *[Regulation 24 (1)(e)]*.

2. Develop learning pathways for potential qualifications and unit standards in the area of occupational health and safety from NQF level 2 through to NQF level 8 and above *[Regulation 24 (1)(a)]*.

3. Generate and / or review qualifications and units standards at NQF Levels 1 to 8 in the domains of Maritime Operations; in accordance with Authority requirements *[Regulation 24 (1)(a)]*.

4. Liaise with SGBs in other Organising Fields whose briefs mandate them to generate Maritime qualifications and unit standards in particular the SGB for Maritime Defence *[Regulation 24 (1)(a) and (e)]*.

5. Recommend qualifications and unit standards generated under Item 3 to SAQA for registration on the NQF *[Regulation 24 (1)(c)]*.

6. Recommend criteria for the registration of assessors, moderators and moderating bodies *[Regulation 24 (1)(d)]*.

7. Review registered qualifications and unit standards that have reached the end of their registration period and make recommendations on their re-registration [*Regulation 24 (1)(b)*.

8. Accept and perform such other relevant functions as requested by Organising Field 11: Services *[Regulation 24 (1)(e)]*.

COMPOSITION OF THE SGB

NAME	WORKPLACE	NOMINATING BODY	QUALIFICATIONS/ EXPERIENCE
Coetzer, P	Seafarers Employers	Seafarers Employers	• 12 Yrs Seagoing – Container Liners • Maritime Industry Training Manager
Johnsen, C	Private Consultant	Seafarers Employers	• Master Mariner • Diploma in Maritime Law
Le Roux, G	Seafarers Employers	Seafarers Employers	• 20 Yrs SA Navy – Seagoing, Officer Commanding Strike Craft • Maritime Industry Training Manager
Pines, E	SA Institute of Marine Engineers & Naval Architects (SAIMENA)	SA Institute of Marine Engineers & Naval Architects (SAIMENA)	• Chief Engineer Officer • Senior Marine Engineer Lecturer DIT
Smith, K	Deep Sea Trawlers	Deep Sea Trawlers	• Marine Engineer • Marine (Fishing) Industry Training & Development • Fishing Industry Personnel Management
Snyders, E	Cape Peninsula University of Technology	Cape Peninsula University of Technology	• Professor, Head of Department Maritime Training – Cape Technicon
Van Gysen, P	SA Maritime Safety Authority (SAMSA)	SA Maritime Safety Authority (SAMSA)	• Master Mariner • Ships Surveyor & Deck Examiner SAMSA
Versfeld, F	Deep Sea Trawlers	Deep Sea Trawlers	• Chief Engineer Officer • Personnel Diploma
Govender, L	Cape Peninsula University of Technology (DMS)	Cape Peninsula University of Technology (DMS)	• National Higher Diploma Maritime Studies • Lecturer Maritime Studies • Researcher • Chief Officer Safmarine
Kapp, W	Cape Peninsula University of Technology (DMS)	Cape Peninsula University of Technology (DMS)	• National Diploma Maritime Studies • Combat officer SA Navy • Maritime Instructor CPUT
Wolamarans, S	Cape Peninsula University of Technology (DMS)	Cape Peninsula University of Technology (DMS)	• National Diploma Maritime Studies • Navigation Officer and Anti-Air Warfare Officer SA Navy • Maritime Instructor CPUT
Ings, B	Siyaloba Training Academy	Employers Organisation for the Cephalopod and Associated Fisheries	• Board member of Transport SETA • Board member of the South African Sea Cadets Training Committee • Managing Director Siyaloba Training Academy

Nienaber-Oosthuizen, L	Private Consultant	Employers Organisation for the Cephalopod and Associated Fisheries	• BA (Psychology & History) • Member of Bazuza Training Services cc • Quality Management Systems for Training Providers.
Alexander, M	Transport Education Training Authority	Transport Education Training Authority	• Diploma Teaching And Training • RPL Advisor • Maritime Defence SGB Member • Moderator • Assessor • Facilitator

No. 272   **14 March 2008**

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Heritage Management Studies

registered by Organising Field 02, Culture & Arts, publishes the following Qualification and Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Qualification and Unit Standards. The full Qualification and Unit Standards 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 and Unit Standards should reach SAQA at the address below and *no later than 11 April 2008.* All correspondence should be marked **Standards Setting – Heritage Management Studies** and addressed to

The Director: Standards Setting and Development
SAQA
Attention: Mr. D. Mphuthing
Postnet Suite 248
Private Bag X06
Waterkloof
0145
or faxed to 012 – 431-5144
e-mail: dmphuthing@saqa.org.za

DR. S. BHIKHA
DIRECTOR: STANDARDS SETTING AND DEVELOPMENT

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
National Certificate: Heritage Resource Management

SAQA QUAL ID	QUALIFICATION TITLE		
61349	National Certificate: Heritage Resource Management		
ORIGINATOR		PROVIDER	
SGB Heritage Management Studies			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	2 - Culture and Arts	Cultural Studies	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	140	Level 5	Regular-Unit Stds Based

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

PURPOSE AND RATIONALE OF THE QUALIFICATION
Purpose:

Qualified learners are able to manage heritage resources within the context of both intangible and tangible heritage at a specific heritage building, institution or site, within the local, provincial and national context. Learners' personal capacity is enriched during the learning process, and qualified learners improve their chances of progression within learning and career pathways. They achieve improved or additional competence by going beyond entry-level heritage management competence, thereby improving their opportunities for employment in the sector, or related sectors. Heritage resource management exposes learners to different people, environments, cultures, institutions, etc. The resulting competence achieved in terms of networking, building contacts, etc. is transferable to most other sectors. The qualification allows learners to select an area of specialisation for further learning by getting to know all the areas of practice available in the heritage management sector.

The learning outcomes achieved in the qualification ensures that qualified learners can facilitate the survival of heritage and know the value or worth of heritage. They understand what heritage, heritage management and heritage resources are, and understand the aims, objectives and principles of heritage management. They understand relevant heritage legislation, including the National Heritage Resources Act.

The competencies acquired can be applied to bring about in communities a sense of doing things for themselves, ownership, pride, and ultimately development within communities, and individuals. Qualified learners have developed cultural awareness and appreciation, and an understanding of the worth or value of heritage. They may establish their own cultural villages, sharing knowledge and information, become heritage guides in the tourism sector, develop publications to popularise cultures, work in the advertising sector, or the sport and recreation sector. At this NQF Level, qualified learners can find employment as educators, curators, preservation managers and heritage resource managers.

Improved heritage resource management can put both intangible and tangible heritage at a heritage site, building or institution on the world map, and integrate society and communities. It serves to make people aware of heritage conservation and creates opportunities for, and contributes to, other activities, such as local events, world events, or celebrations, thereby

popularising heritage and integrating its preservation and celebration with such (popular) activities.

Well-managed intangible and tangible heritage at a heritage site, building or institution can contribute to sustainable economic growth by creating business opportunities and a platform for investment, including developing SMMEs and entrepreneurship.

The qualification contributes to the creation of an integrated national framework for learning achievements by improving access to other qualifications registered on the National Qualifications Framework through articulation, and by triggering further learning in heritage management, or specialisation in related fields such as anthropology, ensuring life-long learning. The qualification aims to facilitate much needed transformation in the sector by addressing the inequalities within the sector.

The quality of education and training is enhanced by providing improved understanding of the heritage sector and affording education and training providers the opportunity to offer programmes that meet or exceed an agreed minimum standard. More education and training providers with more diverse experience will have an opportunity to participate, and opportunities for learners to obtain qualifications, at least to some extent, are enhanced. International recognition will also facilitate opportunities for qualified learners to achieve qualifications in other countries. Qualified learners are also better equipped to impart what they have learnt to their communities.

Qualified learners are capable of:

• Relating own heritage resource management practice to national and international frameworks.
Range: Frameworks include charters, policies and legislation; heritage resources include movable and immovable heritage. .

• Developing heritage resource management procedures for specific operational aspects/components of sites, buildings or institutions.
Range: Procedures developed can include procedures for claims, procurement, collection accession/registering, visitor receiving, safety and security, facility cleaning, operating hours, etc.

• Planning heritage resource management day-to-day operations.
Range: Planning of operations should be in conjunction with other people, and can include in-house meetings, field work, building surveys, exhibits and displays, workshops, tours and tour guiding, events, and other project activities.

• Implementing policies and procedures relevant for specific sites, buildings or institutions.
Range: Policies and procedures include intangible heritage and tangible heritage site, building or institution policies and procedures as well as local, provincial and national policies that impact on, for example, accepting collection donations, short and long term loans, conservation, labour relations, monitoring and evaluation, performance management, financial management, governance, etc.

