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GOVERNMENT NOTICES

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

No. 843   15 August 2008

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

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

Hospitality, Gaming and Leisure

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.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 15 September 2008*. All correspondence should be marked **Standards Setting – SGB for Hospitality, Gaming and Leisure** and addressed to

> The Director: Standards Setting and Development
> SAQA
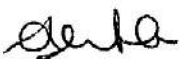> *Attention: Mr. D. Mphuthing*
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DR. S. BHIKHA
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SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
National Certificate: Gaming Operations

SAQA QUAL ID	QUALIFICATION TITLE		
63269	National Certificate: Gaming Operations		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	11 - Services	Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	130	Level 3	Regular-Unit Stds Based

This qualification replaces:

Qual ID	Qualification Title	NQF Level	Min Credits	Replacement Status
14117	National Certificate: Gaming Cashiering	Level 3	120	Will occur as soon as 63269 is registered
14120	National Certificate: Gaming (Slots Operations)	Level 3	120	Will occur as soon as 63269 is registered
14121	National Certificate: Gaming (Surveillance Operations)	Level 3	120	Will occur as soon as 63269 is registered

PURPOSE AND RATIONALE OF THE QUALIFICATION
Purpose:

This qualification will prepare learners for employment in a variety of entry-level positions within the Gaming environment and enable them to be nationally and internationally competitive. Since this will serve as an entry-level qualification in the gaming sector, it opens up career opportunities within the sector.

A learner who has achieved this qualification will be able to:

> Demonstrate an understanding of the gaming environment and the context in which gaming activities take place.
> Meet customer service requirements in interacting with customers.
> Function effectively in the operational environment.
> Operate effectively by performing services in a selected area of specialisation, being one of:
> Dealing.
> Slots operating/hosting.
> Cashiering.
> Surveillance.

Rationale:

The Gaming industry in South Africa is a highly legislated and controlled working environment and gambling institutions are governed by a very well-defined legislative framework which makes it imperative that individuals who work in the environment have the skills to ensure compliance and accountability.

In addition, the environment has a very strong customer orientation and is exposed to high levels of risk such as cheating, money laundering and fraud. These aspects impact directly at operational level and it is thus essential that employees operating within the industry have a solid grounding in the legislative framework impacting on the gaming industry, adequate technical competencies required for specific operational functions, a good understanding of customer service and are sensitised to the particular safety and security requirements of the operational environment.

This qualification is designed to meet the needs of learners who are either actively involved in the gaming environment or individuals who desire to further develop their skills in order to access the industry at entry level employment within a learning pathway for the sector moving from NQF Level 3 to NQF Level 4.

It will provide a benchmark and increase overall expertise in the gaming sector, assisting the industry to achieve transformational goals relating to employment equity. The added value of the skills, knowledge and understanding developed by the qualification will lead to improved operational performance resulting from the integration of the learning which may have taken place in the work environment.

The qualification addresses skills and competencies in the following entry-level positions:

> Dealers/Croupiers for a range of games such as Poker, American Roulette, Blackjack, Punto Banco and Dice.
> Slots operators/hosts.
> Cashiers.
> Surveillance personnel.

RECOGNIZE PREVIOUS LEARNING?
Y

LEARNING ASSUMED IN PLACE
It is assumed that the learner attempting this qualification is competent in:

> Communication at NQF Level 2 or equivalent.
> Mathematical Literacy at NQF Level 2 or equivalent.

Recognition of Prior Learning:

The structure of this unit standard based qualification makes the Recognition of Prior Learning possible. Learner and assessor will jointly decide on methods to determine prior learning and competence in the knowledge, skills, values and attitudes implicit in the qualification and the associated unit standards. RPL will be done by means of an integrated assessment.

This Recognition of Prior Learning may allow for:

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

All Recognition of Prior Learning is subject to quality assurance by the relevant ETQA or an ETQA that has a Memorandum of Understanding with the relevant ETQA.

Access to the Qualification:

There is open access to any learner wishing to access the qualification who is able to arrange for assessment opportunities within the gaming environment. Learners need to apply and be

granted a gaming licence from the relevant provincial gaming board in order to have opportunity to demonstrate applied competence in an authentic setting for completion of the qualification.

