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GOVERNMENT NOTICES

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

No. 606

29 May 2009



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

Piano Restoration and Tuning

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

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

Comment on the Qualification should reach SAQA at the address below and **no later than 29 June 2009**. All correspondence should be marked **Standards Setting – SGB for Piano Restoration and Tuning** and addressed to

The Director: Standards Setting and Development
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Attention: Mr. E. Brown

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D. MPHUTHING

ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
Further Education and Training Certificate: Piano Technology

SAQA QUAL ID	QUALIFICATION TITLE		
67354	Further Education and Training Certificate: Piano Technology		
ORIGINATOR	PROVIDER		
SGB Piano Restoration and Tuning			
QUALIFICATION TYPE	FIELD	SUBFIELD	
Further Ed and Training Cert	2 - Culture and Arts	Music	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	123	Level 4	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:

The Further Education and Training Certificate: Piano Technology is the third qualification within the learning pathway of Piano Tuning and Restoration. This Qualification will provide learners with access to various employment opportunities within the piano regulation industry. It will also contribute to increasing levels of efficiency and effectiveness and will develop a common integrated and co-ordinated approach to this industry.

The learner assessed as competent against this qualification will be able to:

- Communicate in a variety of ways to achieve personal and organisational objectives.
- Use Mathematics and Mathematical thinking to solve every day problems for oneself and the piano industry workplace.
- Apply knowledge and skills of piano regulation.
- Apply knowledge and skills of basic piano tuning.
- Apply knowledge and skills of piano theory.
- Apply knowledge and skills for personal and career development.

Rationale:

The Further Education and Training Certificate: Piano Technology is designed to meet the needs of learners in the Piano restoration, tuning and general piano technology industry. It is designed to provide learners with the necessary knowledge, skills and attitudes required in this highly specialized industry.

This is the third qualification within a career pathway for Piano Restoration and Tuning leading to NQF Level 5. The qualifying learner will apply an understanding of the acoustic pianos in order to regulate it.

This qualification will provide learners with an opportunity for life-long learning. The qualification will help them to become knowledgeable and skilled people with enhanced employment and self-employment opportunities. Qualifying learners will be able to contribute to improved productivity and efficiency in the Piano Industry.

This Qualification aims to develop learners and promote professionalism and a strong, positive work ethic within the Piano restoration industry, while at the same time bringing it into line with international standards. It provides learners with knowledge and a skills platform from which they can develop additional competencies required for a range of occupations and job-roles in the sector. It will also enable learners to receive a formal Qualification in piano restoration where previously no formal recognition of expertise and competence existed.

This Qualification will ensure that the quality of education and training in this industry is enhanced and is in line with the standards worldwide.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED IN PLACE

It is assumed that learners accessing this qualification are competent in:

- Communication at NQF Level 3 on the NQF or equivalent.
- Mathematical Literacy at NQF Level 3 on the NQF or equivalent.

Recognition of Prior Learning:

The structure of this Qualification makes the Recognition of Prior Learning possible through the assessment of individual Unit Standards. This Qualification may therefore be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience. The learner should be thoroughly briefed on the mechanism to be used and support and guidance should be provided. Care should be taken that the mechanism used provides the learner with an opportunity to demonstrate competence and is not so onerous as to prevent learners from taking up the RPL option towards gaining a Qualification.

This recognition of prior learning may allow:

- Gaining of credits for unit standards in the qualification.
- Obtaining of this Qualification in part or in whole.

Access to the Qualification:

Learners wishing to access this qualification must have completed the following qualifications:

- National Certificate: Piano Restoration at NQF Level 2.
- National Certificate: Acoustic Piano Back-framing at NQF Level 3.

It is recommended that learners have dexterity and ear-hand coordination.

QUALIFICATION RULES

The qualification consists of Fundamental, Core and Elective Unit Standards. A minimum of 123 Credits is required to achieve the qualification. The Credits are allocated as follows:

Fundamental Component (56 Credits) Compulsory for all learners:

The Fundamental Component consists of the following learning, which is compulsory for all learners:

- Unit standards at NQF Level 4, totalling 16 Credits in Mathematical Literacy.

- Unit standards at NQF Level 4, totalling 20 Credits in Communication in a First South African Language.
- Unit standards at NQF Level 3, totalling 20 Credits in Communication in a Second South African Language.

It is therefore compulsory for learners to do Communication in two different South African language, one at NQF Level 4 and the other at NQF Level 3.

Core Component (42 Credits) Compulsory for all learners.

Elective Component:

Learners are to choose unit standards totalling a minimum of 25 Credits from those listed as Electives.

The qualification consists of a number of elective learning covering aspects that will lead to piano tuning specialisations as well as life skills. Learners must select a minimum of twenty five (25) Credits to complete the qualification. Learners wishing to progress to piano tuning must select "Develop Piano Tuning Ability" as one of the electives.

EXIT LEVEL OUTCOMES

1. Communicate in a variety of ways to provide piano regulation services.
2. Use mathematics and mathematical thinking to solve every day problems for oneself, and the piano workplace organisation.
3. Apply knowledge and skills of acoustic piano regulation.
4. Apply knowledge and skills management in the workshop operations.
5. Apply knowledge and skills for personal, career and business development.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

- Oral communication is maintained and adapted to meet workplace needs and personal expectations.
- Texts are interpreted and responded to in writing using a range of contexts in the provision of piano back-frame repair and restoration services.
- Language and communication is used to interpret and respond to texts in occupational learning programmes.

Associated Assessment Criteria for Exit Level Outcome 2:

- Statistics, probability and probability models are used to solve a range of contextual problems.
- Mathematical number systems, shape, and motion analysis are used to solve a range of life and work related problems.
- Mathematics is used to investigate and monitor the financial aspects of personal and workplace transactions.

Associated Assessment Criteria for Exit Level Outcome 3:

- Equipment and machines for production is prepared in a safe way.
- The condition of the acoustic piano back-frame is determined in relation to the viability of repairing or restoring.
- The acoustic piano is regulated according to international and industry standards.

- Assembly to repaired and damaged furniture are carried out according to workshop procedure.

Associated Assessment Criteria for Exit Level Outcome 4:

- The application of safety, health and environmental protection procedures are monitored to ensure absolute workplace safety.
- Management functions of an organisation are applied in the context of the piano industry.

Associated Assessment Criteria for Exit Level Outcome 5:

- Time is managed effectively in order to complete the assigned task on time and thus improve productivity.
- Innovative ideas are explored in order to develop a small business.
- Learner's role in the work team and organisation is described and an action plan is developed to enhance team performance to meet organisational requirements.

Integrated assessment:

Integrated assessment at the level of Qualification provides an opportunity for learners to show that they are able to integrate concepts, ideas and actions across Unit Standards to achieve competence that is grounded and coherent in relation to the purpose of the Qualification. Integrated assessment should show how already demonstrated competence in individual areas can be linked and applied for the achievement of a holistic outcome as described in the Exit Level Outcomes.

Integrated assessment must judge the quality of the observable performance, and also the quality of the thinking that lies behind it. Assessment tools must encourage learners to give an account of the thinking and decision-making that underpin their demonstrated performance. Some assessment practices will demand practical evidence while others may be more theoretical, depending on the type of outcomes to be assessed. The ratio between action and interpretation is not fixed, but varies according to the demands of the particular exit level outcome of the Qualification.

While the generic component (communication, mathematical literacy, supporting skills for the piano industry) of this Qualification at NQF Level 3 can be assessed through occupational contexts and activities relating to piano industry, care must be taken in both the learning programme and the assessment to ensure that learners achieve these foundational skills. The primary aim of this Qualification is to ensure that learners have a sound base of general education to prepare them for further learning, whatever career path they may choose. Learners must be able to transfer generic skills across a number of different contexts, and apply them within a number of learning areas.

A broad range of task-orientated and theoretical assessment tools may be used, with the distinction between practical knowledge and disciplinary knowledge maintained so that each takes its rightful place.

INTERNATIONAL COMPARABILITY

Internationally, the skills and knowledge required in piano regulation are generally passed on to apprentices or picked up through experience under mentors or expert guidance. Another source of such training is the Piano manufacturers that offer in-house training for staff. The range of learning offerings includes e-learning, distance learning and full-time study.

The most common approach is to access a short learning programme or a short course as is offered worldwide. Examples of some of these are:

USA and Spain:

- Piano tuner's super home study course.
- Randy Potter School of Piano Technology.
- The American School of Piano Tuning.
- Escuela de Tecnollog Pianica de Buenos Aires.

The competencies within these courses cover business skills, harpsichord tuning, history of the piano, music, repairs, maintenance, construction, theory and practice of piano tuning.

The following institutions are examples of some institutions that offer full-time vocational courses:

USA, Germany:

- Emil Fries School of Piano Tuning and Technology.
- The Chicago School for Piano Technology.
- Oscar-Walcker-schule Ludwigsburg: Germany.
- University of Western Ontario.

The competencies within these courses cover business skills, harpsichord tuning, history of the piano, music, repairs, maintenance, construction, theory and practice of piano tuning.

In most states of America and countries of Europe "piano repair" is offered as a short course or learning programme offered by private institutions.

This National Certificate in Piano Technology at NQF Level 4 has been designed to develop the whole individual while the examples located to develop a range of job related skills only. These courses and programmes are focussed only on vocational knowledge and skills. In this sense there is a differing emphasis in the qualification for the learners. This National Certificate at NQF Level 4, although for a South African context, has been compared with Qualifications from the countries below as well.

United Kingdom:

Best practice internationally in Piano repairs training is found in the UK. This qualification has been benchmarked against the United Kingdom (Qualifications and Curriculum Authority) vocationally related qualification, Level 4 Certificate in Classical Musical Instrument Technology. This qualification was chosen because it is of a similar duration, competencies and complexity. Both qualifications are registered at Level 4 on the respective frameworks.

The United Kingdom approach is informed by the learning pathway for Piano Maintenance, Tuning and Toning. Elements of this qualification are used in related careers or learning pathways. While this National Certificate is dedicated to the repair of one classical instrument, the acoustic piano (Upright), the benchmarked qualification offers electives for the repair of a range of classical musical instruments. Furthermore, for the purpose of this comparison the Fundamental component of learning has not been included.

Some institutions that offer some form of piano repair, restoration, regulating and tuning training courses are:

- Piano Tuners Association.
- National Association of Musical Instrument Repairers.
- Institute of Musical Instrument Technology (IMIT).
- Incorporated Society of Musicians (ISM).
- British Violin Making Association.

- London Metropolitan University.
- Newark and Sherwood College.

The School of Violin, Woodwind and Piano Technology offers a range of programmes in the making, repairing and tuning of instruments:

The royal national college for the blind(RNC), is acknowledged as the UK's national centre for training people who are blind or partially sighted for careers in piano tuning and repairs. The internationally recognised VIEW Diploma in Piano Tuning and Repairs prepares learners for self-employment or employment as a Piano Tuner Technician.

The programme includes: Business skills, harpsichord tuning, history of the piano, music, repairs, maintenance, construction, theory and practice of piano tuning.

Conclusion:

This qualification compares well with international best practice.

ARTICULATION OPTIONS

Examples of vertical articulation include:

- National Certificate: Piano Tuning at NQF Level 5.

Examples of horizontal articulation with this Qualification include:

- ID 48811: Further Education and Training Certificate: Music Industry: Sound technology at NQF Level 4.

MODERATION OPTIONS

- Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with the relevant ETQA.
- Any institution offering learning that will enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA.
- Assessment and moderation of assessment will be overseen by the relevant ETQA according to the ETQA's policies and guidelines for assessment and moderation, in terms of agreements reached around assessment and moderation between ETQA's (including professional bodies), and in terms of the moderation guideline detailed immediately below.
- Moderation must include both internal and external moderation of assessments at exit points of the Qualification, unless ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described both in individual unit standards, exit level outcomes as well as the integrated competence described in the Qualification.
- 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

Criteria for the registration of assessors:

- Relevant Qualification at NQF Level 5 or higher.
- Registration as an assessor with the relevant ETQA.
- Assessors must be registered as assessors with a relevant ETQA or an ETQA that has a Memorandum of Understanding with the relevant ETQA.

NOTES

N/A

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	5
Fundamental	119457	Interpret and use information from texts	Level 3	5
Fundamental	119467	Use language and communication in occupational learning programmes	Level 3	5
Fundamental	119465	Write/present/sign texts for a range of communicative contexts	Level 3	5
Fundamental	9015	Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems	Level 4	6
Fundamental	119462	Engage in sustained oral/signed communication and evaluate spoken/signed texts	Level 4	5
Fundamental	119469	Read/view, analyse and respond to a variety of texts	Level 4	5
Fundamental	9016	Represent analyse and calculate shape and motion in 2- and 3-dimensional space in different contexts	Level 4	4
Fundamental	119471	Use language and communication in occupational learning programmes	Level 4	5
Fundamental	7468	Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues	Level 4	6
Fundamental	119459	Write/present/sign for a wide range of contexts	Level 4	5
Core	242815	Apply the organisation's code of conduct in a work environment	Level 4	5
Core	14667	Describe and apply the management functions of an organization	Level 4	10
Core	13224	Monitor the application of safety, health and environmental protection procedures	Level 4	4
Core	264857	Regulate an acoustic piano	Level 4	18
Core	264862	Understand the theory of piano tuning and regulation	Level 4	5
Elective	117175	Carry out assembly repairs to damaged furniture	Level 4	6
Elective	252217	Comply with organisational ethics	Level 4	4
Elective	114591	Implement an action plan for business operations	Level 4	4
Elective	114589	Manage time productively	Level 4	4
Elective	114597	Practice effective team work in a venture	Level 4	4
Elective	117176	Prepare equipment and machines for production	Level 4	6
Elective	264861	Tune a piano	Level 4	15

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION

None

No. 607

29 May 2009

**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

Equine Management and Equestrian Practices

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

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

Comment on the Qualification should reach SAQA at the address below and **no later than 29 June 2009**. All correspondence should be marked **Standards Setting – SGB for Piano Restoration and Tuning** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. E. Brown

Postnet Suite 248

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D. MPHUTHING**ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT**



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
National Certificate: Equine Practices

SAQA QUAL ID	QUALIFICATION TITLE		
67589	National Certificate: Equine Practices		
ORIGINATOR	PROVIDER		
SGB Equine Management and Equestrian Instruction			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	2 - Culture and Arts	Sport	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	125	Level 3	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:

This qualification provides learners with the opportunity to obtain competencies in equine studies at NQF Level 3, namely, managing an equestrian facility, understanding equine foot care as well as dentition, recognizing and managing stable and un-mounted vices, understanding equine health and nutrition as well as developing some business skills that will allow a learner to manage an equine establishment should they choose to follow that career path. The qualification is the third within the learning pathway of the equine and equestrian practices' industry.

The fundamental learning, which learners will acquire, will allow them to be able to compile verbal and written communications and perform basic calculations.

The qualification aims to produce learners with the ability to succeed in a wide range of careers by developing academic and practical skills. Furthermore, the qualification aims to develop a competitive equine industry and aspire to give the learner an insight into the many different equine related careers that exist.

Rationale:

This qualification will allow persons currently in the equine environment, to obtain an integrated practical and theoretical grounding in the operation of equine establishment and the functions thereof. This will ensure a portable, nationally recognized qualification that will:

- Improve the understanding of the system of an equine, its health care and nutrition requirements as well as general understanding how to operate within this industry.
- Ensure that the animal protection act and other related acts are observed when handling equines.
- Lead to transformation in economic growth and social development.

RECOGNIZE PREVIOUS LEARNING?

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LEARNING ASSUMED IN PLACE

Source: National Learners' Records Database

Qualification 67589

08/05/2009

Page 1

- Communication, Mathematical Literacy NQF Level 2.

Recognition of Prior Learning:

This qualification may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience. Where RPL is required the learner will need to prove applied competence in that specific area in order to obtain recognition of that skill and/or knowledge.

To achieve the qualification through RPL, the learner must submit him/herself to be assessed against the integrated assessment criteria of this qualification, which includes formal, informal and non-formal learning and work experience.

Evidence can be presented in a variety of forms, including international or previous local qualifications, reports, testimonials mentioning functions performed, work records, portfolios, videos of practice and performance records.

This recognition of prior learning may allow:

- Gaining of credits for unit standards in the qualification.
- Obtaining of this qualification in part or in whole.

Access to the Qualification:

Access to this qualification is open to learners who have some occupational experience in the sector. It is advisable that learners should already have addressed the areas reflected under "learning assumed to be in place" before embarking on learning towards this qualification.