• Communicating heritage resource management information to all relevant stakeholders.
Range: Stakeholders include education and training providers, other sites, buildings or institutions, and local, provincial, and national government; information includes information for the purpose of marketing (e.g. displays, exhibitions, articles, press releases, invitations, materials design, etc.), research, education (e.g. workshops, outreach programmes, conferences, seminars, etc.), etc.

• Conducting heritage resource management research for a specific area of operation.

Range: Areas of operation can include tourism, archaeology, oral history, anthropology, and indigenous knowledge systems; research can include heritage impact assessments.

• Coordinating heritage project and event activities in collaboration with relevant stakeholders. Range: Events can include museum days, heritage days, educational events, heritage awareness workshops, etc., activities include health, safety and security (inc. services provided by external suppliers), facilities, materials (i.e. marketing and event materials such as stationary, brochures, etc.), sending out invitations, registration of participants and recording participation, catering, production (e.g. sound, lighting, stage, seating, shelter, etc.), accommodation and travel arrangements, etc.

Rationale:

With the implementation of the South Africa Heritage Resources Agency (SAHRA) conservation principles came a need in the heritage sector for competence to ensure that the implementation of heritage principles is effective. These principles include, cultural and other conservation, community heritage education, ability to investigate, determination of cultural significance, continuous historical development and being able to engage in contemporary design. There is a shortage of heritage law enforcement officers (e.g. for enforcing underwater heritage protection) resulting in the plundering of cultural and natural treasures. Research and heritage surveying competence is required to ensure that cultural and natural sites, buildings and institutions are surveyed in terms of their safety and environmental status, that oral history is recorded, and that best practice is shared, etc. Managing small sites, buildings or institutions requires multi-skilling (i.e. both heritage and general management). However, few people in the sector are multi-skilled.

Local Government Integrated Development Plans (IDPs) require heritage management and include performance criteria in this regard. If the outcomes of this qualification are achieved, competent persons will be able to assist Local Government to achieve its objectives. The qualification can also assist in providing the skills necessary to facilitate repatriation of heritage. Cultural projects are being established by, for example, various Government departments (e.g. joint projects by the Departments of Arts and Culture, and Public Works) for the purpose of producing cultural artefacts, educating people regarding cultural heritage, providing employment and preserving heritage, etc. This qualification will ensure that the management needs of such centres are met, and they can rely on the contributions of heritage managers to ensure sustainability. The socio-economic impact of technology and technology used at heritage sites are changing the way that heritage sites are managed, and the sector must remain up to date.

Previously, learners acquired competence through work-based experience and could access postgraduate diplomas only after approximately five years' experience, or completing a first degree, and this limited access. In addition, there was a gap between the Further Education and Training Certificate: Heritage Administration (NQF Level 4) and NQF Level 6 qualifications (first degrees) that this qualification aims to fill. Qualifications from other fields also do not address the specific needs for competence in the Heritage sector, and Heritage qualifications do not address aspects required from other fields (e.g. marketing and public relations, general management, etc.).

This qualification could provide a means for the sector to define what South African heritage management should entail, so that decisions regarding participation in and/or adoption of international models of heritage management can be informed. Definition of heritage management competence areas also assist the definition of roles and responsibilities, ensuring that human resources are applied effectively in terms of what can be expected of whom.

Institutions in the heritage sector should encourage and facilitate transformation, both in the sector and in South Africa. This qualification will facilitate such transformation by allowing access to and progression within the sector and its career paths, thereby ensuring succession and sustainability, and by ensuring that all components of heritage are represented by cultural

and natural sites, building and institutions. A larger pool of competent heritage managers will mean that more cultural and natural sites, buildings or institutions can be established within or at least closer to the communities they serve.

Target learners for this qualification can be unemployed, or employed in the heritage sector, and have a passion for heritage to access the related careers. For example, matriculants enter the qualification from schools, possibly with an arts and culture background (e.g. involvement in cultural groups), selecting heritage management as a career, or sometimes without any information regarding heritage management. Other learners are people already working in the sector, usually with Grade 10 or 11, who have subsequently achieved the Further Education and Training Certificate: Heritage Administration (NQF Level 4). Therefore, most target learners have already achieved a Further Education and Training Certificate (NQF Level 4) before attempting this qualification. They are mostly employed in the sector where they have gained experience that can be credited as part of this qualification. Qualified learners can continue their learning pathway by completing a related Diploma and NQF Level 5, and then progressing to NQF Level 6 in heritage management and various related disciplines, such as archaeology, sociology, anthropology, etc.

Target learners at this level often require skills to manage heritage in addition to knowledge, and the qualification provides for experiential learning, often in a project and work-based context. They learn to manage heritage resources, both intangible and tangible at a heritage building, institution or site, within the local, provincial and sometimes national context of heritage management.

Qualified learners can find employment in organisations such as Non Profit Organisations (i.e. NPOs such as Non Government Organisations, Community-based Organisations, etc.), community-based cultural centres, heritage sites and institutions, such as:

- Museums.
- Art centres.
- Tourism organisations.
- Local, provincial and national government.
- Statutory bodies such as SAHRA.
- The National Heritage Council (i.e. as stakeholder representatives, or employed in the organisation.
- Bodies such as Museum Boards and Councils, etc.
- Community cultural centres.
- National parks and natural protected areas.

Qualified learners could also create their own self-employment opportunities in the heritage sector, produce/write short articles for newspapers and magazines, write scripts, consult in the film industry regarding production as well as heritage preservation, and produce short documentaries, etc.

Benefits to society and the economy include that heritage management contributes significantly to:

- SAHRA conservation principles (see above).
- Moral regeneration by improving knowledge of the values of your society or community.
- Integration of communities, nation building and national tolerance.
- Improving knowledge of all people in South Africa.
- Empowering future generations by sustaining Indigenous Knowledge Systems (IKS).
- Providing access to IKS to people inside and outside South Africa.
- Cultural and heritage tourism, which contributes to Gross Domestic product (GDP).
- Decreasing crime through increased employment.
- Guaranteeing the survival of heritage.

- Uplifting communities socially, spiritually and economically (as one of the relevant tools) when used correctly.
- Community participation, ownership and preservation of indigenous knowledge.

RECOGNIZE PREVIOUS LEARNING?
Y

LEARNING ASSUMED IN PLACE
The qualification was designed based on the assumption that the following competencies have already been achieved:

- Communication at NQF Level 4.
- Mathematical Literacy at NQF Level 4.

Recognition of Prior Learning:

This qualification can be achieved wholly, or in part, through recognition of prior learning. Evidence can be presented in a variety of forms, including previous international or local qualifications, reports, testimonials, mentoring, functions performed, portfolios, work records and performance records. As such, evidence should be judged according to the general principles of assessment described in the notes to assessors below. Learners who have met the requirements of any Unit Standard that forms part of this qualification may apply for recognition of prior learning to the relevant Education and Training Quality Assurance body (ETQA). The applicant must be assessed against the specific outcomes and with the assessment criteria for the relevant Unit Standards. A qualification will be awarded should a learner demonstrate that the exit level outcomes of the qualification have been attained.

Access to the Qualification:

An FETC grants learners access to this qualification.

QUALIFICATION RULES
The Fundamental component unit standard (5 credits) and all Core component unit standards (118 credits) are compulsory. For the Elective component, learners are required to achieve at least 17 of the available 93 credits.

EXIT LEVEL OUTCOMES
1. Relate own heritage resource management practice to national and international frameworks.

2. Developing heritage resource management procedures for specific operational aspects/components of sites, buildings or institutions.

3. Planning heritage resource management day-to-day operations.

4. Implementing policies and procedures relevant for specific sites, buildings or institutions.

5. Communicating heritage resource management information to all relevant stakeholders.

6. Conducting heritage resource management research for a specific area of operation.

7. Coordinating heritage project and event activities in collaboration with relevant stakeholders.

ASSOCIATED ASSESSMENT CRITERIA
Associated Assessment Criteria for Exit-Level Outcome 1:

• International and national conceptual heritage frameworks are described in terms of the nature, extent and scope of heritage management.
• Own heritage resource management practice is contextualised within international and national conceptual heritage frameworks.

Associated Assessment Criteria for Exit-Level Outcome 2:

• Procedures are developed that are comprehensive in terms of the required scope, and can remain constant over time (i.e. do not require frequent revision), while accommodating amendments.
• Procedures are developed in line with agreed preservation and conservation policies and principles and are fit-for-purpose.
○ Range: Fit-for-purpose refers to the fact that the procedures must be workable/feasible in specific contexts.
• Required resources are identified and all responsibilities for implementation are assigned to relevant persons.
• Procedures are communicated in a way that is user friendly, accessible and clear for the users of such procedures.