QUALIFICATION RULES

The Qualification consists of Fundamental, Core and Elective components and is unit standards based. A minimum of 130 credits is required to complete the qualification. In this qualification the credits are allocated as follows:

Fundamental component:
> All unit standards totalling 36 credits are compulsory.

Core component:
> All unit standards totalling 52 credits are compulsory.

Elective component:

> The elective component is grouped into areas of specialisation. Each specialisation consists of compulsory and optional unit standards.
> Learners are required to select a specialisation and:
 > Complete all the compulsory unit standards for the specialisation.
 > Choose additional optional unit standards from those listed for the specialisation to give a minimum of 42 credits for the specialisation.

The following are the specialisations and their unit standards:

Dealing:

Compulsory:

> Comply with security procedures for dealers; Level 3; 3 Credits.
> Follow correct procedures when handling casino chips; Level 3; 5 Credits.
> Manage the float in a gaming environment; Level 3; 4 Credits.
> Recognise and report customer cheat moves; Level 3; 3 Credits.

Optional:

> Deal American Roulette; Level 3; 16 Credits.
> Deal Blackjack; Level 3; 6 Credits.
> Deal Poker; Level 3; 4 Credits.
> Operate the game of Dice; Level 4; 15 Credits.
> Deal Punto Banco; Level 4; 6 Credits.
> Recognise and track players; Level 2; 3 Credits.
> Induct a member into a team; Level 3; 4 Credits.
> Assist in dealing with problem and pathological gambling in the workplace; Level 3; 4 Credits.
> Operate a smart card system; Level 3; 4 Credits.
> Apply basic first aid in an operational environment; Level 2; 6 Credits.
> Apply basic business ethics in a work environment; Level 2; 2 Credits.
> Adhere to a disciplinary code; Level 3; 1 Credit.
> Manage time and the work process in a business environment; Level 3; 4 Credits.

Slots Operating/Hosting:

Compulsory:

> Demonstrate knowledge of slot machines and their operation; Level 4; 10 Credits.

> Demonstrate knowledge of the slots department and internal procedures; Level 3; 5 Credits.
> Make gaming machine payouts; Level 3; 4 Credits.
> Operate communication equipment; Level 2; 3 Credits.
> Maintain security within slots area; Level 3; 6 Credits.

Optional:

> Carry out fault finding, fault resolution, repair, maintenance and servicing of gaming machines and gaming related equipment and systems; Level 4; 12 Credits.
> Carry out maintenance of gaming machines; Level 3; 6 Credits.
> Install, remove, convert and upgrade gaming machines and gaming related equipment and systems; Level 3; 8 Credits.
> Recognise and track players; Level 2; 3 Credits.
> Induct a member into a team; Level 3; 4 Credits.
> Assist in dealing with problem and pathological gambling in the workplace; Level 3; 4 Credits.
> Operate a smart card system; Level 3; 4 Credits.
> Apply basic first aid in an operational environment; Level 2; 6 Credits.
> Apply basic business ethics in a work environment; Level 2; 2 Credits.
> Adhere to a disciplinary code; Level 3; 1 Credit.
> Manage time and the work process in a business environment; Level 3; 4 Credits.
> Recognise and track players; Level 2; 3 Credits.
> Induct a member into a team; Level 3; 4 Credits.
> Assist in dealing with problem and pathological gambling in the workplace; Level 3; 4 Credits.
> Operate a smart card system; Level 3; 4 Credits.
> Apply basic first aid in an operational environment; Level 2; 6 Credits.
> Apply basic business ethics in a work environment; Level 2; 2 Credits.
> Adhere to a disciplinary code; Level 3; 1 Credit.
> Manage time and the work process in a business environment; Level 3; 4 Credits.

Cashiering:

Compulsory:

Operate and maintain cashiering equipment; Level 3; 4 Credits.