QUALIFICATION RULES

The Qualification is made up of a combination of learning outcomes that have a defined purpose and will provide qualifying learners with applied competence and a foundation for further learning. The Qualification is made up of Unit Standards classified as Fundamental, Core and Elective, totalling 125 minimum credits.

Fundamental: 36 credits.

Core: 64 credits.

Elective (min): 25 credits.

Total: 125 credits.

Fundamental Component:

- All the Fundamental Unit Standards totalling 36 credits are compulsory.

Core Component:

- All the Core Unit Standards totalling 64 credits are compulsory.

Elective Component:

- The qualification consists of a number of elective learning covering life skills that the learner need to choose 25 of the available 105 credits.

EXIT LEVEL OUTCOMES

1. Communicate effectively using a range of strategies to identify and deal with equine operational issues.

2. Demonstrate knowledge and understanding of the principles and functioning of equine system and conformation.
3. Demonstrate an understanding of dealing with issues relating to equine health and nutrition.
4. Apply HR and business principles in the management of an equestrian establishment.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

- Verbal and non-verbal communication skills are used effectively in a range of equine management related contexts.
- Appropriate Communication strategies are identified and developed to promote effective functioning of an equine establishment.
- The communication strategy is analysed to inform future practice.

Associated Assessment Criteria for Exit Level Outcome 2:

- Key equine management related principles and concepts are explained with examples.
- The roles and function of different equine systems are discussed in terms of their impact and effect on functioning of the equine.

Associated Assessment Criteria for Exit Level Outcome 3:

- The roles of good health care and nutrition in equines are discussed in terms of their contribution and effect in the general well being of the equine.
- Strategies to promote good equine health are identified and explained.
- Strategies are applied to deal with aspects that will promote good health and nutrition.

Associated Assessment Criteria for Exit Level Outcome 4:

- Gender sensitive indicators are identified, selected and explained to enhance training interventions.
- HR aspects and methodologies that support advising, coaching, mentoring, managing, guiding team on issues that will promote the smooth functioning of an equine establishment are identified and explained.
- Business management knowledge, skills and attributes are discussed and applied in a range of situations in the workplace.

Integrated Assessment:

Unit standards associated with this qualification must be used to assess specific and critical cross-field outcomes. Assessment should focus in an integrated way on determining the competence of the learner in terms of the overall purpose and title of this qualification.

The term integrated assessment also implies that the theoretical and practical components should be assessed together and assess combinations of practical, foundational and reflective competencies.

Assessment activities should be done in real workplace situations and where simulations or role-plays are used, there should be supporting evidence to show that the learner is able to display the competencies to the real work situation.

All assessments should be conducted in line with the following documented principles of assessment: Appropriateness, fairness, manageability and integration into work of learning, validity, direct, authentic, sufficient, systematic, open and consistent.

INTERNATIONAL COMPARABILITY

This Qualification and set of Unit Standards utilizes international and locally recognised best practice and standards. Best practice is found in The International Group for Equestrian qualifications (IGEQ) consisting of 32 member countries that regulates equestrian qualifications on an international scale for its member countries through its qualifications body called, The International Group for Equestrian qualifications which aligns to best practice internationally.

IGEQ comprises the following countries; Austria, Belgium, Bermuda, Canada, China, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Latvia, Lithuania, Malawi, Malaysia, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovenia, Spain, Sweden, Switzerland and United Kingdom. Training within these countries comprises IGEQ recommendations of the following competencies:

- Introduction to Occupational Health and Safety procedures in the equine industry.
- Horse handling and behaviour.
- Horses care.
- Horse nutritional requirements for standardbreds and thoroughbreds.
- Principles of basic anatomy and physiology.
- Monitor horse health.
- Apply the various legislative requirements in Horse handling, care, breeding etc.

The following learning programmes offered by international institutions and organisations were looked at to inform the generation process in terms of specific components of the General Education and Training Certificate: Equine and Equestrian:

- Stable Management and Riding Proficiency offered by The Pony Club.
- Mounted Policing offered by the Metro Police UK and the Royal Canadian Mounted Police.
- Stud Management/Breeding offered by Massey, Kellogg`s.
- Disabled Persons Riding offered by the Federation of Riding for the Disabled International.
- Farriers offered by Farriers USA.
- Complimentary Health Care offered by Equiworks USA.
- Tourism Trail Riding offered by the International Tourism Federation, Ireland.

Qualifications in the qualification frameworks were also evaluated and the following qualifications and unit standards were found to be comparable to this qualification:

New Zealand:

- National Certificate in Equine (Community Coach) (Level 3) Ref 0655.
- National Certificate in Equine (Basic Farriery) (Level 3) Ref 1091.
- NQF Ref: National Certificate in Equine (Stable Practice) (Level 3) Ref 0654.

Australia:

The Certificate III in Horse Industry Practice (Performance Horse) (91189NSW) offered by TAFE and in line with the Australian Qualifications Authority has the following unit of competence:

- Determine nutritional requirements for horses.
- Handle horses safely.
- Apply principles of basic anatomy and physiology to horses.
- Maintain the health and welfare of performance horses.
- Care for performance horses.

United Kingdom:

The British Horse Society was founded in 1947 with the amalgamation of two organisations-the Institute of the Horse and Pony Club, and the National Horse Association of Great Britain. It offers vocational qualifications in the equine field. The aim of these qualification is to produce a clear, coherent and comprehensive system of vocational (occupational) Qualifications that are directly relevant to the needs of employment and the individual. They offer Level 3 in Horse Care and Management Certificate which cover a wide variety of stable management tasks and routines including units involving management and health and safety requirements.

The British Equestrian Federation has the following Equine Ethnology Certificate qualification that has components that compare favourably to General Education and Training Certificate: Equine and Equestrian:

These components are; (a) Horse behaviour theory, (b) Horse behaviour intermediate riding skills freestyle, (c) Understanding house behaviour to develop engagement advanced riding skills A, B,C,D.

There are also a number of training institutions that offer vocational qualifications to prepare students for direct entry into employment or for progression to higher education. These programmes are within the Qualification framework.

NVQs:

National Occupational Standards Title; NVQ/SVQ qualification Structure Titles:

- Animal Care; Animal Care Levels 3.
- Animal Care; Animal Care (Boarding) Level 3.
- Animal Care; Animal Care (Animal Welfare) Level 3.

Conclusion:

This qualification aligns well to international best practice because the South African National Equestrian Federation (SANEF), the body that controls training and certification in South Africa, is affiliated to the Fédération Equestre Internationale (FEI), the international governing body of equestrian sports. It offers SANEF National Instructors' Examinations. Through its membership of the International Group for Equestrian qualifications, holders of the SANEF Instructor's Certificate (Levels 1, 2 or 3) qualify for International Equestrian Passports.

ARTICULATION OPTIONS

Horizontal articulation is possible with the following qualifications:

- ID 49048: National Certificate: Animal Production, NQF Level 3.
- ID 49052: National Certificate: Plant Production, NQF Level 3.

Vertical articulation is possible with the following qualifications:

- FETC: Farming NQF Level 4.
- FETC: Equine Supervision NQF Level 4.

MODERATION OPTIONS

- Anyone assessing a learner against these unit standards must be registered as an assessor with the relevant ETQA.

- Any institution offering learning that will enable achievement of these unit standards or will assess these unit standards must be accredited as a provider with the relevant ETQA. Moderation of assessment will be overseen by the relevant ETQA according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.

- Therefore anyone wishing to be assessed against these unit standards may apply to be assessed by any assessment agency, assessor or provider institution, which is accredited by the relevant ETQA.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

Criteria for the registration of assessors:

- Relevant qualification at NQF Level 4 or higher.
- Registration as an assessor with the relevant ETQA.
- Assessors must be registered as assessors with a relevant ETQA or an ETQA that has a Memorandum of Understanding with the relevant ETQA.

NOTES

N/A

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	5
Fundamental	9010	Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations	Level 3	2
Fundamental	9013	Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 3	4
Fundamental	119457	Interpret and use information from texts	Level 3	5
Fundamental	9012	Investigate life and work related problems using data and probabilities	Level 3	5
Fundamental	119467	Use language and communication in occupational learning programmes	Level 3	5
Fundamental	7456	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	Level 3	5
Fundamental	119465	Write/present/sign texts for a range of communicative contexts	Level 3	5
Core	119713	Apply basic HR principles in a new venture	Level 3	4
Core	8000	Apply basic business principles	Level 3	9
Core	116534	Carry out basic first aid treatment in the workplace	Level 3	2
Core	265077	Demonstrate an understanding of Equine dentition	Level 3	4
Core	265078	Demonstrate knowledge of the elements of equine feeding and nutrition	Level 3	5
Core	265056	Demonstrate an understanding of Equine Hoof Care	Level 3	5
Core	265080	Describe functional system and physiology of an equine	Level 3	10
Core	265079	Lunge a novice equine for training and exercise	Level 3	8
Core	265075	Manage an equestrian facility	Level 3	5
Core	265054	Understand equine health and wellbeing	Level 3	12
Elective	244574	Apply knowledge of HIV/AIDS to a specific business sector and a workplace	Level 3	4
Elective	13912	Apply knowledge of self and team in order to develop a plan to enhance team performance	Level 3	5
Elective	244611	Apply problem-solving techniques to make a decision or solve a problem in a real life context	Level 3	2
Elective	265076	Demonstrate an understanding of ancillary tack for the Equine	Level 3	5
Elective	262439	Demonstrate an understanding of information pertaining to a race horse in racing documents	Level 3	6
Elective	120107	Demonstrate knowledge and understanding of the business cycle in a small business	Level 3	10

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Elective	244571	Describe how to manage anxiety and depression in the workplace	Level 3	2
Elective	244581	Describe how to manage substance abuse and addiction in the workplace	Level 3	2
Elective	265055	Develop riding proficiency and basic schooling of horses	Level 3	8
Elective	244589	Identify causes of stress and techniques to manage it in the workplace	Level 3	2
Elective	116492	Interact ethically in multicultural contexts	Level 3	6
Elective	262477	Interact with the stipendiary board at the race course	Level 3	4
Elective	13936	Outline the legal environment of a selected industry	Level 3	2
Elective	262417	Read a horse race	Level 3	8
Elective	265074	Utilise an Equine for patrols in a law enforcement environment to ensure visibility	Level 3	4
Elective	262377	Demonstrate an understanding of basic horse racing strategies	Level 4	4
Elective	242811	Prioritise time and work for self and team	Level 4	5

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION

None

No. 608

29 May 2009

**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


Inclusive Education

registered by Organising Field 05 – Education, Training and Development, 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 29 June 2009**. All correspondence should be marked **Standards Setting – SGB** for Inclusive Education and addressed to

The Director: Standards Setting and Development
SAQA
Attention: Mr. E. Brown
Postnet Suite 248
Private Bag X06
Waterkloof
0145
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e-mail: ebrown@saqa.org.za


D. MPHUTHING
ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:

National Diploma: Orientation and Mobility Practice

SAQA QUAL ID	QUALIFICATION TITLE		
67373	National Diploma: Orientation and Mobility Practice		
ORIGINATOR		PROVIDER	
SGB Inclusive Education			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Diploma	5 - Education, Training and Development	Adult Learning	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	241	Level 5	Regular-Unit Stds Based

This qualification replaces:

Qual ID	Qualification Title	NQF Level	Min Credits	Replacement Status
49087	National Diploma: Orientation and Mobility Practice for Blind and Partially Sighted Persons	Level 5	248	Will occur as soon as 67373 is registered

PURPOSE AND RATIONALE OF THE QUALIFICATION**Purpose:**

The purpose of the Qualification is to ensure that practitioners are capable of enabling persons who are who are blind or partially sighted to be functionally independent by teaching them effective and appropriate orientation, mobility and skills of daily living. Such life skills will empower people who are blind or partially sighted and promote educational, social and economic inclusivity. The Qualification and its components are suited to train professionals who educate and train, as well as non-professionals such as parents and caregivers who are in contact with persons who are blind or partially sighted. The Qualification provides learners with the competencies to advocate for the necessity of Orientation and Mobility competence for people who are blind or partially sighted.

The qualified learners will support people who are blind or partially sighted to enhance the quality of their lives, promote inclusion in the community and benefit the economy by adding to the competency pool and employability of people who are blind or partially sighted. An O&M Instructor needs to liaise closely with other professionals, particularly in the fields of health, education and social work, and with the client's family members. Qualified learners will be capable of:

- Understanding O&M fundamental knowledge.
- Orientating self and travelling whilst experiencing a visual barrier.
- Facilitating learning for blind and partially sighted persons.
- Providing support services to blind and partially sighted persons.

Rationale:

An Orientation and Mobility (O&M) Practitioner's work in the health and disability sector with people of all ages. O&M clients all have some form of vision impairment. Many have other disabilities too, such as acquired brain injury, hearing loss, intellectual disability and

communication difficulties. An Orientation and Mobility Practitioner assesses a client's mobility needs, then develops and delivers individual or group programs which address these needs. O&M Practitioner's monitor clients in dynamic environments, teaching skills and developing concepts which help to increase the client's level of independent travel. They teach the use of specialised aids such as long canes, electronic mobility aids and monoculars.

This National Diploma in Orientation and Mobility (O&M) Practice at NQF Level 5 will equip qualified learners with the skills and knowledge to facilitate the independence of persons who are blind or partially sighted to enhance their quality of life. There is currently a wide divide between the number of blind and partially sighted persons that require the services of an O&M Practitioner and the number of qualified and available O&M Practitioners. The availability of this Qualification will positively contribute to bridging this divide. While the continued supply of qualified O&M Practitioners is desired, an increased output is the sector goal. This Qualification will serve to provide the opportunity for this goal to be met.

The services of an O&M Practitioner is vital to the blind and partially sighted persons in the South African society as it enhances the quality of their lives. These services involve a wide range of competencies that relate to daily living such as independence, traveling, use of assistive devices and orientation.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED IN PLACE

The design and credits of this Qualification are based on the assumptions that learners have already attained the following competencies, before embarking on learning towards this Qualification:

- Communication 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 is 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.

QUALIFICATION RULES

A minimum of 241 Credits must be achieved for award of the Qualification:

- All the Fundamental Component Unit Standards are compulsory (51 credits).
- All the Core Component Unit Standards are compulsory (145 credits).
- For the Elective Component learners are required to attain a minimum of 45 Credits.

The qualifying learner will select one of the following clusters of unit standards related to each stream of learning:

Life Skills stream comprises the following Elective Unit Standards:

- 252513: Apply established strategies and procedures to deal with risk behaviour and promote personal wellbeing, Level 4, 3 Credits.
- 252697: Demonstrate knowledge and understanding of an individual's rights in a specific helping context, Level 4, 3 Credits.
- 117845: Restore and build relationships in dealing with conflict, Level 5, 8 Credits.
- 117863: Promote health and wellness in a selected context, Level 4, 2 Credits.
- 116493: Demonstrate understanding of tolerance in human relations, Level 4, 6 Credits.

Workplace Skills stream comprises the following Elective Unit Standards:

- 120385: Apply a range of project management tools and techniques, Level 4, 7 Credits.
- 116928: Manage diversity in the workplace, Level 5, 14 Credits.
- 119767: Build relationships for development practice, Level 5, 12 Credits.

Recreation/Sport stream comprises the following Elective Unit Standards:

- 10220: Include persons with disabilities in sport, recreation or fitness activities, Level 5, 5 Credits.
- 244585: Coach people with disabilities, Level 5, 15 Credits.
- 243299: Adapt available spaces in the community as a sports or fitness facility, Level 4, 5 Credits.
- 10210: Apply principles of sport and exercise physiology, Level 5, 15 Credits.
- 14480: Coaching sport to intermediate and/or advanced level performers with disabilities, Level 5, 5 Credits.
- 254456: Explain the principles of physical activity in the context of sport or fitness, Level 4, 3 Credits.
- 244594: Identify and recommend support needs of people with disabilities, Level 5, 8 Credits.

Braille and related services stream comprises the following Elective Unit Standards:

- 117857: Prepare Braille reading readiness, Level 5, 10 Credits.
- 117872: Read and write fully contracted standard Braille in any one language, Level 5, 15 Credits.
- 117095: Facilitate optimal functioning for persons who are blind and partially sighted in controlled environments, Level 4, 15 Credits.

Children/Youth stream comprises the following Elective Unit Standards:

- 117505: Educate and support parents in childcare, Level 4, 12 Credits.
- 244485: Design activities to support the development of babies, toddlers and young children, Level 5, 8 Credits.
- 244475: Observe and report on child development, Level 4, 6 Credits.
- 13856: Facilitate an inclusive educational environment in ECD settings, Level 5, 12 Credits.
- 117094: Facilitate the development of quality of life skills of children who are blind and partially sighted, Level 5, 20 Credits.