Associated Assessment Criteria for Exit-Level Outcome 3:

• Plans adhere to given overall time frames and budgets and include all tasks or activities required to meet given objectives.
• Responsibilities are assigned or delegated to relevant persons and are feasible in terms of resources required.
○ Range: Resources include human, financial, time and other resources.
• Accountability is assumed for assigned responsibilities and contingency plans are put into place.
• All relevant legislation and policies are adhered to.
○ Range: Both general (such as the Public Finance Management Act) and heritage-specific legislation and policies are included.

Associated Assessment Criteria for Exit-Level Outcome 4:

• Policies and procedures are implemented according to given instructions, policies and procedures and suggestions are made regarding policy and procedure improvements.
• Policies and procedures are implemented in accordance with best practice methods.
• Implementation ensures the maintenance of collection condition using effective conservation methods.

Associated Assessment Criteria for Exit-Level Outcome 5:

• Heritage terminology is explained in language that ensures accessibility of information/terms.
• Communication adheres to overall communication strategies and can achieve the required communication objectives.
○ Range: Overall communication strategies include marketing, protocol, etc., communication purpose can include lobbying, convincing, negotiating, etc.
• Information that is communicated is authentic, verifiable, and accurate.
• Communication is directed at all relevant stakeholders and is sustained according to agreed terms of reference.
○ Range: Terms of reference relate to channels, formats, protocol, etc.

Associated Assessment Criteria for Exit-Level Outcome 6:

• Research is focused on selected topics relevant for the specific field of research, and approaches and methodologies are appropriate for the specified purpose of research.

• Agreed legal and ethical principles/requirements are adhered to and research ensures sustainability of future research endeavours.
o Range: Legal requirements include intellectual property and copyright law.
• Relevant sources of information are accessed.
• Dissemination of findings meets specified/agreed requirements of stakeholders.
o Range: Requirements include level of understanding/background, language, form, format, etc., stakeholders include communities, learners, organisations (own or other), individuals, funders, etc.

Associated Assessment Criteria for Exit-Level Outcome 7:

• Coordination adheres to given resource limitations and all logistic requirements for events are met.
o Range: Limitations include budget, timeframes/deadlines, etc., requirements include protocol, technical requirements (e.g. sound systems), legal requirements (e.g. municipal by-laws), etc.
• Stakeholder agreement is secured prior to commencement, and activities meet stakeholder requirements.
o Range: Demand can include type of activities required, frequency, scope, etc.
• Heritage project and event activities meet objectives, observable evidence that planned activities took place is recorded, and contingency plans are in place.
• Communication and outreach strategies are aimed at achieving support from all relevant stakeholders and events and projects can be recognised by those they are targeted at.
• All contributions are acknowledged.
• The health, safety and security of participants are ensured.

Integrated Assessment:

The assessment criteria in the unit standards are performance-based, assessing applied competence, rather than only underpinning knowledge, or only skills. The critical cross-field outcomes are also achieved in the unit standards. In addition to the competence assessed to achieve the unit standards, learners must demonstrate that they can achieve the outcomes in an integrated manner, dealing effectively with different and random demands related to occupational and learning contexts, to qualify, and assessment approaches used should be appropriate for assessing applied competence. Integrated assessment is meaningful if there are clear relationships between the purpose statement, exit level outcomes and integrated assessment of this qualification.

Learners who qualify must be able to integrate concepts, ideas and behaviours across unit standards to achieve the purpose of the qualification. Evidence (as specified in the associated assessment criteria) is required that the learner is able to achieve the exit level outcomes of the qualification as a whole and in an integrated way, and thus its purpose, at the time of the award of the qualification.

Evidence of integration may be presented by learners when being assessed against the unit standards, and separate assessment for integration may not be necessary. Workplace experience can be recognised when assessing towards this qualification. Integrated assessment should include observable performance as well as the quality of thinking behind such performance. Formative assessment can be employed during learning towards the unit standards and during integration to achieve exit level outcomes, to ensure that integration takes place when summative assessment is employed.

INTERNATIONAL COMPARABILITY
Comparisons were made with all regions in the world. Internationally, the largest number of programmes is offered at post graduate level, above the level of this South African qualification, for example, in Austria, Mexico, New Zealand, Pakistan, Philippines, Spain, Switzerland,

Sweden, Philippines, Sri Lanka, Greece, Egypt, etc. Comparisons were made only with programmes at an equivalent level compared with this South African qualification.

In Australia, the Edith Cowan University Museum of Childhood offers a Certificate in Museum Studies that covers preventative conservation, techniques of display, conservation techniques, management, documentation and interpretation of collections. The one year programme has the following competencies that compare favourably with this South African qualification:

Certificate in Museum Studies:

• Museums, heritage, culture and society.
• Preventative conservation.
• Collecting and documentation.
• Exhibition development.
• Public programs.

Electives:

• Interpretation of meaning in museums.
• Museum planning and operations.
• Museums and indigenous people.
• Conservation: artworks.
• Conservation: textiles.
• Conservation: paper and books.
• Conservation: photographs.
• Photography in a museum environment.

At an equivalent level in, for example, the Bachelor of Arts: Environment and Heritage in Australia includes subjects such as Communication and Thought, Innovation, Creativity and Entrepreneurship, Environment, Technology and Sustainability, History of Australian Popular Culture: The Twentieth Century and Beyond, Introduction to Environmental Studies.

Also in Australia, the University of Canberra School of Resource, Environment and Heritage Sciences offers a Bachelor of Environmental Science (791AA) with a major in Cultural Heritage Studies. The major in Cultural Heritage Studies comprises 25% of the qualification, and includes Cultural Heritage in Australia, Indigenous Societies and Adaptation, Cultural Heritage Management, Archaeology of Australia, Building Conservation, and Issues in Cultural Heritage Management. All of these aspects are also addressed in the South African qualification. Other programmes also combine heritage management with tourism.

The Macquarie University in Sydney, Australia offers a unique BSc. with BA degree in Museum Studies. It is a four-year double degree programme, and compulsory components include Introduction to information technology, information management and museums practice, history, culture and museums studies, museums collections and data management, palaeontology and biology and/or geology, one of ancient Mediterranean cultures, Australian history, indigenous studies, environmental and cultural Geography, and early childhood. The museum specific components are addressed in this South African qualification.

The Australian National University post graduate programme is also offered in Vietnam. This institution offers a Bachelor of Arts (Art History and Curatorship), a 3 year work-related degree programme. The programme has a major focus on Art History, with the heritage resource management components at a level above the level of this South African qualification.

In South America, no equivalent programmes were found. The Federal University of Bahia: Faculty of Philosophy and Human Sciences in Brazil offers a Degree in Museology that is three times the notional hours of this South African qualification. The first degree includes at an

equivalent level History of Art, Introduction to Philosophy, Aesthetics, Anthropology, Introduction to Sociology, Introduction to Museology, History of Brazil: Art, Economics, Politics, Social, Scientific Methods and electives for Administration, Conservation and Restoration of Art, Brazilian Cultural, Cultural History, Baianan Culture, American History, History, Anthropology and Folklore, Brazilian Ethnology, French, English. At the University of Rio de Janeiro, heritage management is offered only as part of other programmes.

The Centro Nacional de Conservación, Restauración y Museología (CENCREM) in Cuba offers a number of programmes, including Diplomas in Heritage Management, Museology, and Conservation and Restoration Sciences. The three programmes have the following competencies that compare well with this South African qualification. Some of the competencies are contextualised:

Cuban Diploma:

• Built heritage, damage, inspection and assessment.
• Hispanic architecture in the Caribbean.
• Basic elements of built heritage.
• Development and context of built heritage and Hispano-American cities.
• Restoration and rehabilitation of buildings.
• Conservation strategies.
• Conservation of heritage buildings with external murals/paintings.
• Recordkeeping and documenting building restoration projects.
• Introduction to the theory and history of the architecture and urbanism.
• Study, assessment and conservation of structural wood elements.
• Technical analysis of building status.
• Cuban Colonial architecture.
• Introduction to natural heritage studies.
• Typologies.
• Intangible heritage.
• Traditional popular culture.
• Folklore and anthropology.
• Heritage legislation in the Cuban and the International context.
• Introduction to the Study of Archaeology in the Caribbean Context.
• Trends in architectural conservation.
• Technical inspection of built heritage.
• International conservation perspectives.
• Intangible heritage.
• Oral tradition in urban legends and mythology.
• Tangible and intangible heritage and the formation of national cultural identity.