Optional:

> Control a slots safe inventory; Level 4; 6 Credits.
> Control the casino float; Level 4; 8 Credits.
> Process cheque, credit card and bank transactions; Level 3; 8 Credits.
> Process slots transactions and redeem and retrieve slots shorts; Level 3; 4 Credits.
> Batch coins and tokens; Level 2; 3 Credits.
> Operate a chip and cash float; Level 3; 6 Credits.
> Operate a cash and coin float; Level 3; 6 Credits.
> Process table transactions; Level 3; 4 Credits.
> Recognise and track players; Level 2; 3 Credits.
> Induct a member into a team; Level 3; 4 Credits.
> Assist in dealing with problem and pathological gambling in the workplace; Level 3; 4 Credits.
> Operate a smart card system; Level 3; 4 Credits.
> Apply basic first aid in an operational environment; Level 2; 6 Credits.
> Apply basic business ethics in a work environment; Level 2; 2 Credits.
> Adhere to a disciplinary code; Level 3; 1 Credit.
> Manage time and the work process in a business environment; Level 3; 4 Credits.

Surveillance:

Compulsory:

Operate a closed circuit television system; Level 3; 5 Credits.
Operate communication equipment; Level 2; 3 Credits.

Optional:

> Monitor clearance and count procedures; Level 2; 4 Credits.
> Monitor financial transactions; Level 3; 10 Credits.
> Monitor slots operations; Level 3; 12 Credits.
> Monitor American Roulette; Level 3; 8 Credits.
> Monitor Blackjack; Level 3; 6 Credits.
> Monitor Dice; Level 4; 12 Credits.
> Monitor functions of a smart card system in a gaming environment; Level 3; 4 Credits.
> Monitor Poker; Level 3; 3 Credits.
> Monitor Punto Banco; Level 3; 12 Credits.
> Recognise and track players; Level 2; 3 Credits.
> Induct a member into a team; Level 3; 4 Credits.
> Assist in dealing with problem and pathological gambling in the workplace; Level 3; 4 Credits.
> Operate a smart card system; Level 3; 4 Credits.
> Apply basic first aid in an operational environment; Level 2; 6 Credits.
> Apply basic business ethics in a work environment; Level 2; 2 Credits.
> Adhere to a disciplinary code; Level 3; 1 Credit.
> Manage time and the work process in a business environment; Level 3; 4 Credits.

EXIT LEVEL OUTCOMES
1. Demonstrate an understanding of the gaming environment and the context in which gaming activities take place.

2. Meet customer service requirements.

3. Function in the operational environment.

Exit Level Outcomes for areas of specialisation in the qualification:

Depending of the area of specialisation selected, the qualifying learner will be able to:

4. Operate as a dealer.

Or

5. Operate as a slots operator/host.

Or

6. Operate as a cashier in a gaming environment.

Or

7. Carry out surveillance in a gaming environment.

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

1.1 The gaming environment is explained in terms of the legislative framework in which gaming activities take place.

1.2 The consequences of non-compliance with legislation are explained for the employee and the casino.

1.3 The accepted Code of Conduct and Business Procedures applicable within the casino industry are explained in terms of own behaviour and work performance.

1.4 Operational requirements are identified and explained as they relate to legislation and operational objectives.

Associated Assessment Criteria for Exit Level Outcome 2:

2.1 The factors that impact on customer service in the gaming environment are explained and demonstrated with examples of good and bad practices.

2.2 Communication skills are used effectively when interacting with customers and fellow employees.

2.3 Customers are assisted with queries relating to the layout, services and facilities available within the organisation.

2.4 Principles of responsible gaming are understood and applied within the context of customer interaction.

Associated Assessment Criteria for Exit Level Outcome 3:

3.1 Working relationships are maintained with other members of staff in order to support operational functions.

3.2 Health and safety is maintained according to operational requirements.

Associated Assessment Criteria for Exit Level Outcome 4:

4.1 Dealing functions are handled according to operational requirements and industry standards.

4.2 Chips are handled with dexterity and accuracy as per operational requirements in support of the dealing function.

4.3 The operational float is handled according to organisational requirements.

4.4 Security procedures for dealers are executed according to operational requirements.

4.5 Customer cheat moves are recognised and reported according to operational policy and procedures.

4.6 Players are recognised and tracked according to operational requirements.

Or

Associated Assessment Criteria for Exit Level Outcome 5:

5.1 A working knowledge of the equipment required for effective slots operation is demonstrated and applied in the workplace.