Facilitate/Inclusion stream comprises the following Elective Unit Standards:

- 119763: Design learning events, Level 5, 8 Credits.
- 10290: Evaluate, select and adapt published learning materials and develop, use and evaluate own supplementary learning aids, Level 5, 12 Credits.
- 119273: Assist in creating an inclusive environment, Level 4, 4 Credits.
- 119272: Identify levels of support needed for inclusion, Level 4, 13 Credits.
- 252491: Analyse and apply legislation, policies, theory and principles to promote inclusion, Level 5, 12 Credits.

- 10292: Conduct research and liaison relevant to the learning situation, Level 5, 10 Credits.

EXIT LEVEL OUTCOMES

1. Understand Orientation and Mobility fundamental knowledge.
2. Orientate self and travel whilst experiencing a visual barrier.
3. Facilitate learning for blind or partially sighted persons.
4. Provide support services to blind and partially sighted persons.

Critical Cross-Field Outcomes:

The learner is able to demonstrate ability to:

- Identify and solve problems in which responses show that responsible decisions using critical and creative thinking have been made in order use a range of strategies to create an inclusive learning and teaching environment for learners who are blind or partially sighted.
- Work effectively with others as a member of a team, group, organisation or community in order to create an enabling environment for learners experiencing barriers to learning and development.
- Organise and manage him/herself and his/her own activities responsibly and effectively through professional and ethical conduct and in accordance with organisational processes, procedures and requirements.
- Collect, organise and critically evaluate information by screening potential barriers and strengths, and assessing the needs of the learners who are blind or partially sighted as well as determining required levels of support and appropriate interventions.
- Communicate effectively by collaborating with stakeholders and support services on the needs and development of learners who are blind or partially sighted.
- Use science and technology effectively and safely in facilitating the use of assistive devices for the orientation and mobility of blind or partially sighted persons.
- Demonstrate an understanding of the world as a set of related systems by understanding the relationship between internal and external support structures and how these impact on the short term interventions and the long term effect on blind or partially sighted persons.
- Reflect on and explore a variety of strategies to learn more effectively by evaluating strengths and weaknesses which can help to inform future planning and practice.
- Participate as a responsible citizen in the life of local, national and global communities by contributing towards creating an enabling inclusive setting for blind or partially sighted persons.
- Demonstrate cultural sensitivity across a range of inclusive settings by applying the principles of human rights and knowledge of inclusivity in order to accommodate different learning styles and strategies.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

- 1.1 Stages in the development of children in each domain are described in line with existing theories.
- 1.2 Factors that enable the development of children in each domain are identified in line with relevant existing theories.
- 1.3 Medical conditions that may cause loss of vision are evaluated in terms of the impact on the individual.
- 1.4 Orientation and Mobility intervention programme is developed in relation to medical and other conditions that impact on training.

Associated Assessment Criteria for Exit Level Outcome 2:

- 2.1 Environmental information and personal abilities are assessed in order to orientate self in a controlled environment.
- 2.2 Orientation plan is developed, implemented and evaluated in relation to a specific context and organisational procedures.
- 2.3 Sighted guide techniques are applied in accordance with client needs and ability as well as Orientation and Mobility practice.
- 2.4 Pre-cane mobility techniques and adaptations are applied in accordance with client needs and ability as well as Orientation and Mobility practice.
- 2.5 Cane techniques and adaptations are applied in accordance with client needs and ability as well as Orientation and Mobility practice.

Associated Assessment Criteria for Exit Level Outcome 3:

- 3.1 Facilitation is planned, implemented and evaluated in line with selected methodologies associated with blind or partially sighted persons.
- 3.2 The impact of barriers to learning and development is analysed in relation to the learning process.
- 3.3 An inclusive learning programme is planned, implemented and evaluated in relation to facilitation of blind or partially sighted persons.
- 3.4 Daily living skills programme is facilitated in line with the developed programmes and individual requirements.
- 3.5 Techniques and adaptations used to enhance visual functioning is facilitated according to client needs and preference.
- 3.6 Travel through a complex route is facilitated using techniques to enhance functional use of vision for persons experiencing low vision.

Associated Assessment Criteria for Exit Level Outcome 4:

- 4.1 Maps are planned, constructed and used to facilitate safe and optimal travel along specific routes.
- 4.2 Supportive techniques, basic assistive devices and adaptations are applied according to individual and/or group requirements.
- 4.3 Advocacy plans are developed and implemented in collaboration with relevant stakeholders in relation to a specific campaign.
- 4.4 Referral process is implemented in consultation with the service provider, client and other stakeholders according to organisational procedures.
- 4.5 A counselling process to counsel an individual is implemented and evaluated using appropriate skills and techniques according to organisational procedures.

Integrated Assessment:

The assessment criteria of the unit standards are performance-based, assessing applied competence rather than only knowledge, or skills. In addition, learners must demonstrate that they can achieve the outcomes in an integrated manner, dealing effectively with different and random demands related to the environmental conditions in occupational contexts, to qualify. Evidence is required that the learner is able to achieve the exit level outcomes of the Qualification as a whole and thus its purpose, at the time of the award of the Qualification. Workplace experience can be recognised when assessing towards this Qualification.

INTERNATIONAL COMPARABILITY

Most orientation and mobility Qualifications are delivered in the United Kingdom and the United States of America. South Africa is the only African country with recorded orientation and mobility training.

In the United Kingdom, a two-year Diploma in Higher Education in Rehabilitation Studies is the equivalent of this South African Qualification. It contains an equivalent number of credits (240

credits) at the same level as this Qualification. Competencies addressed in the Qualification are equivalent with the exception of the United Kingdom Qualification addressing competencies related to the management of leisure and recreation, counselling/interpersonal skills (the South African Qualification requires referral to professionals such as psychologists) and reading and writing Grade 2 Braille. The equivalent competencies include (for 20 credits each):

- Communications.
- Independent Living Skills.
- Orientation and Mobility.
- Social Studies/Client Assessment.
- The Eye and Low Vision/Audiology.
- Teaching and Learning.
- Multiple Disability/Dual Sensory Loss (this is an elective in the South African Qualification).

The Qualification includes two practice placements. The South African Qualification addresses advocacy, research, travel and orientation through controlled environments whilst experiencing a visual barrier, and business development (elective) competence, not included in the United Kingdom Qualification.

The New Zealand framework has a Post Graduate Diploma in Rehabilitation specialising in rehabilitation of the visually impaired (Orientation and Mobility). The Qualification is shorter than the South African Diploma, as it consists of the equivalent of 160 credits, including a practice placement. The Qualification includes:

- Theory and Practice in Rehabilitation.
- Education and Rehabilitation of the Visually Impaired.
- Adaptive Communication and Activities of Daily Living.
- Orientation and Mobility.

The South African Qualification addresses all the above components, and also advocacy, travel and orientation through controlled environments whilst experiencing a visual barrier, specialisation in orientation and mobility training for children (elective) and business development (also elective).

In the United States of America, a degree (equivalent to South African NQF Level 6) and a Master of Arts in Rehabilitation of the Blind specialising in Orientation and Mobility is offered (equivalent to South African NQF Level 7), that is longer than the South African Qualification (between 300 and 360 credits) and includes an internship. The Masters Qualification (closer equivalent to the South African Qualification) includes:

- Orientation and mobility instruction.
- Rehabilitation teaching.
- Blindfold simulation classes.
- An introduction to rehabilitation.
- Medical Aspects of Blindness and Associated Disabilities.
- Psychological Aspects of Disability.
- Low Vision Implications.
- Introduction of Methods of Mobility.
- Principles of O&M.
- Introduction to Research (elective).
- Managing the Learning Environment.
- Techniques of the Counselling Interview.
- Advanced Methods of Mobility.

The South African Qualification appears to be equivalent-except for rehabilitation teaching and counselling-and addresses competencies not included in the above Master of Arts, such as advocacy, business development, communication, and specialising in training of children.

The Australian equivalent offering is the Graduate Diploma in Orientation and Mobility as offered at La Trobe University, Victoria. The duration of the programme on a full-time basis is one year. Students complete 70 hours compulsory placement mid-year. A voluntary internship (180 hours) is undertaken after completion of Semester 2. Students are eligible to graduate without completing this internship, but it is a requirement of the Orientation and Mobility profession in Australia.

Units of learning include:

- Retinal Disorders 15.
- Management Rehabilitation 15.
- Theory of Orientation and Mobility A 15.
- Orientation and Mobility Methods A 15.
- Neurosciences A 5.
- Anterior Segment 15.
- Theory of Orientation and Mobility B 15.
- Orientation and Mobility Methods B 15.
- Elective 10+.

This list of learning units suggest a similarity with the South African unit standards on medical conditions, daily living skills, orientation, mapping, assistive devices and facilitation. However, the South African Qualification goes beyond the essentials of Orientation and Mobility to include competencies required to function in an organisation and to provide support services.

Conclusion:

All the Qualifications compared include the fundamental knowledge of medical conditions that impact on the blind and partially sighted as well as the essential elements of Orientation and Mobility such as independence training, orientation, mobility or travel, low vision, supportive techniques and assistive devices. The South African Qualification differs from these international equivalents in that it goes beyond the narrow focus of the O&M Practitioner to include the competencies to provide a wider array of support services such as advocacy, counselling and referrals.

ARTICULATION OPTIONS

The National Diploma in Orientation and Mobility Practice, Level 5 lends itself to both vertical and horizontal articulation. Examples of horizontal articulation:

- ID 49277: National Diploma in Braille Practice, Level 5.
- ID 59429: National Certificate: Inclusive Education, Level 5.

Examples of vertical articulation:

- ID 50330: Bachelor: Occupationally Directed Education Training and Development Practices, Level 6.
- ID 12159: Advanced Diploma: Hearing Aid Acoustics, Level 6.

MODERATION OPTIONS

Moderation of assessment and accreditation of providers shall be at the discretion of a relevant ETQA as long as it complies with SAQA requirements. The ETQA is responsible for moderation of 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 time of assessment of competence, 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 is conducted by 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.

NOTES

This qualification replaces qualification 49087, "National Diploma: Orientation and Mobility Practice for Blind and Partially Sighted Persons", Level 5, 248 credits.

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	264937	Demonstrate understanding of communication methods for blind and partially sighted persons	Level 4	12
Fundamental	119662	Describe the relevance of human rights and democratic practices in South African society	Level 4	8
Fundamental	115753	Conduct outcomes-based assessment	Level 5	15
Fundamental	252027	Devise and apply strategies to establish and maintain workplace relationships	Level 5	6
Fundamental	117876	Write reports regarding learner progress	Level 5	10
Core	260379	Assist with planning and implementing advocacy campaigns for primary health care	Level 4	10
Core	252512	Counsel an individual in a structured environment	Level 4	12
Core	244484	Demonstrate knowledge and understanding of the development of babies, toddlers and young children	Level 4	8
Core	264955	Demonstrate understanding of specific medical conditions that impact on the planning of independence training programmes for blind and partially sighted persons	Level 5	12
Core	252494	Develop and use assistive devices for learners experiencing barriers to learning and development	Level 5	10
Core	264956	Develop daily living skills to enhance independence in blind and partially sighted persons	Level 5	15

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Core	252492	Develop inclusive learning programmes that enable participation of learners experiencing barriers to learning and development	Level 5	10
Core	264958	Enhance visual functioning of persons with low vision to improve quality of life	Level 5	12
Core	117871	Facilitate learning using a variety of given methodologies	Level 5	10
Core	264934	Map aspects of the environment for persons who are blind and partially sighted	Level 5	15
Core	264954	Orientate self to the environment whilst experiencing a visual barrier	Level 5	8
Core	244610	Refer a person with a disability to specialised services	Level 5	8
Core	264935	Travel through environments whilst experiencing a visual barrier	Level 5	15
Elective	243299	Adapt available spaces in the community as a sports or fitness facility	Level 4	5
Elective	120385	Apply a range of project management tools and techniques	Level 4	7
Elective	252513	Apply established strategies and procedures to deal with risk behaviour and promote personal wellbeing	Level 4	3
Elective	119273	Assist in creating an inclusive environment	Level 4	4
Elective	252697	Demonstrate knowledge and understanding of an individual's rights in a specific helping context	Level 4	3
Elective	116493	Demonstrate understanding of tolerance in human relations	Level 4	6
Elective	117505	Educate and support parents in childcare	Level 4	12
Elective	254456	Explain the principles of physical activity in the context of sport or fitness	Level 4	3
Elective	117095	Facilitate optimal functioning for persons who are blind and partially sighted in controlled environments	Level 4	15
Elective	119272	Identify levels of support needed for inclusion	Level 4	13
Elective	244475	Observe and report on child development	Level 4	6
Elective	117863	Promote health and wellness in a selected context	Level 4	2
Elective	252491	Analyse and apply legislation, policies, theory and principles to promote inclusion	Level 5	12
Elective	10210	Apply principles of sport and exercise physiology	Level 5	15
Elective	119767	Build relationships for development practice	Level 5	12
Elective	244585	Coach people with disabilities	Level 5	15
Elective	14480	Coaching sport to intermediate and/or advanced level performers with disabilities	Level 5	5
Elective	10292	Conduct research and liaison relevant to the learning situation	Level 5	10
Elective	244485	Design activities to support the development of babies, toddlers and young children	Level 5	8
Elective	119763	Design learning events	Level 5	8
Elective	10290	Evaluate, select and adapt published learning materials and develop, use and evaluate own supplementary learning aids	Level 5	12
Elective	13856	Facilitate an inclusive educational environment in ECD settings	Level 5	12
Elective	264936	Facilitate optimal functioning for persons who are blind and partially sighted in controlled environments	Level 5	15
Elective	117094	Facilitate the development of quality of life skills of children who are blind and partially sighted	Level 5	20
Elective	264957	Facilitate the development of quality of life skills of children who are blind and partially sighted	Level 5	20
Elective	244594	Identify and recommend support needs of people with disabilities	Level 5	8
Elective	10220	Include persons with disabilities in sport, recreation or fitness activities	Level 5	5
Elective	116928	Manage diversity in the workplace	Level 5	14
Elective	117857	Prepare Braille reading readiness	Level 5	10
Elective	117872	Read and write fully contracted standard Braille in any one language	Level 5	15
Elective	117845	Restore and build relationships in dealing with conflict	Level 5	8

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION**None**



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Map aspects of the environment for persons who are blind and partially sighted

SAQA US ID	UNIT STANDARD TITLE		
264934	Map aspects of the environment for persons who are blind and partially sighted		
ORIGINATOR	PROVIDER		
SGB Inclusive Education			
FIELD	SUBFIELD		
5 - Education, Training and Development	Adult Learning		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	15

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117091	Map aspects of the environment for persons who are blind and partially sighted	Level 5	15	Will occur as soon as 264934 is registered

SPECIFIC OUTCOME 1

Identify needs of people who are blind and partially sighted in order to enhance mobility.

SPECIFIC OUTCOME 2

Plan maps to suit persons who are blind or partially sighted.

SPECIFIC OUTCOME 3

Construct maps that enhance the mobility of persons who are blind and partially sighted.

SPECIFIC OUTCOME 4

Use maps to enhance the mobility of persons who are blind or partially sighted.

SPECIFIC OUTCOME 5

Evaluate the effectiveness of maps in relation to purpose.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	67373	National Diploma: Orientation and Mobility Practice	Level 5



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Travel through environments whilst experiencing a visual barrier

SAQA US ID	UNIT STANDARD TITLE		
264935	Travel through environments whilst experiencing a visual barrier		
ORIGINATOR	PROVIDER		
SGB Inclusive Education			
FIELD	SUBFIELD		
5 - Education, Training and Development	Adult Learning		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	15

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117090	Travel through environments whilst experiencing a visual barrier	Level 5	15	Will occur as soon as 264935 is registered

SPECIFIC OUTCOME 1

Explain the various methods of travel used by blind and partially sighted persons.

SPECIFIC OUTCOME 2

Use sighted guide techniques for purposeful mobility.

SPECIFIC OUTCOME 3

Employ techniques for travel without the use of mobility aids.