Museology:

• Museum concepts, definitions and uses.
• Practical approaches.
• Conservation and restoration of personal property and the collections.
• Painting materials and their use in restoration.
• Document conservation and restoration.
• Cleaning of paintings.
• Work valuation and appraisal of art.
• Conservation and restoration of engravings.
• Introduction to Art.
• Inventory of cultural and natural heritage.
• Conservation and restoration of furniture.
• Curatorial procedures for collections of natural sciences.

- Conservation and restoration of fans.
- Storage, packing and transportation of art.

Conservation and Restoration Sciences:

- Elements of methodology of investigation: application to cultural and natural heritage.
- Preventive tropical climate conservation.
- Preventive conservation in museums and cultural institutions.
- Bio-deterioration and control in cultural objects.
- Metal corrosion, treatments and conservation.
- Stone materials deterioration and conservation.
- Preventative strategic planning for cultural institutions.
- Environmental contamination and cultural heritage.
- Climate control in museums.
- Assessment and identification of cultural objects.
- Bio-deterioration and control in stony materials.
- History of conservation and restoration.
- Cultural object technical-scientific conservation and restoration.

In Canada, the National Heritage Education Network includes:

- Organisations conducting heritage research and facilitating public involvement, including the Canadian Forum for Public Research on Heritage, Quebec Religious Heritage Foundation, Canada Research Chair on Built Heritage, and the Heritage Resources Centre.

- Institutions offering heritage preservation programmes. The programmes are offered for specific types of heritage resources, for example, a one and a half year Certificate for Heritage Carpentry to train carpenters to work on heritage restoration projects. Other such programmes include The Heritage Institute: Carpentry and Millwork (heritage), The Heritage Institute: Masonry (heritage and traditional), Heritage Carpentry and Stone Masonry, Certificate in Architectural Conservation and Preservation, Architectural Heritage and Building Renovation Program, Maîtrise en Architecture, sous-champ de recherche: Conservation et Restauration, Maîtrise en Conservation de l'environnement b and ti, Institut du patrimoine: Patrimoine urbain, Faculty of Environmental Design, and Cultural Resource Management Program. The latter programme at the University of Victoria includes a Diploma in Cultural Resource Management that allows specialisation in museum studies, heritage conservation, or cultural management, or a combination of the three areas. The South African qualification is comparable with the combination option in terms of content, and is of equal notional hours (1 year). However, the Canadian programme is at a level above the NQF level of this South African qualification.

- Institutions offering heritage preservation courses or components. Programmes include an M.A. Heritage Conservation, Building Restoration Technician Program, Faculty of Arts: Heritage Resources, Historical Resources Intern Program, Museum and Heritage Studies, and a Heritage Planning Workshop.
The Certificate in Heritage Resource Management offered at the University of Calgary is a two-year programme, offered largely by distance education, at the equivalent of this South African NQF Level 5 qualification. It compares well with this South African qualification:

University of Calgary Certificate in Heritage Resource Management:

- Material Culture Studies.
- General Principles of Heritage Resource Management Interpretation.
- General Principles of Heritage Area Planning.
- Introduction to Heritage Resource Management.
- General Principles of Materials and Their Conservation.
- Curatorship Principles and Practices.

- General Principles of Building Conservation.
- General Principles of Cultural Tourism/Ecotourism.

The most notable difference between the Canadian and the South African certificate is the focus on project and stakeholder management in the latter, about a third of the qualification content does overlap. However, this could be explained by the unspecified content covered in optional courses in the Canadian programme.

The Diploma in Heritage Resources offered at the Memorial University of Newfoundland Faculty of Arts: Heritage Resources department builds on learners' academic grounding in anthropology/archaeology, folklore, history, geography, and other relevant disciplines. The programme includes object documentation, identification, conservation, and display, and provides learners with an awareness of the broad range of heritage resources (objects, sites, landscapes, documents) specific skills to deal with public perceptions of objects and artefacts, a course in tourism management, and elective courses for particular disciplinary interests. This is similar to the South African qualification, except for the Elective component.

The University of Calgary Museum and Heritage Studies programme is offered in the Faculty of Communication and Culture. Only one course is offered at a level the equivalent of this South African qualification, namely, and introduction to museum and heritage studies, as Museum and Heritage Studies is classified as a minor subject in combination with the major subjects offered by the Faculty. Furthermore, this South African qualification is generic, and not limited to museum studies.

In Eastern Europe, the University of Zagreb, Faculty of Philosophy (Croatia) offers degree programmes in Information Sciences, with a specialisation in Museology. However, due to the programme language no comparison could be made.

In Denmark, the University of Aarhus offers relevant courses as part of two years of first degree studies. The Museology course provides an introduction to Danish and international history of museums, ideas, collections, content and genealogy; institutional structure, function and ethical obligation to the local and international society. The Museological Methods course addresses knowledge of the present situation of museums and their obligations and relevance to society, law and administration of cultural heritage, organisation, marketing, economy and management. Museological Communication includes planning of exhibitions, theories and methods of information and communication including linguistic, aesthetic and pedagogical aspects, which can throw light on the museological gathering of knowledge and the communication of it. Finally, a practical training period is required. Each of these courses are the equivalent of 150 notional hours of learning, and all aspects are addressed in the South African qualification. The School of Conservation at the Royal Danish Academy of Fine Arts (Copenhagen) and the Museumshojskolen: Museum Studies programmes of the Association of Danish Museums (Soroe) also offer relevant programmes, but the programmes could not be compared due to the language in which information about the programmes is available. The Syddansk Universitet (University of Southern Denmark) in Esbjerg offers a Master's in Cultural History Information Technology.

Most programmes in France are either at a higher level, or are shorter when compared with this South African qualification, for example, History of Art and Museology courses offered by the Ecole du Louvre, an 18 month advanced professional and administrative programme for curators, archaeologists, archivists, librarians, conservation architects by the Institut National du Patrimoine, and advanced training in the conservation and restoration of works of art offered by IFROA in Paris.

Italy has a number of relevant first degrees in Cultural heritage studies, offered at, for example, the Università degli Studi di Bari, Scienze dei Beni Culturali per il Turismo e l'Ambiente: Sede di Taranto, Scienze dei Beni Culturali, and Universita Degli Studi di Pavia, that include fields of study such as Arts, Education, and Humanities alongside Cultural heritage studies. In addition,

Historic-artistic and Musical Heritage programmes are offered at, for example, Storia e Conservazione del Patrimonio Artistico, Archeologico e Musicale, Sciences for Cultural and Environmental Heritage at, for example, Università degli Studi di Firenze, History and Conservation of the Artistic and Cultural Heritage, and Archaeology at Università degli Studi di Palermo, and Artistic, Theatre, Cinema and New Media Heritage Studies at Università degli Studi di Parma. Programme information was not accessible.

In Germany, the Fachhochschule für Technik und Wirtschaft Berlin's Diploma in Museology is being phased out, and the Humboldt-Universität zu Berlin's Schwerpunktes Museumspädagogik course is a module offered as part of Bachelor in Education degree. In Leipzig, the HTWK (University of Applied Sciences), Department of Library Science, Book Trade and Museology offers a Diploma in Museology at postgraduate level.

The German guidelines for museum professional development (Smithsonian Center for Education and Museum Studies) include the following competence requirements, all of which are also required in this South African qualification:

• Communications and computer literacy, information and collections management (archive, database, records, collections, copies/reproductions/digitisation and copyright, access, deterioration, automation, cataloguing, preventative care, collections, history and philosophy, registration, accessioning, deaccessionng), research (library and information services, scientific activities, data collection, preparation and analysis, research design, process and procedures, sampling, research instruments).
• Subject expertise (knowledge of local, national, regional, international issues, resources and conditions, environmentalism and its impact, evaluation methods, ethnic, racial, cultural and intellectual diversity, administrative and management policies and practices, Museology; materials).
• Professionalism, leadership.
• Project management and quality control.
• Formal museum structure and governance, legal context for practice, legal system: National and international comparisons, legal status of museums, legal responsibilities of personnel and board, collection law: Accessioning, de-accessioning and bequests, contract management and law, including loans and exhibition exchanges, tax law.
• Resource management, including museum architecture, environmental monitoring and control, packing and transporting, pest management, conservation and restoration, human resource planning and management, physical plant and site management (emergency preparedness, fire, safety, and security, plant maintenance).
• Policy and programme development, implementation and evaluation, goal setting and prioritisation, clarification of objectives, strategic planning.
• Affiliations with other organisations, collaboration and networking, advocacy, coalition-building.
• Financial literacy, planning and management (auditing, budgeting, financial control, documentation, reporting, risk management, insurance/indemnity), fund raising and income-generation (inc. fees, concessions, retail).
• Public programming activities (communication theory and its applications, signage, exhibitions, education and interpretation, publications and products. visitor service and public relations), marketing (audience/visitor research, promotional materials, public image, tourism/business, communication tools, public affairs, media relations).