5.2 Slots department internal procedures are applied when performing operational functions.

5.3 Security is maintained within the slot machine area.

5.4 Gaming machine payouts are made according to internal procedures.

5.5 Technical tasks in the slots operation area are maintained according to operational requirements.

> Range: Installation, conversion, upgrades, maintenance, fault finding, floor moves.

Or

Associated Assessment Criteria for Exit Level Outcome 6:

6.1 Gaming Cashiering equipment is operated according to operational requirements, manufacturer's specifications and gaming board requirements.

6.2 A smart card system is operated according to operational requirements.
6.3 Gaming related transactions are processed according to legislative and operational requirements.
> Range: Table and slots coin transactions, Slot shorts redemption, Cheque, Credit Card and Bank Transactions, Coin exchange, Chip exchange.
6.4 Gaming cashiering administration is executed according to operational procedures.
> Range: Chip and cash float, cash and coin float, batching of chips and tokens.

Or

Associated Assessment Criteria for Exit Level Outcome 7:

7.1 Surveillance equipment is handled according to operational and organisational requirements.
> Range: CCTV System, communication systems.
7.2 Activities within a casino are monitored as per Gaming Board Regulations and internal procedures.
> Range: Financial transactions, clearance and count procedures, bets, slots, games of chance, smart card system, tracking of customers, access control.
7.3 Relevant action is taken where anomalies are identified as per operational procedures and requirements.

Integrated Assessment:

Assessment practices must be open, transparent, fair, valid, and reliable and must ensure that no learner is disadvantaged in any way whatsoever. For this purpose, an integrated assessment approach is incorporated into the qualification.

Learning, teaching and assessment are inextricably aligned. Whenever possible, the assessment of knowledge, skills, attitudes and values shown in the unit standards should be integrated through the practical application of sales and services in a wholesale and retail environment.

Assessment of the communication, language, literacy and numeracy should be conducted in conjunction with other aspects and should use authentic wholesale and retail sales and services 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. 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.

The term 'Integrated Assessment' implies that theoretical and practical components should be assessed together. During integrated assessments the assessor should make use of formative and summative assessment methods and assess combinations of practical, applied, foundational and reflective competencies.

Assessors and moderators should make use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.

Assessment should ensure that all Specific Outcomes, Embedded Knowledge and Critical Cross-Field Outcomes are evaluated. The assessment of the Critical Cross-Field Outcomes should be integrated with the assessment of Specific Outcomes and Embedded Knowledge.

INTERNATIONAL COMPARABILITY

When researching the National Certificate: Gaming Operations, NQF Level 3 it became apparent that it would be virtually impossible to compare this qualification with training in emerging markets. This is mainly due to the fact that gaming establishments are not recognised in all markets and that most training is conducted in-house and the detail thereof is not readily available to the general public.

Based on turnover, number of gaming establishments, and tourism pulling-power, it is generally accepted that the best practice worldwide occurs in the United Stated of America, most notably in Nevada. Therefore qualifications and learning programmes from the USA were used for international comparison. America does not have anything similar to our National Qualifications Framework.

Gaming in South Africa in terms of number of customers and as an income generator is probably the most closely aligned to New Zealand. It is therefore important to also compare the proposed qualification with similar qualifications from New Zealand, which also has its own version of a National Qualifications Framework.

International practice is for training to be given separately for each area of the gaming industry, whereas this qualification offers training in core competencies applicable to all areas and in chosen specialisations. As no one qualification or training programme exists internationally for each specialisation in the National Certificate: Gaming, Level 3, comparisons were done with international qualifications in each specialisation.

Cashiering:

The US Occupational Information Network for Gaming Change Persons and Booth Cashiers.

The competencies offered in this programme include:

> Calculate the value of chips won or lost by players.
> Exchange money, credit, and casino chips, and make change for customers.
> Keep accurate records of monetary exchanges, authorization forms, and transaction reconciliations.
> Work in and monitor an assigned area on the casino floor where slot machines are located.

These competencies are covered in the National Certificate: Gaming, Level 3:

The New Zealand National Certificate in Casino Cashiering, Level 3.