SPECIFIC OUTCOME 4

Use a long cane for mobility in indoor and outdoor environments.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	67373	National Diploma: Orientation and Mobility Practice	Level 5



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Facilitate optimal functioning for persons who are blind and partially sighted in controlled environments

SAQA US ID	UNIT STANDARD TITLE		
264936	Facilitate optimal functioning for persons who are blind and partially sighted in controlled environments		
ORIGINATOR	PROVIDER		
SGB Inclusive Education			
FIELD	SUBFIELD		
5 - Education, Training and Development	Adult Learning		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	15

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117095	Facilitate optimal functioning for persons who are blind and partially sighted in controlled environments	Level 4	15	Will occur as soon as 264936 is registered

SPECIFIC OUTCOME 1

Describe the role and responsibilities of facilitating the independence of persons who are blind and partially sighted

SPECIFIC OUTCOME 2

Facilitate independent functioning of persons who are blind and partially sighted.

SPECIFIC OUTCOME 3

Facilitate the learning of sighted guide skills by persons who are blind and partially sighted.

SPECIFIC OUTCOME 4

Facilitate pre-cane techniques for independent travel without a mobility aid in a controlled environment.

SPECIFIC OUTCOME 5

Facilitate orientation in a controlled environment.

SPECIFIC OUTCOME 6

Access support services for persons who are blind and partially sighted.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

ID	QUALIFICATION TITLE	LEVEL
Elective 67373	National Diploma: Orientation and Mobility Practice	Level 5



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate understanding of communication methods for blind and partially sighted persons

SAQA US ID	UNIT STANDARD TITLE		
264937	Demonstrate understanding of communication methods for blind and partially sighted persons		
ORIGINATOR		PROVIDER	
SGB Inclusive Education			
FIELD	SUBFIELD		
5 - Education, Training and Development		Adult Learning	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	12

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

SPECIFIC OUTCOME 1

Read, write and edit Grade 1 Braille.

SPECIFIC OUTCOME 2

Apply other forms of tactile communication.

SPECIFIC OUTCOME 3

Facilitate the use and maintenance of handwriting skills.

SPECIFIC OUTCOME 4

Apply forms of communication for Deaf-Blind persons.

SPECIFIC OUTCOME 5

Use technology in communication.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

ID	QUALIFICATION TITLE	LEVEL
Fundamental 67373	National Diploma: Orientation and Mobility Practice	Level 5



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Orientate self to the environment whilst experiencing a visual barrier*

SAQA US ID	UNIT STANDARD TITLE		
264954	Orientate self to the environment whilst experiencing a visual barrier		
ORIGINATOR		PROVIDER	
SGB Inclusive Education			
FIELD		SUBFIELD	
5 - Education, Training and Development		Adult Learning	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	8

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117088	Orientate self to the environment whilst experiencing a visual barrier	Level 5	10	Will occur as soon as 264954 is registered

SPECIFIC OUTCOME 1

Assess factors needed to orientate self in the environment.

SPECIFIC OUTCOME 2

Identify environmental information in order to orientate self.

SPECIFIC OUTCOME 3

Select information from the environment within various contexts.

SPECIFIC OUTCOME 4

Implement the orientation plan.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	67373	National Diploma: Orientation and Mobility Practice	Level 5



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate understanding of specific medical conditions that impact on the planning of independence training programmes for blind and partially sighted persons

SAQA US ID		UNIT STANDARD TITLE	
264955		Demonstrate understanding of specific medical conditions that impact on the planning of independence training programmes for blind and partially sighted persons	
ORIGINATOR		PROVIDER	
SGB Inclusive Education			
FIELD		SUBFIELD	
5 - Education, Training and Development		Adult Learning	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	12

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

SPECIFIC OUTCOME 1

Explain the basic functioning of the visual and auditory systems.

SPECIFIC OUTCOME 2

Explain medical disorders and diseases that may lead to blindness and partial sightedness.

SPECIFIC OUTCOME 3

Explain the common conditions that impact on training of the blind and partially sighted person.

SPECIFIC OUTCOME 4

Apply knowledge of medical conditions to develop appropriate O&M interventions.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	67373	National Diploma: Orientation and Mobility Practice	Level 5



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Develop daily living skills to enhance independence in blind and partially sighted persons

SAQA US ID	UNIT STANDARD TITLE		
264956	Develop daily living skills to enhance independence in blind and partially sighted persons		
ORIGINATOR		PROVIDER	
SGB Inclusive Education			
FIELD		SUBFIELD	
5 - Education, Training and Development		Adult Learning	
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

Facilitate the learning of skills to carry out household tasks independently.

SPECIFIC OUTCOME 2

Facilitate the learning of personal management skills.

SPECIFIC OUTCOME 3

Facilitate participation in sports and leisure activities.

SPECIFIC OUTCOME 4

Implement a daily living skills learning programme.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	67373	National Diploma: Orientation and Mobility Practice	Level 5



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Facilitate the development of quality of life skills of children who are blind and partially sighted

SAQA US ID	UNIT STANDARD TITLE		
264957	Facilitate the development of quality of life skills of children who are blind and partially sighted		
ORIGINATOR	PROVIDER		
SGB Inclusive Education			
FIELD	SUBFIELD		
5 - Education, Training and Development	Adult Learning		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	20

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117094	Facilitate the development of quality of life skills of children who are blind and partially sighted	Level 5	20	Will occur as soon as 264957 is registered

SPECIFIC OUTCOME 1

Recognise current competence, emotional state and areas of potential of children who are blind and partially sighted.

SPECIFIC OUTCOME 2

Motivate children to acquire orientation and mobility competencies.

SPECIFIC OUTCOME 3

Facilitate the acquisition of orientation and mobility competencies in children who are blind and partially sighted.

SPECIFIC OUTCOME 4

Facilitate the acquisition of learning styles in children who are blind and partially sighted.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67373	National Diploma: Orientation and Mobility Practice	Level 5



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Enhance visual functioning of persons with low vision to improve quality of life*

SAQA US ID	UNIT STANDARD TITLE		
264958	Enhance visual functioning of persons with low vision to improve quality of life		
ORIGINATOR	PROVIDER		
SGB Inclusive Education			
FIELD	SUBFIELD		
5 - Education, Training and Development	Adult Learning		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	12

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

SPECIFIC OUTCOME 1

Identify needs of persons with low vision.

SPECIFIC OUTCOME 2

Assess the impact of environments on the use of functional vision.

SPECIFIC OUTCOME 3

Select and apply techniques to enhance/improve the use of functional vision.

SPECIFIC OUTCOME 4

Facilitate the integration of skills to enhance the use of functional vision with independent travel through complex environments.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

ID	QUALIFICATION TITLE	LEVEL
Core 67373	National Diploma: Orientation and Mobility Practice	Level 5

No. 609

29 May 2009

**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

Manufacturing and Assembly Processes

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 level and credits of the Unit Standards. The full Unit Standards can be accessed via the SAQA web-site at www.saq.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 29 June 2009**. All correspondence should be marked **Standards Setting – SGB for Manufacturing and Assembly Processes** and addressed to

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


D. MPHUTHING

ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Assemble switchgear assembly***

SAQA US ID	UNIT STANDARD TITLE		
264997	Assemble switchgear assembly		
ORIGINATOR	PROVIDER		
SGB Manufacturing and Assembly Processes			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	12

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

SPECIFIC OUTCOME 1

Plan and prepare for switchgear enclosure assembly.

SPECIFIC OUTCOME 2

Assemble enclosures.

SPECIFIC OUTCOME 3

Fit switchgear components.

SPECIFIC OUTCOME 4

Identify and consider switchgear assembly access and termination requirements.

SPECIFIC OUTCOME 5

Communicate switchgear assembly fabrication difficulties.

SPECIFIC OUTCOME 6

Verify correctness of switchgear assembly.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Install earthing systems and shrouding on switchgear assembly

SAQA US ID	UNIT STANDARD TITLE		
264999	Install earthing systems and shrouding on switchgear assembly		
ORIGINATOR	PROVIDER		
SGB Manufacturing and Assembly Processes			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

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

SPECIFIC OUTCOME 1

Demonstrate knowledge of the regulations applicable to earthing and shrouding of switchgear assembly.

SPECIFIC OUTCOME 2

Install switchgear assembly earthing systems.

SPECIFIC OUTCOME 3

Fabricate and install switchgear assembly shrouding.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Fabricate and install busbars***

SAQA US ID		UNIT STANDARD TITLE	
265002		Fabricate and install busbars	
ORIGINATOR		PROVIDER	
SGB Manufacturing and Assembly Processes			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Manufacturing and Assembly	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	8

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

SPECIFIC OUTCOME 1

Make single bends in busbars as per mechanical drawings.

SPECIFIC OUTCOME 2

Achieve specified busbar sets.

SPECIFIC OUTCOME 3

Punch or drill holes in busbars.

SPECIFIC OUTCOME 4

Install busbars and bracing systems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate an understanding of switchgear assembly

SAQA US ID	UNIT STANDARD TITLE		
265005	Demonstrate an understanding of switchgear assembly		
ORIGINATOR		PROVIDER	
SGB Manufacturing and Assembly Processes			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Manufacturing and Assembly	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	3

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

SPECIFIC OUTCOME 1

Demonstrate knowledge of the principles of switchgear assembly.

SPECIFIC OUTCOME 2

Demonstrate an understanding of the application of switchgear assembly in industry.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate knowledge of legislation and standards relevant to the switchgear assembly industry

SAQA US ID		UNIT STANDARD TITLE	
265007		Demonstrate knowledge of legislation and standards relevant to the switchgear assembly industry	
ORIGINATOR		PROVIDER	
SGB Manufacturing and Assembly Processes			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Manufacturing and Assembly	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	3

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

SPECIFIC OUTCOME 1

Demonstrate awareness and knowledge of regulations relevant to the manufacture of switchgear assemblies.

SPECIFIC OUTCOME 2

Demonstrate knowledge of the application of regulations relevant to the manufacture of switchgear assemblies.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Modify installed switchgear assemblies

SAQA US ID	UNIT STANDARD TITLE		
265008	Modify installed switchgear assemblies		
ORIGINATOR	PROVIDER		
SGB Manufacturing and Assembly Processes			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

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

SPECIFIC OUTCOME 1

Isolate switchgear assemblies.

SPECIFIC OUTCOME 2

Modify and test switchgear assemblies.

SPECIFIC OUTCOME 3

Re-power switchgear assemblies.

SPECIFIC OUTCOME 4

Document switchgear assembly modifications.

SPECIFIC OUTCOME 5

Communicate switchgear assembly fabrication difficulties.

SPECIFIC OUTCOME 6

Verify correctness of switchgear assembly.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Perform production testing of switchgear assembly***

SAQA US ID		UNIT STANDARD TITLE	
265014		Perform production testing of switchgear assembly	
ORIGINATOR		PROVIDER	
SGB Manufacturing and Assembly Processes			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Manufacturing and Assembly	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

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

SPECIFIC OUTCOME 1

Demonstrate knowledge of switchgear assembly testing.

SPECIFIC OUTCOME 2

Prepare to test electric switchgear assemblies.

SPECIFIC OUTCOME 3

Test electric switchgear assemblies.

SPECIFIC OUTCOME 4

Check and set protection devices.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate knowledge of busbar design

SAQA US ID	UNIT STANDARD TITLE		
265015	Demonstrate knowledge of busbar design		
ORIGINATOR	PROVIDER		
SGB Manufacturing and Assembly Processes			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	4

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

SPECIFIC OUTCOME 1

Determine switchgear assembly busbar sizes.

SPECIFIC OUTCOME 2

Describe methods of mounting and spacing busbars.

SPECIFIC OUTCOME 3

Explain the effects of temperature and fault levels on busbars.

SPECIFIC OUTCOME 4

Describe parallel busbar effects.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate knowledge of switchgear assembly components and their representation on drawings

SAQA US ID	UNIT STANDARD TITLE		
265034	Demonstrate knowledge of switchgear assembly components and their representation on drawings		
ORIGINATOR		PROVIDER	
SGB Manufacturing and Assembly Processes			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Manufacturing and Assembly	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	8

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

SPECIFIC OUTCOME 1

Describe and identify switchgear components.

SPECIFIC OUTCOME 2

Describe and identify cable types.

SPECIFIC OUTCOME 3

Describe and identify busbars and busbar coatings.

SPECIFIC OUTCOME 4

Demonstrate knowledge of switchgear assembly drawings.

SPECIFIC OUTCOME 5

Interpret switchgear symbols and variables.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None

No. 610

29 May 2009

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

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Manufacturing and Assembly Processes

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

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Comment on the Unit Standards should reach SAQA at the address below and **no later than 29 June 2009**. All correspondence should be marked **Standards Setting – SGB for Manufacturing and Assembly Processes** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. E. Brown

Postnet Suite 248


Private Bag X06

Waterkloof

0145

or faxed to 012 – 431-5144

e-mail: ebrown@saqa.org.za


D. MPHUTHING**ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT**



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Transport and store material in a manufacturing and assembly process***

SAQA US ID	UNIT STANDARD TITLE		
264994	Transport and store material in a manufacturing and assembly process		
ORIGINATOR		PROVIDER	
SGB Manufacturing and Assembly Processes			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Manufacturing and Assembly	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

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

SPECIFIC OUTCOME 1

Determine material requirements from schedule.

SPECIFIC OUTCOME 2

Collect materials, components and products.

SPECIFIC OUTCOME 3

Deliver materials, components and products.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Paint metal surfaces and products***

SAQA US ID		UNIT STANDARD TITLE	
264995		Paint metal surfaces and products	
ORIGINATOR		PROVIDER	
SGB Manufacturing and Assembly Processes			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Manufacturing and Assembly	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	14

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

SPECIFIC OUTCOME 1

Prepare metal surfaces for painting and powder coating.

SPECIFIC OUTCOME 2

Prepare materials, tools and equipment for applying paint and powder coating.

SPECIFIC OUTCOME 3

Apply paint or powder coating to metal surfaces.

SPECIFIC OUTCOME 4

Maintain, care for and store materials, tools and equipment.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None

No. 611

29 May 2009

**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

Manufacturing and Assembly Processes

registered by Organising Field 06 – Education, Training and Development, 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.saq.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 29 June 2009**. All correspondence should be marked **Standards Setting – SGB for Manufacturing and Assembly Processes** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. E. Brown

Postnet Suite 248

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D. MPHUTHING**ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT**



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:**National Certificate: Electronics Manufacturing and Assembly**

SAQA QUAL ID		QUALIFICATION TITLE	
67569		National Certificate: Electronics Manufacturing and Assembly	
ORIGINATOR		PROVIDER	
SGB Manufacturing and Assembly Processes			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	132	Level 2	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:**

This Qualification intends to set standards for a typical learner entering the field of electronics manufacture and assembly. It will provide learners with foundational knowledge and experiential skills which will enable them to perform in this field. It will be valuable to learners who may have been working or practising within the electronics manufacture and assembly field such as shop floor workers who do not have a formal education and any person wishing to join the electronics manufacture and assembly environment thus providing learners with the opportunity for formal recognition of their skills and knowledge through Recognition of Prior Learning (RPL).

The Qualification is structured in such a way that it enables learners to gain progression towards the higher NQF Level Qualifications thus creating career opportunities for learners within the electronics assembly and manufacture environment. The Unit Standards contained in this Qualification will provide building blocks for specific skills that provide access to related Qualifications in this field as well as providing articulation possibilities.

This Qualification is the first in the learning pathway for the electronics manufacture and assembly field and articulates vertically to the planned NQF Level 3, National Certificate: Electronics; NQF Level 4, Further Education and Training Certificate: Electronics, National Certificate: Electronics, NQF Level 5 and a National Diploma: Electronics at NQF Level 5. The Qualification also provides horizontal articulation to electronics related Qualifications within the telecommunications and electronics servicing industries.

A learner acquiring this Qualification will be able to:

- Use verbal and written practices to communicate in the workplace and apply mathematical processes to solve everyday numerical problems.
- Apply elementary principles of computers and their use in electronics.
- Demonstrate knowledge of electronic components, instruments and test equipment.
- Assemble components to create an electronic product.
- Apply safety measures in an electronics assembly and manufacturing environment.

Qualifying learners will be able to show responsibility and independency and effectively manage themselves in an electronics manufacturing and assembly environment by providing technical support and service during the production process.

Rationale:

Electronics manufacture and assembly is a specialised field that requires specific knowledge and skills to be able to operate productively within the sector. People working on production, manufacturing and operation lines such as assemblers need this Qualification to assist them to operate effectively within the parameters of legislative and regulatory frameworks governing this sector. It will also provide learners with the relevant knowledge, skills, values and attitudes which will enhance their growth opportunities as well as improving the overall level of quality of workmanship within this sector. Currently there is no targeted electronics assembly and manufacturing Qualification existing at an introductory level that will develop key competencies (knowledge, skills, attitudes and values) required in this environment.