A component not included in the South African qualification is Organisational development (change management, diversity, creative thinking, re-engineering, etc.).

Various institutions in the Netherlands offer similar programmes, compared with this South African qualification. For example, in Amsterdam, the Reinwardt Academy at the Amsterdam School of Arts offers both undergraduate and postgraduate Museology courses, and the School of Conservation, Netherlands Institute for Cultural Heritage (ICN) offers a four year Bachelor degree also focused on museums. The areas of competence required in this programme are

also in the South African qualification: information management (including object information), marketing and exhibition management, public visits, conservation, communication, cultural history, art history, interactive media and research. In addition to what the South African qualification includes, the first year of this qualification also includes photography, and drawing. The ICN has cooperation agreements with China, Vietnam, Egypt, Indonesia, Mozambique, Sri Lanka and Costa Rica.

In Peru, the Universidad Ricardo Palma in Lima, through the Instituto de Investigaciones Museologicas y Artisticas, offers undergraduate programmes, but no information was available regarding these courses.

Information about the Peter the Great Museum of Anthropology and Ethnography of the Russian Academy of Sciences in St. Petersburg educational programmes was in Russian, and no translation was available.

Although most programmes on offer in the United Kingdom are at postgraduate level (e.g. Bournemouth University: School of Conservation Studies, University of Cambridge Department of Archaeology, University of Birmingham's Ironbridge Institute, University of Leicester Department of Museum Studies, University of London, University of Manchester, University of Newcastle, University of Northumbria, University of East Anglia, Nottingham Trent University, University of St. Andrews, University of Salford, University of Southampton, etc.) the Bishop Grosseteste College offers a 3 year undergraduate degree in Heritage Studies, with elective streams in heritage specialism, or heritage management. Both aspects are also included in this South African qualification. At an equivalent level, Bishop Grosseteste College degree includes all components in this South African qualification primarily under Heritage Management modules, which comprise of the following competencies:

Bishop Grosseteste College, United Kingdom:

• Introduction to heritage studies: The nature of heritage in the British context, heritage and the media, and the structure of the professional sector.
• Art and design history: Range of visual sources available for the study of the past, and analysing information from such sources.
• Early Modern British History: Social, political and cultural view of the course of events during the sixteenth and seventeenth centuries.
• Archival research.
• Conservation and restoration practice (inc. conservation report writing, and furniture restoration activities).
• History of Ideas of Heritage.
• Heritage Management: British and European heritage legislation, roles played by local planning authorities and national bodies, key elements of site and events management.
• Practical methods and techniques of archaeological survey, excavation, finds and environmental work.
• Museums and Galleries, including current issues and approaches, and exhibits.
• Heritage: Domestic housing, Country Houses, British landscape, Industrial Heritage, Cathedral, Church and Chapel.
• Interpretation and Education.

The University of Chichester in the United Kingdom offers heritage studies in conjunction with history, business studies, English, music, theology, and tourism management. This South African qualification does not include as many combinations and focuses primarily on heritage resource management with other elective fields of study, rather than heritage studies within the context of a specific field of study.

The Higher Diploma in Irish Heritage Management includes areas of competence, also covered in this South African qualification, namely, business management (marketing, management,

accountancy and public administration), heritage studies (archaeology and geography, folklore and Irish), and designing and creating an exhibition.

In the United States of America, most programmes are also at postgraduate level (e.g. Bard College Center for Curatorial Studies, Harvard University, State University of New York, Eastern Illinois University, Northwestern University, University of North Carolina, University of Kansas, New York University, University of Oklahoma, San Francisco State University, John F. Kennedy University, University of Washington, George Washington University, University of Hawaii, etc.). Many universities offer graduate-level programmes in Museum Studies. At an equivalent level, the Baylor University Museum Studies programme includes modules about differentiating types of museums; the policies for collecting, interpreting, and preserving artistic, cultural, and scientific objects, and how individuals aid museums to achieve their goals of cultural identity, public service, and community development; legal and operational structure of museums, personnel, and financial resources; principles of long-term preservation and practices used in museum collections, and regulations related to museum standards for acquisition, documentation, preservation, registration, storage, and assessment. The South African qualification includes all of these components. Other American universities offer Historic Preservation Programs (e.g. Goucher College, Southeast Missouri State University) that include heritage resource management within a History-focused programme.

The United States of America National Parks Service's Cultural Resource Management offers an equivalent level training programme that compares well with this South African qualification:

United States of America National Parks Service:

• Know in general how to identify, evaluate, document, register, treat, and manage cultural resources.
• Know laws, regulations, policies, and guidelines regarding the preservation and protection of cultural resources.
• Know and participate in the further development or revision of the goals, content, and functioning of national park service cultural resource programs, both internal and partnership.
• Know the service's cultural resource inventories.
• Use the data of the cultural resource inventories in the development and management of complex CRM planning and preservation undertakings.
• Know how to apply GIS technology, automatic methods of data collection, analysis, and illustration to cultural resources management.
• Collect, analyse, and synthesise scientific information from research, monitoring, resources management actions, and other sources of information to solve park, regional, and service-wide cultural resource management problems.
• Use computer applications for cultural resources management data analysis, manipulation, and presentation.
• Know preservation treatments and preservation maintenance methods and practices.
• Identify appropriate specialists to carry out complex scientific and cultural preservation, mitigation, and restoration projects.
• Recognise the interrelationships of all resource management disciplines such as museum management, archaeology, cultural landscapes, historic architecture, preservation, ethnography, and maintenance and to work within this divisional/discipline framework to accomplish cultural resource preservation projects and goals.
• Know of funding sources for cultural resources management both within and outside the national park service.
• Develop and manage work plans and schedules, scopes of work, cost estimates, and budget proposals and/or grants to justify funding requests and accomplish goals.
• Direct diverse and complex programs of cultural resource management.
• Negotiate partnerships for the accomplishment of cultural programs that are regional or national in scope.

- Prepare cooperative agreements for the accomplishment of complex cultural resource programs involving one or more universities or national organisations.
- Develop or coordinate the development of cultural resource components of resource management plans in areas with diverse and complex cultural resources.
- Lead complex planning undertakings or manage the development of new or revised cultural resource planning policies and methodologies.
- Apply extensive knowledge of compliance legislation and regulations to the development or revision of them and/or to develop implementing service-wide policies and guidelines.
- Develop and negotiate service-wide programmatic agreements with state historic preservation officers and the advisory council on historic preservation to resolve complex cultural resource issues.
- Maintain liaison with native Americans and other traditionally associated groups.
- Produce complex, clearly-written, well-documented studies of publishable quality to support planning, preservation, management, and public interpretation of cultural resources.
- Develop training programs to support service-wide cultural resource management and preservation programs.
- Lead complex training situations, which may include agendas with numerous topics and speakers; participants with different backgrounds or levels of knowledge, experience, and motivation; or courses of several days duration.

The Arts Conservation Program at the University of Delaware in the United States of America allows for two areas of focus at undergraduate level, namely, Pre-Graduate Studies and Collections Care. The Pre-Graduate Studies programme focuses on preparation for graduate study to pursue a career as a conservator. The Collections Care programme focuses on a more general art preservation-related career, including collections management in museums (e.g. conservation technician, registrar, collection manager, etc.). Both include chemistry, studio arts, art history, and anthropology with a focus on art conservation. The qualifications are not comparable with this South African qualification, although related.

In Bangladesh, equivalent level programmes are mostly in the field of archaeology, and in China and Hong Kong the focus is mostly on leisure, tourism and architecture. In India, the National Conservation Laboratory for Conservation of Cultural Property offers training on both curative and preventive aspects of conservation: a two-week Orientation Workshop on Care and Maintenance of Cultural Heritage, a six-month Conservation of Art Objects course, and various short courses (3 to 10 days) specific for museums, caring and conservation of different types of cultural property. The programmes do not include anything other than what is covered in this South African qualification.

At the Trisaki University in Indonesia, heritage studies are situated within the context of architecture and environmental technology. Although the Gadjah Mada University offers relevant programmes through the Cultural Science faculty, the language of programme descriptions was not accessible. Information about equivalent level, one or two-year programmes about Cultural Asséts and Museology at the Showa Women's University in Japan, the Lao PDR programme at the National University of Laos Department of Architecture, and programmes offered in Mongolia was also not accessible.

At the Universiti Teknologi Malaysia, heritage resource management forms part of the first degree in Urban and Regional Planning and at the Centre for Nepal and Asian Studies (CNAS) a post graduate programme is offered. In Sri Lanka, the focus is on architecture, and archaeology.