The competencies offered include:

> Handle gaming chips in a casino cashiering area.
> Carry out non-cash transactions in a casino cashiering area.
> Handle coin and cash in a casino cashiering area.
> Operate a deposits and cheque cashing facility in a casino cashiering area.
> Demonstrate knowledge of the rules, procedures, and organisational structure of a casino.
> Demonstrate knowledge of communication skills and customer service skills in tourism and travel workplaces.
> Provide customer service in the tourism and travel industry.

These are dealt with in the National Certificate: Gaming, Level 3.

Conclusion:

The abovementioned qualifications, as with almost all learning frameworks outside of South Africa, do not have a fundamental component. The compulsory units of competency in the US and New Zealand qualifications match those in the proposed South African qualification, although the latter includes more compulsory core competencies. In addition, the National Certificate: Gaming, Level 3 offers unit standards specific to the area of specialisation. The core components of the two international qualifications do not include anything of significance which the proposed South African one does not.

The foreign unit standards do not provide as much detail as the local ones. The proposed qualification also offers more unit standards, both as optional and non-optional choices, than either of the compared qualifications does.

In summary, the proposed South African qualification offers practically all of the core competencies of comparable qualifications in the USA and New Zealand, but in addition gives a broader range of potential learners many more options.

Slots:

The US Occupational Information Network for Slots Key persons. The competencies offered include:

> Monitor payment of hand-delivered jackpots to ensure promptness.
> Monitor functioning of slot machine coin dispensers and fill coin hoppers when necessary.
> Respond to and resolve patrons' complaints.
> Patrol assigned areas to ensure that players are following rules and that machines are functioning correctly.
> Reset slot machines after payoffs.
> Perform minor repairs or make adjustments to slot machines, resolving problems such as machine tilts and coin jams.
> Record the specifics of malfunctioning machines and document malfunctions needing repair.
> Exchange currency for customers, converting currency into requested combinations of bills and coins.
> Answer patrons' questions about gaming machine functions and payouts.
> Attach "out of order" signs to malfunctioning machines, and notify technicians when machines need to be repaired or removed.

In addition the training offered by USA providers such as the Slot Floor Mechanic Course offered by the Red Community Rock College address similar competencies.

These include:

> Identifying errors.
> Pay outs of jackpots.
> Filling empty machines.
> Basic machine malfunctions.
> Compliance with regulatory paperwork.
> Troubleshooting and repair.
> Conversions.
> Slot layout.
> Regulatory compliance.

This learning programme also shares many of the core competencies found in the New Zealand National Certificate in Casino Gaming, Level 3. These competencies include:

> Provide gaming machine information to customers in a casino.
> Monitor and maintain gaming machines in casino.

> Maintain security and safety of gaming machines in a casino.
> Demonstrate knowledge of electronic gaming machine procedures.
> Monitor the use of electronic gaming machines.

Conclusion:

The same conclusions can be made as for the cashiering specialisation.

Dealing:

The US Occupational Information Network for Gaming Dealers. The competencies offered include:

> Exchange paper currency for playing chips or coin money.
> Pay winnings or collect losing bets as established by the rules and procedures of a specific game.
> Deal cards to house hands, and compare these with players' hands to determine winners, as in black jack.
> Conduct gambling games such as dice, roulette, cards, or keno, following all applicable rules and regulations.
> Check to ensure that all players have placed bets before play begins.
> Stand behind a gaming table and deal the appropriate number of cards to each player.
> Inspect cards and equipment to be used in games to ensure that they are in good condition.
> Start and control games and gaming equipment, and announce winning numbers or colors.
> Open and close cash floats and game tables.
> Compute amounts of players' wins or losses, or scan winning tickets presented by patrons to calculate the amount of money won.

In addition the training offered by USA providers such as the Certificate in Gaming offered by the University of Nevada and the Casino School Course offered by the National bartenders, casino games and hospitality schools address similar competencies. These include:

> Provide Customer Service.
> Gaming regulations and control.
> Hygiene and safety within Casino Environment.
> Learn about equipment used.
> Rules and objectives of the game.
> Dealer and player positions.
> Handling cards.
> Games procedures.
> Gaming protection.
> Dealing techniques.