It will benefit individuals at work, as it is mostly occupational-oriented thus providing learners with knowledge and skills to enable them to meet global electronics assembly and manufacturing standards at an introductory level. This Qualification will facilitate articulation to other Qualifications which include mechatronics, autotronics and electronic warfare thus facilitating mobility, personal growth within the electronics field and improve productivity. Learners will have a working understanding of elementary principles within the electronics assembly and manufacturing sector.

RECOGNIZE PREVIOUS LEARNING?

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LEARNING ASSUMED IN PLACE

- Mathematical Literacy at NQF Level 1.
- Communication at NQF Level 1.

Recognition of Prior Learning:

The Qualification can be achieved in whole or part through the Recognition of Prior Learning (RPL). Learners obtaining the whole Qualification through RPL and wishing to be declared competent are required to complete a practical assessment component for the purpose of such recognition. This implies that the Qualification may be granted to learners who have acquired the skills and knowledge without attending formal courses, providing they can demonstrate competence in the outcomes of the individual Unit Standards as required by the Fundamental, Core and Elective components stipulated in the Qualification and by the Exit Level Outcomes.

Learners submitting themselves for RPL should be thoroughly briefed prior to the assessment, and may be required to submit a Portfolio of Evidence (POE) in the prescribed format and/or undergo a workplace assessment to be assessed for formal recognition. While this is primarily a workplace-based Qualification, evidence from other areas of endeavour may be introduced if pertinent to any of the Exit Level Outcomes.

Access to the Qualification:

Access is open to all learners. It is however preferable that the learners first complete a GETC Qualification before accessing this Qualification.

QUALIFICATION RULES

The Qualification is made up of a combination of learning outcomes from Fundamental, Core and Elective components, totalling a minimum of 132 Credits:

Fundamental component:

- All Unit Standards to the value of 36 credits are compulsory.

Core component:

- All Unit Standards to the value of 83 credits are compulsory.

Elective component:

The Elective component consists of a number of Unit Standards from which learners are required to choose a combination totalling a minimum of 13 Credits. However, learners wishing to qualify in a specific electronics assembly and manufacturing stream are required to complete one of the following sets of Elective Unit Standards:

Casting and moulding:

- ID 264998: Produce an ear mould and shell, 14 Credits.

Sound and Acoustics:

- ID 244590: Describe and explain sound generation and propagation, 3 Credits.
- ID 265004: Explain sound and acoustics, 10 Credits.

Logistics:

- ID 259737: Complete finishing operations and dispatch product, 12 Credits.
- ID 114891: Count stock for a stock-take, 5 Credits.
- ID 265001: Maintain stock levels of equipment and consumables, 4 Credits.

Using Tools:

- ID 119744: Select, use and care for engineering hand tools, 8 Credits.
- ID 12219: Select, use and care for engineering power tools, 6 Credits.

Additional specialisations for other sectors in which Electronic manufacturing and assembly that are applicable will be added to this Qualification as they are finalised.

EXIT LEVEL OUTCOMES

1. Use verbal and written practices to communicate in the workplace and apply mathematical processes to solve everyday numerical problems.
2. Apply elementary principles of computers and their use in electronics.
3. Demonstrate knowledge of electronic components, instruments and test equipment (hand skills).
4. Assemble components to make an electronic product.
5. Apply safety measures in an electronics assembly and manufacturing environment.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

- 1.1 Information from texts, reports and standard operating procedures is practically applied in the workplace in diesel, diesel electric and electric fitting context.
- 1.2 Communications are addressed and responded to in accordance with the relevant workplace requirements.
- 1.3 Numerical conversions, calculations and measurements are performed as required in the workplace.
- 1.4 Workplace signs are interpreted and explained as required by specific worksites.
- 1.5 Solutions to problems are found based on a clear analysis of information gathered through simple repetitive diagnostic procedures.

Associated Assessment Criteria for Exit Level Outcome 2:

- 2.1 Computer hardware and software is used by employing relevant theories to solve practical electronics problems.
- 2.2 The computer's features are used to solve practical electronic manufacturing and assembly problems.

Associated Assessment Criteria for Exit Level Outcome 3:

- 3.1 Basic electronics components are explained in terms of their various functions in circuits.
- 3.2 The operation of circuits is explained for the production of electronic products.
- 3.3 Measuring instruments are identified and used in interpret various measurements and readings.
- 3.4 Probable causes affecting the malfunctioning of electronic products are identified and prioritized in order to ensure a methodical approach to resolving problems.

Associated Assessment Criteria for Exit Level Outcome 4:

- 4.1 Diagrams and part lists are read and interpreted for the manufacturing and assembling of electronic products.
- 4.2 Electronic and digital circuits are explained in terms of the function and use.
- 4.3 Quality of work and product is monitored and checked in an electronics manufacturing and assembling environment in order to meet specifications.
- 4.4 Post production operations are carried out in accordance with standards and specifications.

Associated Assessment Criteria for Exit Level Outcome 5:

- 5.1 Occupational Health and Safety policies and procedures are applied in the carrying out of the work.
- 5.2 Occupational Health and Safety policies and procedures, and safe work practices are followed to eliminate or minimise dangerous incidents.
- 5.3 Personnel protective equipment needed to do the work are identified and checked to ensure it is safe to use in accordance with standard operating procedures.

INTERNATIONAL COMPARABILITY

The purpose of this International Comparability study is to facilitate the development of a meaningful learning path and its associated curriculum incorporating both theoretical and practical vocational skills which will ensure compatibility, comparability and compliance with existing international Qualification specifications and regulations.

Electronics is a highly recognised sector, in that the modern world relies on electrical and electronics devices which impact considerably in the domestic and world of work today. Internet research was conducted to identify similar Qualifications and/or programmes offered in different countries to determine how this Qualification compares with international Qualifications in electronics in terms of scope, level and outcomes as well as considering the nature of countries compared in relation to the history of offering education and training in this subject from socio-

economic perspectives. Due to the fact that the electrical and electronic engineering field is broad and vibrant thus interfacing with physics, computer science and engineering, the comparison was made on Qualifications/courses that deal with basic electronics and electrical engineering, which include electronic components. The approach used was to determine the international best practice in the comparison of the South African Qualification against the international ones.

This National Certificate was compared with equivalent Qualifications/courses from a range of countries. The countries were selected because they offer education and training that is considered international best practice in terms of electronics assembly and manufacturing. These countries are India, United States of America, United Kingdom, Netherlands and Canada. Countries such as Japan, China and India are considered to be leading in electronics products, but unfortunately their Qualifications in Electronics offered at this level could not be accessed. The research conducted in most countries indicated that Qualifications offered were engineering Qualifications of which electronics form part, were predominantly pitched at Degree, Honours, Masters and PHD levels, which made it difficult to find an introductory Electronics Manufacturing and Assembly Qualification at an entry Level (Level 2).

Below are the Qualifications/programmes/courses that were used in the comparison:
India (Bangalore, Gurgaon, Pune, Mumbai and Chennai):

Siemens PLM Software:

Course Title: NX Advanced Assemblies:

- Simplified representations.
- Component filters.
- Zone creation and management.
- Clearance analysis.
- Weight management.
- Application-specific topics.
- Design in context of large assemblies.
- Create drawings of large assemblies.
- Design review of large assemblies.

The NX Advanced Assemblies course does not compare well with this Qualification as it is pitched at a higher level and covers management issues and design work related to assembling.

North America and Asia:

Omnex Business Development:

Course Title: Unified Lean/Six Sigma Champion Training:

- Understanding the Lean and Six Sigma Movements.
- Benefits of Lean and Six Sigma.
- Benefits of integrating Lean and Six Sigma.
- Lean and Six Sigma organisational structure.
- Customer focus.
- Understanding Lean and Six Sigma tools.
- The Breakthrough Strategy.
- Process Mapping.
- Basic statistics.
- Capability analysis.
- Design of experiments.
- Design for Six Sigma.

- Project selection and planning.
- How to get started.
- Case studies.

Course Title: Lean Project Management and Overall Equipment Effectiveness:

- Develop the knowledge and skills for leading project teams.
- Develop the knowledge and skills to manage Overall Equipment Effectiveness.
- The philosophy and process for achieving workplace organisation.
- Conduct a campaign to clean and organise locations in the plant.
- Utilise Visual Management methods to control process performance.

Course Title: Achieving Continuous Flow; Cellular Manufacturing and Assembly:

- Develop the knowledge of the theory, process and tools of continuous flow processing.
- Apply continuous flow processing in a live situation.
- Identify and quantify cost savings from continuous flow projects.

The three courses offered by Omnex Business Development do not compare favourably with this South African Qualification. They offer a more specific subject/method of manufacturing and assembly (LEAN) as opposed to more generic competencies. There is however similarity in terms of learning such as customer service and working on a production line.

Canada:

George Brown College: Toronto:

Course Title: Electronics Technician Certificate:

- Introduction to Electronics.
- Current, Voltage and Resistance.
- Ohm's Law, Power and Energy.
- Series Circuits.
- Parallel Circuits.
- Series Parallel Circuits.
- DC Measuring Instruments.
- Network Theorems.
- Magnetism.
- Magnetic Circuits.
- Alternating Voltage and Current.
- Digital Electronics.
- AC Measuring Instruments.
- Capacitance and Capacitors.
- Inductance and Inductors.
- Transformers.
- Alternating Current Circuits.
- Resonance.
- Semiconductor Fundamentals.
- Coupling and Filter Circuits.
- Transistors and Thyristors.
- Amplifier Circuits.
- Integrated Circuits.

George Brown College offers the Electronics Technician Certificate programme that is targeting technicians who work in the field of consumer, commercial and industrial electronics. Many

schools and organisations, which have adopted it as part of their training programmes, use this programme as part of their curriculum. People who intend to work within the electronics environment thus will be preparing themselves for employment can also access the programme. The programme is offered on a modular basis with at least 23 modules. The duration of the programme is 32 weeks. Many of the Modules offered here compare favourably with our South African Qualification except that some of the Modules are at a higher level and may be found in the Level 3 Electronics Qualification.

Automated Learning: Ontario:

Course Title: Electronic assembly Consulting and Training:

- Electrostatic discharge control programme management.
- Electrostatic discharge class zero implementation.
- Surface mount technology (SMT).
- Through hole assembly.
- Solder and rework.
- Lead-free solder process transition.
- Mechanical assembly and box build.
- Cellular manufacturing.
- Quality and inspection.
- Lean manufacturing production process.

The above training and development has some aspects that are included in the Level 2 Qualification and therefore compares well in these areas. However it also covers additional subjects which will be found at higher levels.

USA:

San Diego Community College District:

Course Title: Basic Electronic Assembly:

- The use and care of tools.
- The use and care of hardware.
- Electronic components.
- Connecting and soldering electronic components.
- Safety practices.
- Workmanship standards.
- Colour coding.
- Blueprint reading.
- Harnessing.
- Wire wrapping.

San Diego Community College District course in Basic Electronic Assembly is designed for people who are interested in electronics manufacturing and assembly and who may wish to pursue further training and employment in this field. It is a 390 hours course. Some of the modules contained in this Qualification compares favourably with the South African Qualification as it addresses basic knowledge and skills in the electronic manufacturing and assembly environment, although the use and care of tools are an Elective component in the South African NQF Level 2 Qualification.

Electronics Supply Centre: Washington State:

Course Title: Basic Electronics for Schools:

- Lesson 1: Basic electronics theories and principles; Magnetism; The Atom; Rectifying circuits.
- Lesson 2: Series Circuits; Sine Wave Voltages; Diodes; Filtering.
- Lesson 3: Parallel Circuits; Basic principles of Capacitors; Bipolar Junction Transistors (NPN and PNP); Regulators (I.C Regulator circuits, switch mode regulators).
- Lesson 4: Combination Circuits; Capacitors (reactance and various types of capacitors; Field Effect Transistors; UPS System (uninterruptible power supplies).
- Lesson 5: Rheostats, symbols of variables and potentiometers; Inductors (self induced voltages and calculation of inductors in series; Specialty Devices (Semi-conductor devices).
- Lesson 6: Inductors (Autotransformers).
- Lesson 7: RLC Circuits.

The above course compares favourably with the South African Qualification as it provides basic knowledge packaged for beginners in the electronics field. The course is divided into different lessons in each module. These lessons can be benchmarked against the Unit Standards contained in the South African Qualification that provides learners with key competencies contained in the lessons provided in each module.

Skagit Valley College: Washington State:

Course Title: Electronics Fundamentals, 5 credits:

- Departmental standards on laboratory conduct, reporting, and safety.
- Ohm's law.
- Watt's law.
- Series circuits.
- Parallel circuits.
- Series-parallel circuits.
- Computer solutions.
- Voltage and current dividers.
- Resistance, voltage and current meters.
- Conductors and insulators.
- Kirchoff's voltage law.
- Kirchoff's current law.
- Network theorems.

Course Title: Electronic Fundamentals, 5 credits:

- Organisational standards on laboratory conduct, reporting and safety.
- Review of DC concepts.
- Introduction to AC Theory.
- Inductors and Capacitors.
- Reactance and Impedance.
- RL,RC and RLC circuit analysis and characteristics.

The above courses compare well with this Qualification as they provide the foundational knowledge which beginners in the electronics manufacturing and assembly field require and it provides the basic knowledge required to function competently in this field. These courses are divided into different subjects which can be benchmarked against the Unit Standards that provide learners with key competencies required in the Level 2 Qualification.

Fiji Islands, South Pacific:

Fiji Institute of Technology: School of Electrical and Electronic Engineering:

Course Title: Trade Certificate in Electronics Engineering:

- Basic electronics.
- Applied mathematics.
- Electrical principles.
- Electronics fundamentals.
- Electrical measurements.
- Occupational, Health and Safety.
- Digital electronics.
- Analogue electronics.
- Components and measurements.
- Computer applications.
- Technical communication.
- Workshop practice.
- Electronics projects.

This highly recognised institution that is registered as an Academy and that offers very dynamic comprehensive programmes to school leavers who wish to pursue training in electrical and electronic engineering and their allied industries. The above programme only compares fairly well with this South African Qualification at NQF Level 2 as the content offered has some that are the same. However the bulk of the course contents are at a higher level. The Applied Mathematics section's level is not known.

United Kingdom:

MYDATA Automation Ltd; (MYSMT Process Courses):

Course Title: Introduction to Electronics (E-learning course):

- History of electronics assembly.
- Electronics production on base of conventional assembly.
- The transition from conventional assembly to SMD assembly.
- The foundations for the transition into SMT.
- Knowledge about different materials, conventional components, SMT components and different packages.
- Safe handling of materials.

The above course compares favourably with this Level 2 Qualification as it provides a basic knowledge of electronics assembly. It must be noted however, that this course is concluded with a written examination made up of multiple choice and open questions, so learners are not assessed against any of the competencies required by people within the electronics manufacturing and assembly industry.

Edexcel:

Course Title: BTEC National Certificate in Electrical/Electronic Engineering (4322):

- Electrical and Electronic principles.
- Digital electronics.
- Analogue electronics.
- Electronic fault finding.
- Further Electrical Principles.
- Health, Safety and Welfare.

Edexcel is known to be the largest awarding body in the United Kingdom, which develops a diverse range of vocational and academic Qualifications including short courses. The BTEC

National Certificate in Electrical/Electronic Engineering is at the UK NQF Level 3, which has an equivalence level between our NQF Levels 4 and 5. It therefore does not really compare well with this Level 2 Qualification.

New Zealand:

Electro Technology Industry Training Organisation:

Course Title: National Certificate in Electronics Technology, Level 3:

- Demonstrate and apply knowledge of basic semiconductor devices.
- Demonstrate basic knowledge of basic digital and analogue electronic concepts.
- Describe the development of a new electronic product.
- Demonstrate basic knowledge of signals and the transmission of information.
- Demonstrate basic knowledge of electronic product quality and reliability.
- Demonstrate and apply basic knowledge of microcontrollers.

This Qualification is designed for people who are interested in electronics who may wish to pursue further training and employment in this field. The Qualification has been developed for people interested in electronics who may wish to pursue further training and employment in this field and is offered in high schools. Some of the units standards contained in this Qualification compares favourably with the South African Qualification as it addresses basic knowledge and skills of electronics although it is comprised of only 43 credits.

In addition, there are unit standards identified which do not form part of any Qualification within the New Zealand Qualifications Framework pegged at NQF Level 3 which is core electronics for electronics technicians that compare favourably with our Qualification. These are:

- Demonstrate and apply introductory knowledge of D.C. principles for electronics technicians.
- Demonstrate and apply introductory knowledge of A.C. principles for electronics technicians.
- Demonstrate and apply introductory knowledge of digital electronics for electronics technicians.
- Demonstrate and apply introductory knowledge of analogue electronics for electronics technicians.