The International Centre for the Study of Preservation and Restoration of Cultural Property (ICCROM) courses include:

- Archaeological heritage conservation.
- Architectural records, inventories and information systems for conservation.

- Communicating conservation information.
- Conservation and management of immovable cultural heritage.
- Conservation of built heritage.
- Conservation of heritage sites.
- Conservation of modern architecture.
- Conservation of collections in storage.
- Cultural heritage management and the challenges of HIV/AIDS.
- Cultural impact assessment and maritime archaeology.
- Documentation and management of heritage sites.
- Preparing nominations to the world heritage list.
- Preservation and restoration of wooden structures and wood conservation technology.
- Preservation and restoration of cultural heritage.
- Reducing risks to collections.
- Research, analysis and preservation of archaeological sites and remains.
- Rock art conservation of immovable cultural heritage.
- Safeguarding sound and image collections.
- Teamwork for sustainable collections care.
- Paper conservation.

Although many of the courses are region-specific, the general competence addressed is also included in this South African qualification, although sometimes at a lower level of complexity.

Many education and training programmes in Africa focus on museums. The Centre for Heritage Development in Africa (CHDA), located in Kenya, is a non-governmental organisation that offers training to professionals, including funded internships when available. Programmes are offered in collaboration with Ecole du Patrimoine Africain Benin, Royal Tropical Institute Netherlands, University College London, Institute of Archaeology and University of Nairobi, etc. The programmes are mostly at a level above the level of this qualification. Countries actively involved in heritage resource management include Botswana, Gambia, Ghana, Kenya, Namibia, South Africa, Swaziland, Tanzania and Zambia. However, no information about specific programmes could be found.

The outcomes required for this South African qualification are comparable with the first and in some instances second year achievements required of undergraduate learners in other countries. For the most part, compared with other countries, the qualification is unique to South Africa, in terms of the level of the award as well as the credits. However, the aim is to provide improved access to Higher Education and into the heritage management sector.

ARTICULATION OPTIONS
Horizontal articulation on the NQF is possible with the following NQF Level 5 qualifications:

- ID 57612: National Certificate: Arts and Culture Enterprise.
- ID 20416: National Certificate: Conservation: Natural Resource Management: Terrestrial.
- ID 49119: National Certificate: Craft Operational Management.
- ID 49626: National Certificate: Landcare Facilitation.
- ID 58624: National Certificate: Library and Information Services.
- ID 24493: National Certificate: Management.
- ID 49710: National Diploma: Development Practice.
- ID 20613: National Diploma: Event Co-ordination.

The qualification articulates vertically with the following NQF Level 6 qualifications:

- ID 22904: Advanced Certificate: Environmental Education, Training and Development Practice.
- ID 23375: Bachelor of Arts (e.g. tourism, historical studies, archaeology, anthropology, environmental studies and ethnography).

• ID 22903: Bachelor of Environmental Education, Training and Development Practice.

MODERATION OPTIONS

Moderation of assessment and accreditation of providers shall be at the discretion of a relevant ETQA as long as it complies with the SAQA requirements. The ETQA is responsible for moderation of learner achievements of learners who meet the requirements of this qualification. Particular moderation and accreditation requirements are:

• Any institution offering learning that will enable the achievement of this qualification must be accredited as a provider with the relevant ETQA. Providers offering learning towards achievement of any of the unit standards that make up this qualification must also be accredited through the relevant ETQA accredited by SAQA.

• The ETQA will oversee assessment and moderation of assessment according to their policies and guidelines for assessment and moderation, or in terms of agreements reached around assessment and moderation between the relevant ETQA and other ETQAs and in terms of the moderation guideline detailed here.

• Moderation must include both internal and external moderation of assessments for the qualification, unless the relevant ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described in Unit Standards as well as the integrated competence described in the qualification.

• Internal moderation of assessment must take place at the point of assessment with external moderation provided by a relevant ETQA according to the moderation guidelines and the agreed ETQA procedures.

• Anyone wishing to be assessed against this qualification may apply to be assessed by any assessment agency, assessor or provider institution that is accredited by the relevant ETQA.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

Assessment of learner achievements takes place at providers accredited by the relevant ETQA (RSA, 1998b) for the provision of programs that result in the outcomes specified for this qualification. Anyone assessing a learner or moderating the assessment of a learner against this qualification must be registered as an assessor with the ETQA. Assessors registered with the relevant ETQA must carry out the assessment of learners for the qualification and any of the Unit Standards that make up this qualification.

To register as an assessor, the following are required:

• Detailed documentary proof of relevant qualification/s, practical training completed, and/or experience gained in the relevant field at a NQF Level above the level of this qualification.
• Detailed documentary proof of relevant qualification/s, practical training completed, and/or experience gained in assessment at the appropriate NQF Level (credit against the registered unit standard).

Assessors should keep the following general principles in mind when designing and conducting assessments:

• Focus the initial assessment activities on gathering evidence in terms of the main outcomes expressed in the titles of the Unit Standards to ensure assessment is integrated rather than fragmented. The learner must be declared competent in terms of the qualification purpose and exit level outcomes.
• Where assessment across Unit Standard titles or at Unit Standard title level is unmanageable, then focus assessment around each specific outcome, or groups of specific outcomes. Take special note of the need for integrated assessment.

• Make sure evidence is gathered across the entire range, wherever it applies.

In particular, assessors should assess that the learner demonstrates an ability to consider a range of options by:

• Measuring the quality of the observed practical performance as well as the theory and underpinning knowledge.
• Using methods that are varied to allow the learner to display thinking and decision making in the demonstration of practical performance.
• Maintaining a balance between practical performance and theoretical assessment methods to ensure each is measured in accordance with the level of the qualification.
• Taking into account that the relationship between practical and theoretical components is not fixed, but varies according to the type and level of qualification.

All assessments should be conducted in line with the following well-documented principles:

• Appropriate: The method of assessment is suited to the performance being assessed.
• Fair: The method of assessment does not present any barriers to achievements, which are not related to the evidence.
• Manage: The methods used make for easily arranged cost-effective assessments that do not unduly interfere with learning.
• Integrate into work or learning: Evidence collection is integrated into the work or learning process where this is appropriate and feasible.
• Valid: The assessment focuses on the requirements laid down in the standards, i.e. the assessment is fit for purpose.
• Direct: The activities in the assessment mirror the conditions of actual performance as close as possible.
• Authentic: The assessor is satisfied that the work being assessed is attributable to the learner being assessed.
• Sufficient: The evidence collected establishes that all criteria have been met and that performance to the required Standard can be repeated consistently.
• Systematic: Planning and recording is sufficiently rigorous to ensure that assessment is fair.
• Open: Learners can contribute to the planning and accumulation of evidence. Learners for assessment understand the assessment process and the criteria that apply.
• Consistent: The same assessor would make the same judgement again in similar circumstances. The judgement made is similar than the judgement that would be made by other assessors.

NOTES
N/A

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	115790	Write and present for a wide range of purposes, audiences and contexts	Level 5	5
Core	255675	Categorise heritage resources	Level 5	10
Core	255678	Collect information	Level 5	15
Core	119173	Develop and maintain effective working relationship with clients	Level 5	8
Core	230445	Develop partnerships with youth development stakeholders	Level 5	10
Core	252024	Evaluate current practices against best practice	Level 5	4
Core	117871	Facilitate learning using a variety of given methodologies	Level 5	10
Core	115171	Generate resources for projects	Level 5	6
Core.	255676	Monitor heritage resource preservation	Level 5	15
Core	119764	Plan development project operations	Level 5	8
Core	255674	Safeguard tangible heritage resources	Level 5	10

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Core	120378	Support the project environment and activities to deliver project objectives	Level 5	14
Core	255677	Advocate resource management	Level 6	8
Elective	116590	Contribute to sustainable tourism in South Africa	Level 4	4
Elective	110024	Plan, Organise, Implement and Monitor Work within the Payroll environment	Level 4	10
Elective	115498	Resolve client requests and queries	Level 4	4
Elective	117927	Use a Graphical User Interface (GUI)-based database application to solve a given problem	Level 4	6
Elective	123507	Administer provisioning for procurement	Level 5	4
Elective	119341	Apply cost management information systems in the preparation of management reports	Level 5	15
Elective	15234	Apply efficient time management to the work of a department/division/section	Level 5	4
Elective	117522	Conceive, develop and realise exhibition designs	Level 5	8
Elective	115163	Convey a specific design message	Level 5	10
Elective	115116	Create original design messages, forms and arguments	Level 5	16
Elective	120380	Evaluate and improve the project team's performance	Level 5	7
Elective	10290	Evaluate, select and adapt published learning materials and develop, use and evaluate own supplementary learning aids	Level 5	12
Elective	10171	Manage the capture, storage and retrieval of human resources information using an information system	Level 5	3
Elective	116786	Manage the cash flow of a small business or a business unit	Level 5	10
Elective	110063	Plan advocacy campaigns and workshops in development practice	Level 5	8
Elective	12140	Recruit and select candidates to fill defined positions	Level 5	9
Elective	120388	Supervise a project team of a small project to deliver project objectives	Level 5	14
Elective	117515	Tender for projects	Level 5	7

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Safeguard tangible heritage resources

SAQA US ID	*UNIT STANDARD TITLE*			‹
255674	Safeguard tangible heritage resources			
ORIGINATOR			*PROVIDER*	
SGB Heritage Management Studies				;
FIELD			*SUBFIELD*	
2 - Culture and Arts			Cultural Studies	
ABET BAND	*UNIT STANDARD TYPE*		*NQF LEVEL*	*CREDITS*
Undefined	Regular		Level 5	10

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

SPECIFIC OUTCOME 1
Control harmful environmental factors at heritage sites, buildings or institutions.