Conclusion:

The same conclusions can be made as for the cashiering specialisation.

Surveillance:

The US Occupational Information Network for Gaming Surveillance Officers. The competencies offered include:

> Observe casino or casino hotel operations for irregular activities such as cheating or theft by employees or patrons, using audio/video equipment and one-way mirrors.
> Report all violations and suspicious behaviors to supervisors, verbally or in writing.

> Monitor establishment activities to ensure adherence to all state gaming regulations and company policies and procedures.
> Act as oversight and security agents for management and customers.
> Supervise and train surveillance observers.

In addition the training offered by USA providers such as the Training seminar in Casino surveillance offered by the University of Nevada, Las Vegas, address similar competencies to the ones stipulated, albeit in greater detail. These include:

> Protecting table games.
> Cheating.
> Advantage play.
> Internal theft and collusion by dealers.
> Detecting cheating at tables.
> Methods of gathering and preserving evidence so that law enforcement agents can use the information gathered for successful prosecution.
> Prevent cheating by adherence to proper casino procedures.
> How to detect it when it occurs.
> How to coordinate with Surveillance personnel for effective handling, including arrest and prosecution.
> Advantage play.
> Basics of card counting, shuffle tracking, and key card location.
> Cheating at slots.
> Basics of how slot machine cheating and theft can be detected.
> Protecting casino patrons.
> Internal theft and embezzlement.
> Evidence protection.
> Procedures as protection of the casinos.
> Surveillance reporting.
> Surveillance teamwork.

This learning programme also shares many of the core competencies found in the New Zealand National Certificate in Casino Gaming, Level 4.These competencies include:

> Demonstrate knowledge of legislation that impacts upon the operation of casinos.
> Demonstrate knowledge of legislative and regulatory requirements for casino surveillance.
> Demonstrate knowledge of casino fraudulent practices.
> Demonstrate knowledge of casino internal controls and accounting procedures for surveillance purposes.
> Operate a surveillance system in a casino.
> Demonstrate knowledge of the requirements for presenting evidence in court on a casino incident.

Conclusion:

The findings are same as for the other specialisations, but the following are not included in the National Certificate: Gaming, Level 3.
> Playing of particular games (EG Advantage play).
> Legal procedure (EG Presenting evidence in court).

These are not regarded as significant omissions in the National Certificate: Gaming, NQF Level 3.

Conclusion:

Whilst there are many hundreds of institutions that provide Casino or Gaming Training, this International Comparability research has found that the bulk of the providers cater to separate areas of specialisation, often in short courses, in that they provide units within specific disciplines i.e. booths or cashiering, dealers, slots operators, surveillance or security, etc. The comparisons made provide a good indication of the international equivalence of the proposed South African qualification, which draws almost all of these short courses into one qualification which also includes additional compulsory core unit standards, and fundamentals.

ARTICULATION OPTIONS
The qualification provides the following articulation opportunities:

Horizontal Articulation:

> ID 58577: National Certificate: General Security Practices, NQF Level 3.
> ID 48764: National Certificate: Wholesale and Retail Sales Practice, NQF Level 3.

Vertical Articulation:

Vertical Articulation is possible with the following qualifications registered on the National Qualifications Framework:

> ID 59098: Further Education and Training Certificate: Gaming Supervision, NQF Level 4.
> ID 49397: National Certificate: Wholesale and Retail Operations Supervision, Level 4.
> ID 57713: Further Education and Training Certificate: Specialist Security practices, NQF Level 4.
> ID 57712: Further Education and Training Certificate: Generic Management, 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 or moderator with the relevant Education and Training Quality Assurance body (ETQA), or with an ETQA that has a Memorandum of Understanding (MOU) with the relevant ETQA.

> Any institution offering learning that will enable the achievement of this Qualification must be registered and accredited as a provider with the relevant ETQA, or with an ETQA that has an MOU with the relevant ETQA, in which event programme approval will be obtained from the relevant ETQA.

> Assessment and moderation of assessment will be overseen by the relevant ETQA according to the policies and guidelines for assessment and moderation of that ETQA, in terms of agreements reached around assessment and moderation between various ETQAs (including professional bodies), and in terms of the moderation guideline detailed immediately below.