Netherlands:

PIEK International education Centre:

Course Title: Hybrid Integrated Circuits Design for Manufacturing and Assembly Thick Film:

- Understanding Thick film Hybrid Integrated Circuits Design.
- Applicable documentation.
- Base materials.
- Thick film technology.
- Thick film-hybrid circuit process.
- Trends in electronics and influence on hybrid integrated circuit design.
- Quality assurance.
- Verifying the design-cost.

This programme basically only focuses on thick film technology and therefore does not compare all that well with the South African Qualification. It must be noted however that the competencies gained will be similar and therefore valuable and it is targeting individuals who are interested in a career in the electrical and electronics industries as well as offering the stepping-stone to gain broad education and training in this field.

Zimbabwe:

In relation to SADC countries, it has been discovered that countries in the SADC region tend to benchmark their Qualifications against the South African Qualifications. The only country found to provide a programme in the subject field is Zimbabwe through SIRDC (Electronics and Communications Institute) which offers technology transfer and training services in specialised areas of electronics, electronics circuit design and electronic instrumentation which does not compare fairly well with the standards offered by the South African Qualification in that the content/modules of their programme that is partly relevant to our Qualification but not addressed at this level are:

- Electronic circuit design fundamentals.
- Electronic instrumentation and control.

Conclusion:

Comparing our own Qualification with other countries, it seems clear that we are operating at an equivalent level with other countries, including those which are leaders in this field, as well as taking into account the particular requirements of developing nations, including our own. This Qualification falls well within the occupational profiles and training standards of the other relevant countries that we have investigated and offers the additional detail of introducing the very basics of electronics manufacturing and assembly to learners, therefore empowering them to find employment and grow within this industry.

ARTICULATION OPTIONS

Horizontal articulation is possible with:

- ID 63789: National Certificate: Electrical Engineering, NQF Level 2.
- ID 22858: National Certificate: Autotronics, NQF Level 2.
- ID 22770: National Certificate: Mechatronics, NQF Level 2.
- ID 58781: National Certificate: Production Technology, NQF Level 2.

Vertical articulation is possible with:

- ID 59696: National Certificate: Electronics, NQF Level 3.
- ID 48475: National Certificate: Electrical Engineering, NQF Level 3.
- ID 22859: National Certificate: Autotronics, NQF Level 3.
- ID 22791: National Certificate: Mechatronics, NQF Level 3.
- ID 58785: National Certificate: Production Technology, NQF Level 3.
- ID 22936: Certificate: Electronics Servicing Technology, NQF Level 3.
- ID 22939: Certificate: Telecommunications and Electronics Engineering, NQF Level 3.

MODERATION OPTIONS

- Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with the relevant ETQA.
- Any institution offering learning that will enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA.
- Assessment and moderation of assessment will be overseen by the relevant ETQA according to the ETQA's policies and guidelines for assessment and moderation; in terms of agreements reached around assessment and moderation between ETQA's (including professional bodies); and in terms of moderation guideline detailed in "Qualification Assessor Criteria.
- Moderation must include both internal and external moderation of assessments at exit points of the Qualification, unless ETQA policies specifies otherwise. Moderation should also

encompass achievement of the competence described both in individual Unit Standards, Exit Level Outcomes as well as the integrated competence described in the Qualification.

- 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

For an applicant to register as an assessor, the applicant should:

- Be registered as an assessor with the relevant ETQA.
- Be in possession of a relevant Qualification at NQF Level 3 or higher.

NOTES

N/A

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119463	Access and use information from texts	Level 2	5
Fundamental	9009	Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems	Level 2	3
Fundamental	7480	Demonstrate understanding of rational and irrational numbers and number systems	Level 2	3
Fundamental	9008	Identify, describe, compare, classify, explore shape and motion in 2-and 3-dimensional shapes in different contexts	Level 2	3
Fundamental	119454	Maintain and adapt oral/signed communication	Level 2	5
Fundamental	119460	Use language and communication in occupational learning programmes	Level 2	5
Fundamental	7469	Use mathematics to investigate and monitor the financial aspects of personal and community life	Level 2	2
Fundamental	9007	Work with a range of patterns and functions and solve problems	Level 2	5
Fundamental	119456	Write/present for a defined context	Level 2	5
Core	116932	Operate a personal computer system	Level 1	3
Core	117902	Use generic functions in a Graphical User Interface (GUI)-environment	Level 1	4
Core	114974	Apply the basic skills of customer service	Level 2	2
Core	265003	Assemble components	Level 2	12
Core	14359	Behave in a professional manner in a business environment	Level 2	5
Core	114605	Carry out soldering and de-soldering procedures	Level 2	3
Core	265000	Complete post-production and finishing operations	Level 2	6
Core	264996	Construct and test basic electronic circuits	Level 2	16
Core	243705	Demonstrate an understanding of quality procedures and practices	Level 2	10
Core	259639	Explain basic health and safety principles in and around the workplace	Level 2	4
Core	265006	Monitor the quality of materials and the manufactured product	Level 2	4
Core	13221	Perform routine maintenance	Level 2	8
Core	253074	Demonstrate an understanding of basic digital circuits	Level 3	6
Elective	259737	Complete finishing operations and dispatch product	Level 2	12
Elective	114891	Count stock for a stock-take	Level 2	5
Elective	265001	Maintain stock levels of equipment and consumables	Level 2	4
Elective	264998	Produce an ear mould and shell	Level 2	14
Elective	119744	Select, use and care for engineering hand tools	Level 2	8
Elective	12219	Select, use and care for engineering power tools	Level 2	6
Elective	244590	Describe and explain sound generation and propagation	Level 3	3
Elective	265004	Explain sound and acoustics	Level 3	10

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Construct and test basic electronic circuits***

SAQA US ID		UNIT STANDARD TITLE	
264996		Construct and test basic electronic circuits	
ORIGINATOR		PROVIDER	
SGB Manufacturing and Assembly Processes			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Manufacturing and Assembly	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	16

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
12218	Construct and test basic electronic circuits	Level 2	16	Will occur as soon as 264996 is registered

SPECIFIC OUTCOME 1

Discuss and explain the principles of electronics.

SPECIFIC OUTCOME 2

Demonstrate an understanding of the operation of basic electronic circuits.

SPECIFIC OUTCOME 3

Select electronic and related components for circuit construction.

SPECIFIC OUTCOME 4

Construct basic electronic circuits.

SPECIFIC OUTCOME 5

Test electronic circuits.

SPECIFIC OUTCOME 6

Report incidents and problems related to electronic work.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	67569	National Certificate: Electronics Manufacturing and Assembly	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Produce an ear mould and shell***

SAQA US ID	UNIT STANDARD TITLE		
264998	Produce an ear mould and shell		
ORIGINATOR	PROVIDER		
SGB Manufacturing and Assembly Processes			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	14

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

SPECIFIC OUTCOME 1

Take an impression of an ear.

SPECIFIC OUTCOME 2

Create a negative of the impression.

SPECIFIC OUTCOME 3

Create the mould cavity.

SPECIFIC OUTCOME 4

Cast moulds and shells.

SPECIFIC OUTCOME 5

Inspect castings.

SPECIFIC OUTCOME 6

Finish off moulds and shells.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

ID	QUALIFICATION TITLE	LEVEL
Elective 67569	National Certificate: Electronics Manufacturing and Assembly	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Complete post-production and finishing operations***

SAQA US ID		UNIT STANDARD TITLE	
265000		Complete post-production and finishing operations	
ORIGINATOR		PROVIDER	
SGB Manufacturing and Assembly Processes			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Manufacturing and Assembly	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	6

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
9878	Complete post-production and finishing operations	Level 2	12	Will occur as soon as 265000 is registered

SPECIFIC OUTCOME 1

Prepare for post-production and finishing activities.

SPECIFIC OUTCOME 2

Apply finishing procedures to product.

SPECIFIC OUTCOME 3

Carry out post-production/assembly operations.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	67569	National Certificate: Electronics Manufacturing and Assembly	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Maintain stock levels of equipment and consumables

SAQA US ID	UNIT STANDARD TITLE		
265001	Maintain stock levels of equipment and consumables		
ORIGINATOR			PROVIDER
SGB Manufacturing and Assembly Processes			
FIELD			SUBFIELD
6 - Manufacturing, Engineering and Technology		Manufacturing and Assembly	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

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

SPECIFIC OUTCOME 1

Explain stock control concepts.

SPECIFIC OUTCOME 2

Maintain appropriate stock levels.

SPECIFIC OUTCOME 3

Procure stock for a given period or specific contract.

SPECIFIC OUTCOME 4

Count and evaluate materials stocked.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67569	National Certificate: Electronics Manufacturing and Assembly	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Assemble components***

SAQA US ID	UNIT STANDARD TITLE		
265003	Assemble components		
ORIGINATOR	PROVIDER		
SGB Manufacturing and Assembly Processes			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	12

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
9877	Assemble components	Level 2	12	Will occur as soon as 265003 is registered

SPECIFIC OUTCOME 1

Prepare for work activity.

SPECIFIC OUTCOME 2

Assemble components.

SPECIFIC OUTCOME 3

Perform finishing activities.

SPECIFIC OUTCOME 4

Apply basic quality checks on materials, components and product.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	67569	National Certificate: Electronics Manufacturing and Assembly	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Explain sound and acoustics

SAQA US ID	UNIT STANDARD TITLE		
265004	Explain sound and acoustics		
ORIGINATOR	PROVIDER		
SGB Manufacturing and Assembly Processes			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	10

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

SPECIFIC OUTCOME 1

Explain the anatomy and function of the human ear.

SPECIFIC OUTCOME 2

Explain the concept of sound.

SPECIFIC OUTCOME 3

Explain the transmission of sound in electronic devices.

SPECIFIC OUTCOME 4

Demonstrate knowledge of the operation of electronic sound devices.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67569	National Certificate: Electronics Manufacturing and Assembly	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Monitor the quality of materials and the manufactured product***

SAQA US ID	UNIT STANDARD TITLE		
265006	Monitor the quality of materials and the manufactured product		
ORIGINATOR	PROVIDER		
SGB Manufacturing and Assembly Processes			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

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

SPECIFIC OUTCOME 1

Describe and explain the concepts of quality.

SPECIFIC OUTCOME 2

Conduct visual checks on incoming materials and components and the manufactured product.

SPECIFIC OUTCOME 3

Measure products, components and materials and conduct tests.

SPECIFIC OUTCOME 4

Record production and defects and report incidents.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	67569	National Certificate: Electronics Manufacturing and Assembly	Level 2

No. 612

29 May 2009

**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

Maritime Operations

registered by Organising Field 11 – Services, 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.saqqa.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 29 June 2009**. All correspondence should be marked **Standards Setting – SGB for Maritime Operations** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. E. Brown

Postnet Suite 248

Private Bag X06

Waterkloof

0145

or faxed to 012 – 431-5144

e-mail: ebrown@saqa.org.za


D. MPHUTHING
ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:

National Certificate: Inshore Maritime Operations

SAQA QUAL ID	QUALIFICATION TITLE		
67329	National Certificate: Inshore Maritime Operations		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	11 - Services	Transport, Operations and Logistics	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	130	Level 3	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:

This Qualification is aimed at people who work or intend to work on board a vessel and who seek recognition for essential skills in Inshore Operations. In particular, this Qualification will be useful for the following categories:

- Master of a fishing vessel of less than 24 metres in length operating in limited waters.
- Officer in charge of navigational watch on fishing vessels of 24 metres or more in length operating in limited or unlimited waters.
- Chief engineer officer of a fishing vessel of less than 750 kW propulsion power.
- Second engineer officer of a fishing vessel of less than 2000kW propulsion power.
- Officer in charge of an engineering watch on fishing vessels of any kilowatt propulsion power.
- Chief engineer officer of a vessel of less than 350kW propulsion power operating in a port operations area.
- Second engineer officer of a vessel of 1500kW propulsion power or more operating in a port operations area.
- Chief engineer officer of a vessel of less than 350 kW propulsion power on near coastal voyages.
- Second engineer officer of a vessel of less than 750 kW propulsion power on near coastal voyages.
- Officer in charge of an engineering watch on vessels of less than 750 kW propulsion power on unlimited voyages.

This Qualification is designed to equip qualifying learners with the knowledge and skills to conduct the essential operations associated with efficient and safe vessel operations inshore.

Learners will be able to:

- Contribute to safety and emergency related matters when working on a vessel.
- Apply maritime pollution and safety legislation and company procedures.
- Conduct support functions on board a sea going vessel.

Rationale:

Inshore maritime operations is a priority area within the South African context as it provides jobs to many people involved in the fishing and shipping industry and is regulated by legislation, national policies and strategies. In order to meet the requirements of the workplace it is important to be able to identify and recognise competent seamen at various levels. There is a critical need in this industry to identify and give recognition to people who are able to conduct the essential operations associated with efficient and safe onboard operations in at least one of the functions under fishing, deck or engine room operations.

This Qualification is the second in the learning pathway and will give candidates working in the maritime industry and the opportunity to build on experience or Qualifications they already have, and complement their practical skills with the essential knowledge needed to earn a formal Qualification in the maritime industry.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED IN PLACE

- Communication at NQF Level 2.
- Mathematical Literacy at NQF Level 2.

Access to the Qualification:

Access is open to all learners who completed the South African Maritime Safety Authority (SAMSA) pre-sea familiarisation programme.

QUALIFICATION RULES

The Qualification consists of a Fundamental, a Core and an Elective Component.

To be awarded the Qualification learners are required to obtain a minimum of 130 credits as detailed below.

Fundamental Component

The Fundamental Component consists of Unit Standards in:

- Mathematical Literacy at Level 3 to the value of 16 credits
- Communication at Level 3 to the value of 20 credits

All Unit Standards in the Fundamental Component are compulsory.

Core Component

The Core Component consists of Unit Standards to the value of 43 credits all of which are compulsory.

Elective Component

The Elective Component consists of Unit Standards in a number of specialisations each with its own set of Unit Standards. Learners are to choose a specialisation area and Elective Unit Standards at least to the value of 51 Credits. The specialisations are as follows:

Deck:

- ID 264856: Carry out fire fighting management activities on a sea going vessel, Level 3 , 4 Credits .
- ID 26863: Conduct a safe passage using radar, Level 3, 4 Credits.
- ID 243993: Demonstrate an understanding of Marine Safety information, Level 2, 3 Credits.

- ID 244001: Demonstrate an understanding of the Merchant Shipping Collision Regulations, Level 3, 3 Credits.
- ID 264878: Explain flotation, buoyancy, stability and the centre of gravity with reference to a sea going vessel, Level 3, 3 Credits.
- ID 264881: Explain the working and operation of on board machinery and propulsion systems on a sea going vessel, Level 3, 8 Credits.
- ID 264914: Manoeuvre a sea going vessel at sea and in port under different situations and conditions, Level 3, 8 Credits.
- ID 264887: Outline the specific parts of the hull structure and fittings on a sea going vessel, Level 3, 5 Credits.
- ID 264884: Perform specific navigating activities while on a coastal passage, Level 3, 3 Credits.
- ID 264876: Plan and conduct a safe passage when nearing specific approaches under different weather conditions, Level 3, 4 Credits.
- ID 264855: React to emergencies and distress signals at sea and in port, Level 4, 3 Credits.
- ID 264877: Take command of a sea going vessel, Level 3, 7 Credits.
- ID 264880: Use shipboard meteorological instruments on a sea going vessel, Level 3, 4 Credits.

Engineering:

- ID 264885: Carry out marine diesel and fuel oil bunkering activities, Level 3, 6 Credits.
- ID 264889: Cut, form and shape sheet metal, Level 3, 8 Credits.
- ID 116450: Demonstrate a broad understanding of pneumatic and hydraulic systems and concepts, Level 3, 4 Credits.
- ID 264854: Explain the construction and operation of diesel engines of sea going vessels, Level 3, 6 Credits.
- ID 262178: Explain the operation of the vapour compression refrigeration cycle, identify and explain the operation of the components and the associated controls, safety devices and defrost systems, Level 4, 6 Credits.
- ID 264859: Explain the specific operation and maintenance activities required in the engineering department on board a vessel, Level 3, 5 Credits.
- ID 244000: Operate refrigeration equipment on board a vessel, Level 3, 10 Credits.
- ID 264888: Perform specific watchkeeping competencies, Level 3, 8 Credits.
- ID 14682: Prepare and assemble welding equipment related to welding process, Level 2, 5 Credits.
- ID 119744: Select, use and care for engineering hand tools, Level 2, 8 Credits.
- ID 12219: Select, use and care for engineering power tools, Level 2, 6 Credits.
- ID 243063: Weld carbon steel work-pieces using the shielded metal arc welding process in the down hand position, Level 2, 15 Credits.
- ID 243072: Weld work-pieces using the oxy-acetylene gas welding process in the down hand position, Level 2, 10 Credits.