SPECIFIC OUTCOME 2
Safeguard objects or specimens against damage or loss.

SPECIFIC OUTCOME 3
Control security for the protection of heritage sites, buildings or institutions.

SPECIFIC OUTCOME 4
Control disaster planning and management.

SPECIFIC OUTCOME 5
Present heritage resources and information in accessible forms.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	61349	National Certificate: Heritage Management	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Categorise heritage resources

SAQA US ID	UNIT STANDARD TITLE		
255675	Categorise heritage resources		
ORIGINATOR		PROVIDER	
SGB Heritage Management Studies			
FIELD		SUBFIELD	
2 - Culture and Arts		Cultural Studies	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	10

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

SPECIFIC OUTCOME 1
Describe heritage resources for classification.

SPECIFIC OUTCOME 2
Assess movable or immovable heritage resource significance according to specified procedures.

SPECIFIC OUTCOME 3
Consult experts regarding heritage resource classification.

SPECIFIC OUTCOME 4
Record heritage resource categorisation information.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	61349	National Certificate: Heritage Management	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Monitor heritage resource preservation

SAQA US ID	UNIT STANDARD TITLE		
255676	Monitor heritage resource preservation		
ORIGINATOR		PROVIDER	
SGB Heritage Management Studies			
FIELD		SUBFIELD	
2 - Culture and Arts		Cultural Studies	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	15

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

SPECIFIC OUTCOME 1
Identify risks to heritage resource preservation.

SPECIFIC OUTCOME 2
Develop procedures to monitor heritage resource preservation.

SPECIFIC OUTCOME 3
Survey heritage resources according to specified procedures.

SPECIFIC OUTCOME 4
Survey public participation at heritage sites, buildings, or institutions.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	61349	National Certificate: Heritage Management	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Advocate resource management

SAQA US ID	UNIT STANDARD TITLE			
255677	Advocate resource management			
ORIGINATOR		PROVIDER		
SGB Heritage Management Studies				
FIELD		SUBFIELD		
2 - Culture and Arts		Cultural Studies		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL		CREDITS
Undefined	Regular	Level 6		8

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

SPECIFIC OUTCOME 1
Select paradigms for advocating resource management in the South African context.

SPECIFIC OUTCOME 2
Assess the need for and the effectiveness of resource management advocacy in specific contexts.

SPECIFIC OUTCOME 3
Develop strategies for advocating resource management.

SPECIFIC OUTCOME 4
Create enabling environments for advocating resource management in specific contexts.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	61349	National Certificate: Heritage Management	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Collect information

SAQA US ID	UNIT STANDARD TITLE		
255678	Collect information		
ORIGINATOR		PROVIDER	
SGB Heritage Management Studies			
FIELD		SUBFIELD	
2 - Culture and Arts		Cultural Studies	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	15

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

SPECIFIC OUTCOME 1
Access published (secondary) and primary information sources relevant for specific research questions.

SPECIFIC OUTCOME 2
Liaise with researchers regarding resource management information.

SPECIFIC OUTCOME 3
Record information about resources for future reference.

SPECIFIC OUTCOME 4
Process information collected.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	61349	National Certificate: Heritage Management	Level 5

No. 273   **14 March 2008**

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Engineering

registered by Organising Field 06 – Manufacturing, Engineering and Technology, publishes the following Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Unit Standards.   The full Unit Standards 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 Unit Standards should reach SAQA at the address below and *no later than 11 April 2008.* All correspondence should be marked **Standards Setting – Engineering** and addressed to

> The Director: Standards Setting and Development
> SAQA
> *Attention: Mr. D. Mphuthing*
> Postnet Suite 248
> Private Bag X06
> Waterkloof
> 0145
> or faxed to 012 – 431-5144
> e-mail: dmphuthing@saqa.org.za

DR. S. BHIKHA
DIRECTOR: STANDARDS SETTING AND DEVELOPMENT

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Quantify the benefit of proposed energy interventions on energy equipment

SAQA US ID	UNIT STANDARD TITLE		
254374	Quantify the benefit of proposed energy interventions on energy equipment		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 6	18

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

SPECIFIC OUTCOME 1
Calculate energy efficiency on a variety of design parameters.

SPECIFIC OUTCOME 2
Calculate economic and environmental benefits of proposed energy interventions.

SPECIFIC OUTCOME 3
Calculate the impact of variables that affect equipment energy performance criteria.

SPECIFIC OUTCOME 4
Identify the most technically feasible energy solution for a specific situation.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Sustain performance of energy systems

SAQA US ID	UNIT STANDARD TITLE		
254318	Sustain performance of energy systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 6	20

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

SPECIFIC OUTCOME 1
Guide operation and maintenance practices for sustainable energy.

SPECIFIC OUTCOME 2
Test and evaluate energy performance.

SPECIFIC OUTCOME 3
Correct poor energy performance.

SPECIFIC OUTCOME 4
Conduct specific energy investigations.

SPECIFIC OUTCOME 5
Sustain energy performance.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Implement technology for sustainable energy

SAQA US ID	UNIT STANDARD TITLE		
254336	Implement technology for sustainable energy		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 7	20

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

SPECIFIC OUTCOME 1
Identify and justify proven technology for sustainable energy.

SPECIFIC OUTCOME 2
Model, target and monitor energy performance.

SPECIFIC OUTCOME 3
Diagnose causes of poor energy performance.

SPECIFIC OUTCOME 4
Implement solutions to improve energy performance.

SPECIFIC OUTCOME 5
Compile best practice procedures for sustainable energy.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Develop an energy management strategy

SAQA US ID	UNIT STANDARD TITLE		
254334	Develop an energy management strategy		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 7	12

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

SPECIFIC OUTCOME 1
Develop energy procurement and delivery strategies.

SPECIFIC OUTCOME 2
Develop energy technology strategies.

SPECIFIC OUTCOME 3
Improve organisational energy management profiles.

SPECIFIC OUTCOME 4
Quantify energy impact on resources and the environment.

SPECIFIC OUTCOME 5
Introduce best practices for end-use of energy.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SAQA

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Quantify the benefit of proposed energy changes on integrated facilities

SAQA US ID	UNIT STANDARD TITLE		
254354	Quantify the benefit of proposed energy changes on integrated facilities		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 7	18

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

SPECIFIC OUTCOME 1
Calculate energy efficiency on a variety of system design parameters.

SPECIFIC OUTCOME 2
Calculate economic and environmental benefits of proposed systems level energy projects.

SPECIFIC OUTCOME 3
Calculate the impact of variables that affect system energy performance criteria.

SPECIFIC OUTCOME 4
Identify the risks associated with the proposed systems level energy solutions.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Design sustainable solutions for energy resources

SAQA US ID	UNIT STANDARD TITLE		
254339	Design sustainable solutions for energy resources		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 8 and above	20

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

SPECIFIC OUTCOME 1
Assess designs for sustainable energy.

SPECIFIC OUTCOME 2
Assess management strategy for sustainable energy.

SPECIFIC OUTCOME 3
Assess operational procedures for sustainable energy.

SPECIFIC OUTCOME 4
Create sustainable energy solutions.