Fishing:

- ID 26883: Construct and repair a fishing net for commercial fishing, Level 4, 9 Credits.
- ID 264879: Deal with the performance of the trawl assembly during fishing activities, Level 3, 8 Credits.
- ID 264894: Demonstrate an understanding of responsible fishing measures, Level 3, 5 Credits.
- ID 243996: Explain and apply safety measures related to fishing operations, fishing gear and fish handling, Level 3, 8 Credits.
- ID 26886: Explain responsible fishing measures, Level 2, 3 Credits.
- ID 264875: Operate fishing technology used to monitor the fish and fishing equipment, Level 3, 7 Credits.
- ID 264858: Plan, conduct and review a fishing trip, Level 4, 10 Credits.

Co-ordinating Fleet Vessels:

- ID 119837, Conduct clearing of vessels for arrival and departure, Level 4, 4
- ID 119839, Conduct communications between shore and sea, Level 4, 6
- ID 119842, Coordinate performance, maintenance and repairs, Level 4, 12
- ID 119848, Coordinate safety management of vessels alongside quay, Level 4, 9
- ID 119847, Demonstrate an understanding of fishing related technology, Level 4, 12
- ID 119846, Demonstrate an understanding of ships and related functions, Level 4, 7
- ID 119845, Discharge product from vessel, Level 4, 8
- ID 119838, Provide weather information relating to fishing, Level 4, 6
- ID 119840, Conduct vessel administration activities, Level 4, 12
- ID 119841, Manage fishing operations at shore, Level 4, 12
- ID 119843, Prepare nets for fishing operations, Level 3, 12

EXIT LEVEL OUTCOMES

1. Contribute to safety and emergency related matters when working on a vessel.
2. Apply maritime pollution and safety legislation and company procedures.
3. Conduct support functions on board a sea going vessel.

ASSOCIATED ASSESSMENT CRITERIA

The outcomes are specified in terms of a combination of Specific and Critical Cross-Field Outcomes as defined in the different unit standards. On achieving this Qualification, a Learner is able to:

Associated Assessment Criteria for Exit Level Outcome 1:

- First aid is applied on board a vessel in accordance with regulated requirements.
- Fire fighting and prevention procedures are carried out to ensure the safety of self and others onboard a vessel.
- Life-raft activities are carried out in accordance with regulated requirements.

Associated Assessment Criteria for Exit Level Outcome 2:

- An environmental policy implementation plan is compiled to ensure compliance with maritime legislation and shipboard policies and practices.
- Duties are performed to prevent pollution.
- A pollution situation is dealt with in terms of maritime legislation and shipboard practices.

Associated Assessment Criteria for Exit Level Outcome 3:

- The management of people on board a vessel is understood and implemented in accordance with maritime legislation and shipboard practices.
- Vessel construction and stability is understood in order to operate a vessel in a safe manner.

Integrated Assessment:

The term 'Integrated Assessment' implies that theoretical and practical components should be assessed together and that more than one competency, assessment criterion and specific outcome should be assessed together, where possible. During integrated assessments the assessor should make use of formative and summative assessment methods and assess combinations of practical, applied, foundational and reflective competencies.

Assessment of communication and mathematical literacy should be integrated as far as possible with other aspects and should use authentic inshore maritime operational contexts wherever possible. A variety of methods must be used in assessment and tools and activities must be appropriate to the context in which the learner is working or will work.

The achievement of applied competence of this Qualification will be demonstrated if the learner is able to apply operational knowledge and skills to operate on board a sea going vessel in a safe manner.

Assessors should note that evidence of integration could well be presented by candidates when being assessed against the individual unit standards. Thus, there should not necessarily be separate assessments for each unit standard and then further assessment for integration. Well designed assessments should make it possible to gain evidence against each unit standard while at the same time gaining evidence of integration.

Where it is not possible to assess the learner in the workplace or on-the-job, simulations, case studies, role-plays and other similar techniques should be used to provide a context appropriate to the assessment.

INTERNATIONAL COMPARABILITY

An Inshore Maritime Operation is an area with globally recognised best practices, standards and Qualifications. This Qualification and set of Unit Standards utilises international and locally recognised best practice and standards.

The International Convention for Standards for Training and Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F) was adopted in July 1995 by a diplomatic conference convened under the auspices of the International Maritime Organisation (IMO).

South Africa is a member of the IMO Council and is expected to support this initiative and this Qualification complies with these principles and practices.

The South African Maritime Safety Authority (SAMSA) introduced in domestic law the principles and standards embodied in the convention. This Qualification is an example of that and the majority of unit standards were drawn up with reference to the related maritime legislation, amendments and codes.

The following Qualifications, courses and modules were used as part of the international comparability exercise. All the countries shown below were used because they are all party to the International Convention for Standards for Training and Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F) was adopted in July 1995.

Papua New Guinea - National Fisheries College:

Certificate in Fishing Operations 1 (CFO1):

A course for deckhand Qualifications for fishing boat crews:

- Basis skills required for employment as qualified deckhands on fishing boats.
- Safe working practices, safety at seas, radio operations, deck skills, fish quality and handling.
- Team work, discipline and understanding the chain of command at sea.

Certificate in Small Fishing Operations 1 and 2:

- Boat Safety.
- Basic Navigation.
- Mechanical maintenance and repair.

- Fishing Gear Design.
- Fishing Operations.
- Seafood Handling.
- Small Business Management.
- Fisheries Resources Management.

The above Qualifications compare well with the South African Unit Standards that are more specifically based on the Fishing Specific Elective category as well as the use of radio's and safety issues. These Qualifications also emphasise the importance of discipline and team work aboard a vessel.

United Kingdom-Maritime Training (Plymouth):

Efficient Deck Hand (Ref.MCA-MGN 10):

- Meaning of common nautical terms.
- Name and function of various parts and equipment of the ship.
- Use and care of ropes and wires, splicing of ropes.
- Use of different types of blacks and shackles, bottle screws, bull-dog grips, thimbles, monkey plates.
- Rigging and attendance of pilot ladders and hoists.
- Rigging and bosun's chair and slinging an over side stager.
- Precautions to be taken while working over side.
- Identification of commonly used single letter flags.
- Maintain an efficient lookout.
- Operation of windlass, mooring winch, back spring, skip wire, rope stopper, chain stopper.
- Opening and closing hatches, rigging up derrick.
- Knots, bends and hitches in common use.
- Securing in anticipation of rough sea.

Deck Officer Certificates of Competence-Ancillary Courses:

- STCW'95 Basic Safety Training:
 - Basic principles of First Aid.
 - Fire Fighting; Survival at Sea.
 - Personal Safety and Social Responsibility.
- Basic and Advanced Fire Fighting:
 - Principles of Fire Fighting.
 - Breathing Apparatus.
 - Command and Control of Fire Fighting Teams.
- Navigation; Radar and ARPA Simulation:
 - Navigation principles.
 - Electronic navigation aids.
 - Radar Principles and Operation.
 - Collision prevention.
 - Automatic Radar Plotting Aids.
- Small Ships Navigation and Radar:
 - Chartwork.
 - Navigational aids.
 - Bridge watchkeeping.
 - Prevention of collision.
 - Radar principles.

The courses and Qualifications offered by the United Kingdom are also well aligned with ours. However these are specifically aimed at people working on the deck of a vessel and exclude the Engineering and Fishing specific Elective components of the South African Qualification.

Australia-Australian Maritime College-School of Maritime Industry Operations (SMIO):

Deck Hand Course:

- First Aid.
- Fire-fighting.
- Survival at Sea.
- Occupational Health and Safety.
- Seamanship Skills.

The above course only offers the learners skills which will allow them to become licensed to be able to work on board a vessel. It does not prepare them in any way for the other disciplines required to be a competent Deck Hand or Engineer aboard a vessel.

United States; Fort Lauderdale-Maritime Professional Training Masters, Mates and Engineers Inc:

Courses:

Lifeboatman/Proficiency in survival Craft and Rescue Boats:

- Survival methods.
- Inflatable liferafts.
- Lifeboats.
- Survival equipment.
- Launching and recovery of life boats.
- Shipboard Davit Systems.
- Oar commands.

Automatic Radar Plotting Aids (ARPA):

- Review of Radar Plotting Techniques.
- Automatic Radar Plotting Aids (ARPA) Theory.
- Automatic Radar Plotting Aids (ARPA) Errors and limitations.
- Setting up and maintaining Automatic Radar Plotting Aids (ARPA) displays.
- Use of Automatic Radar Plotting Aids (ARPA) information to avoid close quarters situations.
- Navigation aided by Automatic Radar Plotting Aids (ARPA).

Advanced Fire Fighting:

- Pre-fire planning.
- Rapid response team concept.
- Incident command team.
- Stability considerations during fire fighting operations.
- Fire party organisation.
- Training of the fire party.
- Hazardous materials storage and organisation.
- Inspection and service of fire detection and extinguishing systems and equipment.
- Port fire investigation.
- Combating shipboard fire.

The Courses offered by the United States, as with the Australian ones also only cover certain aspects of working on board a vessel. They do however place a huge emphasis on the safety aspect of working on board a vessel. It also covers an in-depth knowledge of navigation, which is offered at a higher level in South Africa.

India-International Maritime Training Centre (Mumbai):

Practical Deck Skills Workshop:

- Practical training in knots, bends, hitches and splices with synthetic and natural fibre rope.
- Practical training in splices with wire rope.
- Surface maintenance theory and procedures.
- General maintenance of deck equipment.

This course does not compare well to its South African counter part as it only focuses on working with ropes and the general maintenance on board a vessel.

New Zealand - New Zealand Qualifications Authority.

- National Certificate in Seafood Vessel Operations (Fishing Technology) Level 3, 76 Credits.
- The first noticeable difference between the South African Qualification and the New Zealand one is the number of credits available for the Qualification. It goes without saying that the South African Qualification together with its associated Unit Standards is far more comprehensive. The other difference is that it is pitched at a higher level, which is offered at NQF Level 3 in South Africa.

The contents of the above international Qualifications, courses and modules are reflected clearly in this Qualification's Exit Level Outcomes, in the related Associated Assessment Criteria and in the Unit Standards. It is evident that the international Qualifications and the South African Qualification have very similar, if not the same, contents. Again it is clear that the South African Qualification offers a more comprehensive coverage than any of its international counterparts.

ARTICULATION OPTIONS

Horizontal articulation is possible with:

- ID 48535: National Certificate: Maritime Operations, NQF Level 3.
- ID 59669: National Certificate: Mechanical Engineering: Fitting, NQF Level 3.

Vertical progression is possible with:

- ID 49155: Further Education and Training Certificate: Shipping, NQF Level 4.
- ID 65875: Further Education and Training Certificate: Engineering Skills: Mechanical Fitting and Plant Maintenance, NQF Level 4.
- ID 59709: Further Education and Training Certificate: Mechanical Engineering: Fitting, NQF Level 4.

MODERATION OPTIONS

- Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with the relevant ETQA.
- Any institution offering learning that will enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA.
- Assessment and moderation of assessment will be overseen by the relevant ETQA according to the ETQA's policies and guidelines for assessment and moderation; in terms of agreements

reached around assessment and moderation between ETQA's (including professional bodies); and in terms of the moderation guideline detailed immediately below.

- Moderation must include both internal and external moderation of assessments at exit points of the Qualification, unless ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described both in individual unit standards, exit level outcomes as well as the integrated competence described in the Qualification.

- 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

Assessors registered with TETA and/or SAMSA must carry out the assessment of candidates for any of the unit standards that make up this Qualification. The following criteria are specified for assessors concerning the technical aspects of the Qualification:

- Relevant Qualification at NQF Level 4 or higher.
- Minimum of 2 years' experience.
- Registration as an assessor with the relevant ETQA.
- Assessors must be registered SAMSA assessors.
- Have the requisite SAMSA licence.

NOTES

N/A

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	5
Fundamental	9010	Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations	Level 3	2
Fundamental	9013	Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 3	4
Fundamental	119457	Interpret and use information from texts	Level 3	5
Fundamental	9012	Investigate life and work related problems using data and probabilities	Level 3	5
Fundamental	119467	Use language and communication in occupational learning programmes	Level 3	5
Fundamental	7456	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	Level 3	5
Fundamental	119465	Write/present/sign texts for a range of communicative contexts	Level 3	5
Core	264874	Demonstrate proficiency in survival craft activities	Level 2	7
Core	243986	Describe and apply fire prevention and fire fighting aboard ship	Level 2	3
Core	13912	Apply knowledge of self and team in order to develop a plan to enhance team performance	Level 3	5
Core	244010	Demonstrate knowledge of vessel construction and stability	Level 3	8
Core	264959	Explain and deal with oil spills and environmental safety at sea	Level 3	2
Core	243999	Explain pollution control and safe working practices	Level 3	2
Core	244181	Perform hand over and take over responsibilities	Level 3	2
Core	254220	Provide primary emergency care/first aid as an advanced first responder	Level 3	8
Core	243989	Respond to distress signals and emergencies at sea and in port	Level 3	3
Core	9533	Use communication skills to handle and resolve conflict in the workplace	Level 3	3

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Elective	243993	Demonstrate an understanding of marine safety information	Level 2	3
Elective	264882	Demonstrate personal safety and social responsibilities at sea	Level 2	2
Elective	264860	Demonstrate personal survival techniques in the event of ship abandonment	Level 2	2
Elective	264886	Explain responsible fishing measures	Level 2	3
Elective	14682	Prepare and assemble welding equipment related to welding processes	Level 2	5
Elective	119744	Select, use and care for engineering hand tools	Level 2	8
Elective	12219	Select, use and care for engineering power tools	Level 2	6
Elective	243063	Weld carbon steel work-pieces using the shielded metal arc welding process in the down-hand position.	Level 2	15
Elective	243072	Weld workpieces using the oxy-acetylene gas welding process in the downhand position	Level 2	10
Elective	264856	Carry out fire fighting management activities on a sea going vessel	Level 3	4
Elective	264885	Carry out marine diesel and fuel oil bunkering activities	Level 3	6
Elective	264863	Conduct a safe passage using radar	Level 3	4
Elective	119844	Conduct maritime rigging operations	Level 3	8
Elective	264889	Cut, form and shape sheet metal	Level 3	8
Elective	264879	Deal with the performance of the trawl assembly during fishing activities	Level 3	8
Elective	116450	Demonstrate a broad understanding of pneumatic and hydraulic systems and concepts	Level 3	4
Elective	264894	Demonstrate an understanding of responsible fishing	Level 3	5
Elective	244001	Demonstrate an understanding of the Merchant Shipping Collision Regulations	Level 3	3
Elective	243996	Explain and apply safety measures related to fishing operations, fishing gear and fish handling	Level 3	8
Elective	264878	Explain flotation, buoyancy, stability and the centre of gravity with reference to a sea going vessel	Level 3	3
Elective	264854	Explain the construction and operation of diesel engines of sea going vessels	Level 3	6
Elective	264859	Explain the specific operation and maintenance activities required in the engineering department on board a vessel	Level 3	5
Elective	264881	Explain the working and operation of on board machinery and propulsion systems on a sea going vessel	Level 3	7
Elective	264914	Manoeuvre a sea going vessel at sea and in port	Level 3	8
Elective	264875	Operate fishing technology used to monitor fish and fishing equipment	Level 3	7
Elective	244000	Operate refrigeration equipment on board a vessel	Level 3	10
Elective	264887	Outline the specific parts of the hull structure and fittings on a sea going vessel	Level 3	5
Elective	264884	Perform specific navigating activities while on a coastal passage	Level 3	4
Elective	264888	Perform specific watchkeeping activities	Level 3	8
Elective	264876	Plan and conduct a safe passage when nearing specific approaches under different weather conditions	Level 3	4
Elective	119843	Prepare nets for fishing operations	Level 3	12
Elective	264877	Take command of a sea going vessel	Level 3	7
Elective	264880	Use shipboard meteorological instruments on a fishing vessel	Level 3	4
Elective	119837	Conduct clearing of vessels for arrival and departure	Level 4	4
Elective	119839	Conduct communications between shore and sea	Level 4	6
Elective	119840	Conduct vessel administration activities	Level 4	12
Elective	264883	Construct and repair fishing nets for commercial fishing	Level 4	9
Elective	119842	Coordinate performance, maintenance and repairs	Level 4	12
Elective	119848	Coordinate safety management of vessels alongside quay	Level 4	9
Elective	119847	Demonstrate an understanding of fishing related technology	Level 4	12
Elective	119846	Demonstrate an understanding of ships and related functions	Level 4	7
Elective	119845	Discharge product from vessel	Level 4	8
Elective	262178	Interpret the effect of operating conditions on components, safety and control devices	Level 4	6
Elective	119841	Manage fishing operations at shore	Level 4	12

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Elective	264858	Plan, conduct and review a fishing trip	Level 4	10
Elective	119836	Provide provisions, services and crew to meet vessel needs	Level 4	4
Elective	119838	Provide weather information relating to fishing	Level 4	6
Elective	264855	React to emergencies and distress signals at sea, and in port	Level 4	3

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION**None**



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Explain the construction and operation of diesel engines of sea going vessels***

SAQA US ID		UNIT STANDARD TITLE					
264854		Explain the construction and operation of diesel engines of sea going vessels					
ORIGINATOR		PROVIDER					
SGB Maritime Operations							
FIELD		SUBFIELD					
11 - Services		Transport, Operations and Logistics					
ABET BAND		UNIT STANDARD TYPE		NQF LEVEL		CREDITS	
Undefined		Regular		Level 3		6	

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

SPECIFIC OUTCOME 1

Explain the working principles and constructional details of marine diesel engines.

SPECIFIC OUTCOME 2

Explain the operation and maintenance of marine diesel engines.

SPECIFIC OUTCOME 3

Explain the properties of fuel and lubricating oils used in marine diesel engines.

SPECIFIC OUTCOME 4

Explain the manufacture of various machinery components.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

React to emergencies and distress signals at sea, and in port

SAQA US ID	UNIT STANDARD TITLE		
264855	React to emergencies and distress signals at sea, and in port		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	3

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

SPECIFIC OUTCOME 1

Explain how beaching, grounding, re-floating, collisions and the impairment of watertight integrity are managed.

SPECIFIC OUTCOME 2

Explain in detail how an emergency situation will be managed.

SPECIFIC OUTCOME 3

Identify and explain the management role of the international and national maritime organizations that deal with emergencies and distress signals.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Carry out fire fighting management activities on a sea going vessel

SAQA US ID	UNIT STANDARD TITLE		
264856	Carry out fire fighting management activities on a sea going vessel		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

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

SPECIFIC OUTCOME 1

Describe the control of fire fighting operations on board ship.

SPECIFIC OUTCOME 2

Describe emergency procedures on board ship.

SPECIFIC OUTCOME 3

Organise and train fire parties.

SPECIFIC OUTCOME 4

Inspect and maintain fire fighting equipment.

SPECIFIC OUTCOME 5

Investigate and compile reports on incidents involving shipboard fires.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Plan, conduct and review a fishing trip

SAQA US ID	UNIT STANDARD TITLE		
264858	Plan, conduct and review a fishing trip		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	10

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

SPECIFIC OUTCOME 1

Prepare the vessel and crew for sea.

SPECIFIC OUTCOME 2

Plan a fishing trip.

SPECIFIC OUTCOME 3

Conduct daily fishing activity.

SPECIFIC OUTCOME 4

Review daily fishing activity.

SPECIFIC OUTCOME 5

Review fishing trip.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Explain the specific operation and maintenance activities required in the engineering department on board a vessel

SAQA US ID		UNIT STANDARD TITLE	
264859		Explain the specific operation and maintenance activities required in the engineering department on board a vessel	
ORIGINATOR		PROVIDER	
SGB Maritime Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	5

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

SPECIFIC OUTCOME 1

Explain the construction details and maintenance of pressure vessels.

SPECIFIC OUTCOME 2

Explain the safe and efficient operation and maintenance of auxiliary boilers.

SPECIFIC OUTCOME 3

Explain the constructional details and working principle of air compressors.

SPECIFIC OUTCOME 4

Explain the safe operation and maintenance of deck machinery.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Demonstrate personal survival techniques in the event of ship abandonment***

SAQA US ID	UNIT STANDARD TITLE		
264860	Demonstrate personal survival techniques in the event of ship abandonment		
ORIGINATOR		PROVIDER	
SGB Maritime Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	2

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

SPECIFIC OUTCOME 1

Describe emergencies at sea and survival principles.

SPECIFIC OUTCOME 2

Demonstrate the use of life-saving appliances.

SPECIFIC OUTCOME 3

Demonstrate liferaft boarding activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Conduct a safe passage using radar

SAQA US ID		UNIT STANDARD TITLE	
264863		Conduct a safe passage using radar	
ORIGINATOR		PROVIDER	
SGB Maritime Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

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

SPECIFIC OUTCOME 1

Set up and evaluate the performance of radar.

SPECIFIC OUTCOME 2

Operate, interpret and analyse information obtained from radar with reference to the movement of other vessels in the area.

SPECIFIC OUTCOME 3

Use radar as an aid to avoid collisions.

SPECIFIC OUTCOME 4

Use radar in blind pilotage circumstances.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate proficiency in survival craft activities

SAQA US ID		UNIT STANDARD TITLE	
264874		Demonstrate proficiency in survival craft activities	
ORIGINATOR		PROVIDER	
SGB Maritime Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	7

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

SPECIFIC OUTCOME 1

Perform activities related to the launching and boarding of a survival craft.

SPECIFIC OUTCOME 2

Explaining how to survive at sea in the event of ship abandonment.

SPECIFIC OUTCOME 3

Describe the construction of survival craft.

SPECIFIC OUTCOME 4

Handle survival craft.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Operate fishing technology used to monitor fish and fishing equipment***

SAQA US ID	UNIT STANDARD TITLE		
264875	Operate fishing technology used to monitor fish and fishing equipment		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	7

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

SPECIFIC OUTCOME 1

Identify the types of fishing technology/equipment involved.

SPECIFIC OUTCOME 2

Prepare the fishing technology/equipment for use.

SPECIFIC OUTCOME 3

Operate and interpret the technology while conducting fishing operations.

SPECIFIC OUTCOME 4

Perform routine maintenance activities.

SPECIFIC OUTCOME 5

Perform routine fault finding activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Plan and conduct a safe passage when nearing specific approaches under different weather conditions

SAQA US ID	UNIT STANDARD TITLE		
264876	Plan and conduct a safe passage when nearing specific approaches under different weather conditions		
ORIGINATOR		PROVIDER	
SGB Maritime Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

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

SPECIFIC OUTCOME 1

Explain and demonstrate the use and maintenance of navigational charts and nautical publications.

SPECIFIC OUTCOME 2

Explain the broad principles and use of conventional magnetic and gyro compasses.

SPECIFIC OUTCOME 3

Plan a safe coastal passage.

SPECIFIC OUTCOME 4

Conduct a safe coastal passage.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

ID	QUALIFICATION TITLE	LEVEL
Elective 67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Take command of a sea going vessel

SAQA US ID		UNIT STANDARD TITLE	
264877		Take command of a sea going vessel	
ORIGINATOR		PROVIDER	
SGB Maritime Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	7

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

SPECIFIC OUTCOME 1

Take ultimate leadership role of a vessel.

SPECIFIC OUTCOME 2

Explain seaworthiness, ship safety and assistance to vessels in distress.

SPECIFIC OUTCOME 3

Deal with dangers to navigation and the environment.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Explain flotation, buoyancy, stability and the centre of gravity with reference to a sea going vessel

SAQA US ID		UNIT STANDARD TITLE	
264878		Explain flotation, buoyancy, stability and the centre of gravity with reference to a sea going vessel	
ORIGINATOR		PROVIDER	
SGB Maritime Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	3

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

SPECIFIC OUTCOME 1

Describe the concepts/principles of flotation and displacement.

SPECIFIC OUTCOME 2

Describe the concepts and principles of buoyancy and reserve buoyancy.

SPECIFIC OUTCOME 3

Describe the concepts and principles of stability.

SPECIFIC OUTCOME 4

Describe the movement of the centre of gravity (G).

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Deal with the performance of the trawl assembly during fishing activities*

SAQA US ID		UNIT STANDARD TITLE	
264879		Deal with the performance of the trawl assembly during fishing activities	
ORIGINATOR		PROVIDER	
SGB Maritime Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	8

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

SPECIFIC OUTCOME 1

Organise the trawl deck work area.

SPECIFIC OUTCOME 2

Adjust trawl components to optimise the catch.

SPECIFIC OUTCOME 3

Retrieve trawls.

SPECIFIC OUTCOME 4

Land, contain and sort the catch.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Use shipboard meteorological instruments on a fishing vessel

SAQA US ID	UNIT STANDARD TITLE		
264880	Use shipboard meteorological instruments on a fishing vessel		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

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

SPECIFIC OUTCOME 1

Explain weather terminology.

SPECIFIC OUTCOME 2

Describing cold fronts and depressions.

SPECIFIC OUTCOME 3

Describing local seasonal weather and sea conditions.

SPECIFIC OUTCOME 4

Using shipboard meteorological instruments.

SPECIFIC OUTCOME 5

Identifying the various sources of local weather information.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

ID	QUALIFICATION TITLE	LEVEL
Elective 67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Explain the working and operation of on board machinery and propulsion systems on a sea going vessel

SAQA US ID	UNIT STANDARD TITLE		
264881	Explain the working and operation of on board machinery and propulsion systems on a sea going vessel		
ORIGINATOR		PROVIDER	
SGB Maritime Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	7

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

SPECIFIC OUTCOME 1

Describe the construction and operation of marine power plants and auxiliary machinery and systems.

SPECIFIC OUTCOME 2

Describe the construction and operation of steering gear.

SPECIFIC OUTCOME 3

Describe the construction and operation of generators, alternators and electrical distribution systems.

SPECIFIC OUTCOME 4

Describe the construction and operation of oily-water separators and oil filtering equipment.

SPECIFIC OUTCOME 5

Describe the construction and operation of the deck machinery.

SPECIFIC OUTCOME 6

Describe the construction and operation of hydraulic systems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Demonstrate personal safety and social responsibilities at sea***

SAQA US ID	UNIT STANDARD TITLE		
264882	Demonstrate personal safety and social responsibilities at sea		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	2

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

SPECIFIC OUTCOME 1

Take action when encountering an emergency.

SPECIFIC OUTCOME 2

Describe precautions to prevent pollution of the marine environment.

SPECIFIC OUTCOME 3

Observe safe working practices.

SPECIFIC OUTCOME 4

Describe effective relationships on board ship.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

ID	QUALIFICATION TITLE	LEVEL
Core 67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Construct and repair fishing nets for commercial fishing

SAQA US ID	UNIT STANDARD TITLE		
264883	Construct and repair fishing nets for commercial fishing		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	9

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

SPECIFIC OUTCOME 1

Plan the construction of a net.

SPECIFIC OUTCOME 2

Cut netting to produce net panels.

SPECIFIC OUTCOME 3

Assemble net panels, lines and wires.

SPECIFIC OUTCOME 4

Prepare netting material for repair.

SPECIFIC OUTCOME 5

Mend holes and tears using twine.

SPECIFIC OUTCOME 6

Mend large scale damage using netting material.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Perform specific navigating activities while on a coastal passage

SAQA US ID	UNIT STANDARD TITLE		
264884	Perform specific navigating activities while on a coastal passage		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

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

SPECIFIC OUTCOME 1

Determine and compensate for the effect of current and leeway on course and speed when steering a vessel.

SPECIFIC OUTCOME 2

Determine the compass error and deviation using the bearing of the sun at any time.

SPECIFIC OUTCOME 3

Determine and use dipping distances of lights and distances of sighting points of land of known height.

SPECIFIC OUTCOME 4

Determine the time and height of the tides at specified localities and specific circumstances.

SPECIFIC OUTCOME 5

Determine and use nautical tables to find courses and distances between two positions by Mercator sailing method or traverse tables.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Carry out marine diesel and fuel oil bunkering activities*

SAQA US ID	UNIT STANDARD TITLE		
264885	Carry out marine diesel and fuel oil bunkering activities		
ORIGINATOR		PROVIDER	
SGB Maritime Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	6

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

SPECIFIC OUTCOME 1

Explain the general bunkering process from shore to vessel or vessel to vessel.

SPECIFIC OUTCOME 2

Prepare for bunkering activities.

SPECIFIC OUTCOME 3

Perform bunkering activities.

SPECIFIC OUTCOME 4

Conclude bunkering activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Explain responsible fishing measures***

SAQA US ID	UNIT STANDARD TITLE		
264886	Explain responsible fishing measures		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	3

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

SPECIFIC OUTCOME 1

Explaining the need for responsible fishing awareness and practices.

SPECIFIC OUTCOME 2

Describing the single species and ecosystem approaches to fisheries management.

SPECIFIC OUTCOME 3

Explaining the application of sector-specific Permit Conditions at sea.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Outline the specific parts of the hull structure and fittings on a sea going vessel***

SAQA US ID	UNIT STANDARD TITLE		
264887	Outline the specific parts of the hull structure and fittings on a sea going vessel		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	5

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

SPECIFIC OUTCOME 1

Sketching and describing the construction of specific parts of the hull structure.

SPECIFIC OUTCOME 2

Describe the safety features of specific parts of the hull structure.

SPECIFIC OUTCOME 3

Sketch and describe the structure and attachment of various hull fittings.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Perform specific watchkeeping activities

SAQA US ID	UNIT STANDARD TITLE		
264888	Perform specific watchkeeping activities		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	8

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

SPECIFIC OUTCOME 1

Prepare the ship's main and auxiliary machinery for sea.

SPECIFIC OUTCOME 2

Test the ship's steering gear for sailing.

SPECIFIC OUTCOME 3

Examine and record temperatures, pressures and fluid levels.

SPECIFIC OUTCOME 4

Operate of the ship's main pumping systems.

SPECIFIC OUTCOME 5

Explain the starting, coupling and changing over alternators and/or generators.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Cut, form and shape sheet metal

SAQA US ID	UNIT STANDARD TITLE		
264889	Cut, form and shape sheet metal		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	8

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

SPECIFIC OUTCOME 1

Select the appropriate sheet metal.

SPECIFIC OUTCOME 2

Cut sheet metal.

SPECIFIC OUTCOME 3

Form/Bend sheet metal.

SPECIFIC OUTCOME 4

Finish the item to specification.

SPECIFIC OUTCOME 5

Keep the workplace safe and productive.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate an understanding of responsible fishing

SAQA US ID	UNIT STANDARD TITLE		
264894	Demonstrate an understanding of responsible fishing		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	5

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

SPECIFIC OUTCOME 1

Explaining the need for a responsible fishing policy implementation.

SPECIFIC OUTCOME 2

Explaining the reasons that fisheries resources are under threat.

SPECIFIC OUTCOME 3

Describing management policies designed to ensure the sustainability of fisheries resources.

SPECIFIC OUTCOME 4

Describing measures to monitor marine resources and compliance with permit conditions.

SPECIFIC OUTCOME 5

Complying with monitoring and enforcement measures.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

ID	QUALIFICATION TITLE	LEVEL
Elective 67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Manoeuvre a sea going vessel at sea and in port***

SAQA US ID	UNIT STANDARD TITLE		
264914	Manoeuvre a sea going vessel at sea and in port		
ORIGINATOR	PROVIDER		
SGB Maritime Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	8

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

SPECIFIC OUTCOME 1

Explain the theory relating to manoeuvring the vessel.

SPECIFIC OUTCOME 2

Manoeuvre the vessel in port.

SPECIFIC OUTCOME 3

Manoeuvre the vessel at sea under different situations and conditions.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	67329	National Certificate: Inshore Maritime Operations	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Explain and deal with oil spills and environmental safety at sea*

SAQA US ID		UNIT STANDARD TITLE	
264959		Explain and deal with oil spills and environmental safety at sea	
ORIGINATOR		PROVIDER	
SGB Maritime Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	2

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

SPECIFIC OUTCOME 1

Identify organisations concerned with shipping.

SPECIFIC OUTCOME 2

Explain action to be taken in the event of a pollution emergency.

SPECIFIC OUTCOME 3

Explain elementary information relating to the protection and preservation of the marine environment.

SPECIFIC OUTCOME 4

Explain the maritime occupational safety regulations.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

ID	QUALIFICATION TITLE	LEVEL
Core 67329	National Certificate: Inshore Maritime Operations	Level 3