SPECIFIC OUTCOME 5
Build capacity to achieve sustainable energy.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Engineering

registered by Organising Field 06 – Manufacturing, Engineering and Technology, publishes the following Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Unit Standards. The full Unit Standards 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 Unit Standards should reach SAQA at the address below and *no later than 11 April 2008.* All correspondence should be marked **Standards Setting – Engineering** and addressed to

The Director: Standards Setting and Development
SAQA
Attention: Mr. D. Mphuthing
Postnet Suite 248
Private Bag X06
Waterkloof
0145
or faxed to 012 – 431-5144
e-mail: dmphuthing@saqa.org.za

DR. S. BHIKHA
DIRECTOR: STANDARDS SETTING AND DEVELOPMENT

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Design fire alarm and detection systems

SAQA US ID	UNIT STANDARD TITLE		
255717	Design fire alarm and detection systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 6	6

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of commissioning fire alarm and detection systems.

SPECIFIC OUTCOME 2
Activate and test fire alarm and detection systems.

SPECIFIC OUTCOME 3
Inspect fire alarm and detection systems.

SPECIFIC OUTCOME 4
Certify fire alarm and detection systems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Commission passive fire protection systems

SAQA US ID	UNIT STANDARD TITLE		
255735	Commission passive fire protection systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 6	6

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of commissioning passive fire protection systems.

SPECIFIC OUTCOME 2
Activate and test passive fire protection systems.

SPECIFIC OUTCOME 3
Inspect passive fire protection systems.

SPECIFIC OUTCOME 4
Certify passive fire protection systems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Commission aerosol fire extinguishing systems

SAQA US ID	UNIT STANDARD TITLE			
255715	Commission aerosol fire extinguishing systems			
ORIGINATOR		PROVIDER		
SGB Engineering				
FIELD		SUBFIELD		
6 - Manufacturing, Engineering and Technology		Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL		CREDITS
Undefined	Regular	Level 6		6

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of commissioning aerosol fire extinguishing systems.

SPECIFIC OUTCOME 2
Activate and test aerosol fire extinguishing systems.

SPECIFIC OUTCOME 3
Inspect aerosol fire extinguishing systems.

SPECIFIC OUTCOME 4
Certify aerosol fire extinguishing systems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SAQA

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Commission water sprinkler systems

SAQA US ID	UNIT STANDARD TITLE		
255699	Commission water sprinkler systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 6	6

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of commissioning water sprinkler systems.

SPECIFIC OUTCOME 2
Activate and test water sprinkler systems.

SPECIFIC OUTCOME 3
Inspect water sprinkler systems.

SPECIFIC OUTCOME 4
Certify water sprinkler systems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Commission powder fire extinguishing systems

SAQA US ID	UNIT STANDARD TITLE		
255714	Commission powder fire extinguishing systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 6	6

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of commissioning powder fire extinguishing systems.

SPECIFIC OUTCOME 2
Activate and test powder fire extinguishing systems.

SPECIFIC OUTCOME 3
Inspect powder fire extinguishing systems.

SPECIFIC OUTCOME 4
Certify powder fire extinguishing systems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Commission foam fire extinguishing systems

SAQA US ID	UNIT STANDARD TITLE		
255702	Commission foam fire extinguishing systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 6	6

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of commissioning foam fire extinguishing systems.

SPECIFIC OUTCOME 2
Activate and test foam fire extinguishing systems.

SPECIFIC OUTCOME 3
Inspect foam fire extinguishing systems.

SPECIFIC OUTCOME 4
Certify foam fire extinguishing systems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

SAQA

UNIT STANDARD:

Commission smoke control systems

SAQA US ID	UNIT STANDARD TITLE		
255705	Commission smoke control systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 6	6

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of commissioning smoke control systems.

SPECIFIC OUTCOME 2
Activate and test smoke control systems.

SPECIFIC OUTCOME 3
Inspect smoke control systems.

SPECIFIC OUTCOME 4
Certify smoke control systems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Commission mechanical fixed gaseous fire extinguishing systems

SAQA US ID	UNIT STANDARD TITLE		
255700	Commission mechanical fixed gaseous fire extinguishing systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 6	6

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of commissioning mechanical fixed gaseous fire extinguishing systems.

SPECIFIC OUTCOME 2
Activate and test mechanical fixed gaseous fire extinguishing systems.

SPECIFIC OUTCOME 3
Inspect mechanical fixed gaseous fire extinguishing systems.

SPECIFIC OUTCOME 4
Certify mechanical fixed gaseous fire extinguishing systems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Commission electrical fixed gaseous fire extinguishing systems

SAQA US ID	UNIT STANDARD TITLE		
255703	Commission electrical fixed gaseous fire extinguishing systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 6	6

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of commissioning electrical fixed gaseous fire extinguishing systems.

SPECIFIC OUTCOME 2
Activate and test electrical fixed gaseous fire extinguishing systems.

SPECIFIC OUTCOME 3
Inspect electrical fixed gaseous fire extinguishing systems.

SPECIFIC OUTCOME 4
Certify electrical fixed gaseous fire extinguishing systems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Design fire alarm and detection systems

SAQA US ID	UNIT STANDARD TITLE		
255716	Design fire alarm and detection systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 7	16

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of fire alarm and detection system design.

SPECIFIC OUTCOME 2
Research design requirements.

SPECIFIC OUTCOME 3
Stipulate design requirements.

SPECIFIC OUTCOME 4
Communicate design criteria.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Design passive fire protection systems

SAQA US ID	UNIT STANDARD TITLE			
255734	Design passive fire protection systems			
ORIGINATOR		PROVIDER		
SGB Engineering				
FIELD		SUBFIELD		
6 - Manufacturing, Engineering and Technology		Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL		CREDITS
Undefined	Regular	Level 7		16

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of passive fire protection system design.

SPECIFIC OUTCOME 2
Research design requirements.

SPECIFIC OUTCOME 3
Stipulate design requirements.

SPECIFIC OUTCOME 4
Communicate design criteria.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Design aerosol fire extinguishing systems

SAQA US ID	UNIT STANDARD TITLE		
255704	Design aerosol fire extinguishing systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 7	2

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of aerosol fire extinguishing system design.

SPECIFIC OUTCOME 2
Research design requirements.

SPECIFIC OUTCOME 3
Stipulate design requirements.

SPECIFIC OUTCOME 4
Communicate design criteria.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Design water sprinkler systems

SAQA US ID	UNIT STANDARD TITLE		
255697	Design water sprinkler systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 7	16

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of water sprinkler system design.

SPECIFIC OUTCOME 2
Research design requirements.

SPECIFIC OUTCOME 3
Stipulate design requirements.

SPECIFIC OUTCOME 4
Communicate design criteria.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SAQA

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Design powder fire extinguishing systems

SAQA US ID	UNIT STANDARD TITLE		
255696	Design powder fire extinguishing systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 7	10

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of powder fire extinguishing system design.

SPECIFIC OUTCOME 2
Research design requirements.

SPECIFIC OUTCOME 3
Stipulate design requirements.

SPECIFIC OUTCOME 4
Communicate design criteria.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Design foam fire extinguishing systems

SAQA US ID	UNIT STANDARD TITLE		
255695	Design foam fire extinguishing systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 7	16

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of foam fire extinguishing system design.

SPECIFIC OUTCOME 2
Research design requirements.

SPECIFIC OUTCOME 3
Stipulate design requirements.

SPECIFIC OUTCOME 4
Communicate design criteria.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Design smoke control systems

SAQA US ID	UNIT STANDARD TITLE		
255698	Design smoke control systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 7	16

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of smoke control system design.

SPECIFIC OUTCOME 2
Research design requirements.

SPECIFIC OUTCOME 3
Stipulate design requirements.

SPECIFIC OUTCOME 4
Communicate design criteria.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

SAQA

UNIT STANDARD:

Design mechanical fixed gaseous fire extinguishing systems

SAQA US ID	UNIT STANDARD TITLE		
255694	Design mechanical fixed gaseous fire extinguishing systems		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 7	10

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of mechanical fixed gaseous fire extinguishing system design.

SPECIFIC OUTCOME 2
Research design requirements.

SPECIFIC OUTCOME 3
Stipulate design requirements.

SPECIFIC OUTCOME 4
Communicate design criteria.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

SAQA

UNIT STANDARD:

Design electrical fixed gaseous fire extinguishing systems

SAQA US ID	*UNIT STANDARD TITLE*		
255701	Design electrical fixed gaseous fire extinguishing systems		
ORIGINATOR		*PROVIDER*	
SGB Engineering			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 7	10

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

SPECIFIC OUTCOME 1
Demonstrate knowledge of electrical fixed gaseous fire extinguishing system design.

SPECIFIC OUTCOME 2
Research design requirements.

SPECIFIC OUTCOME 3
Stipulate design requirements.

SPECIFIC OUTCOME 4
Communicate design criteria.

QUALIFICATIONS UTILISING THIS UNIT STANDARD
None