> Moderation must include both internal and external moderation of assessments at all exit points of the Qualification, unless ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described in the Exit Level Outcomes of the Qualification.

The options as listed above provide the opportunity to ensure that assessment and moderation can be transparent, affordable, valid, reliable and non-discriminatory.

For an applicant to register as an assessor or moderator of this Qualification the applicant needs:

> To be registered as an assessor.

> To be in possession of a relevant qualification at NQF Level 4 or above or relevant experience in the sector.

NOTES

This qualification replaces the following qualifications:

> ID 14117: National Certificate: Gaming Cashiering, Level 3, 120 Credits.
> ID 14120: National Certificate: Gaming (Slots Operations), Level 3, 120 Credits.
> ID 14121: National Certificate: Gaming (Surveillance Operations), Level 3, 120 Credits.

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	116520	Apply safety, health and environmental principles and procedures in a workplace	Level 2	2
Core	113904	Explain how money laundering legislation impacts on monetary transactions in South Africa	Level 2	2
Core	244574	Apply knowledge of HIV/AIDS to a specific business sector and a workplace	Level 3	4
Core	113852	Apply occupational health, safety and environmental principles	Level 3	10
Core	244572	Describe how to manage workplace relationships	Level 3	2
Core	123258	Foster and maintain customer relations	Level 3	10
Core	114979	Operate a computer workstation in a business environment	Level 3	2
Core	258056	Understand compliance in a casino environment	Level 3	3
Core	242815	Apply the organisation's code of conduct in a work environment	Level 4	5
Core	252217	Comply with organisational ethics	Level 4	4
Core	243947	Develop self within the job role	Level 4	4
Core	243954	Understand the need for cultural awareness in dealing with customers and colleagues	Level 4	4
Elective	258037	Batch coins and tokens	Level 2	3
Elective	258055	Monitor clearance and count procedures	Level 2	4
Elective	258066	Operate communication equipment	Level 2	3
Elective	258071	Assist in dealing with problem and pathological gambling in the workplace	Level 3	4
Elective	258043	Comply with security procedures for dealers	Level 3	3
Elective	258057	Deal American Roulette	Level 3	16
Elective	258059	Deal Blackjack	Level 3	6
Elective	258044	Deal Poker	Level 3	4
Elective	258036	Demonstrate and apply knowledge of the slots department and internal procedures	Level 3	5
Elective	258045	Handle casino chips	Level 3	5
Elective	242812	Induct a member into a team	Level 3	4
Elective	258070	Install, remove, convert and upgrade gaming machines and gaming related equipment and systems	Level 3	8
Elective	258067	Maintain security within a gaming environment	Level 3	12
Elective	258060	Make gaming machine payouts	Level 3	4

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Elective	258041	Manage the float in a gaming environment	Level 3	4
Elective	258061	Monitor gaming operations	Level 3	12
Elective	258035	Operate a chip and cash and coin float	Level 3	8
Elective	258063	Operate a closed circuit television system	Level 3	5
Elective	258058	Operate a smart card system	Level 3	4
Elective	258040	Process cheque, credit card and bank transactions	Level 3	8
Elective	258038	Process slots transactions and redeem and retrieve slots shorts	Level 3	4
Elective	258039	Process table transactions	Level 3	4
Elective	254220	Provide primary emergency care/first aid as an advanced first responder	Level 3	8
Elective	258062	Recognise and report customer cheat moves	Level 3	3
Elective	258064	Carry out fault finding, fault resolution, repair, maintenance and servicing of gaming machines and gaming related equipment and systems	Level 4	8
Elective	258046	Control a slots safe inventory	Level 4	6
Elective	258042	Control the casino float	Level 4	8
Elective	258068	Deal Punto Banco	Level 4	6
Elective	258069	Demonstrate knowledge of and operate slot machines	Level 4	5
Elective	258065	Operate the game of Dice	Level 4	15
Elective	242811	Prioritise time and work for self and team	Level 4	5

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate a chip and cash and coin float

SAQA US ID	UNIT STANDARD TITLE		
258035	Operate a chip and cash and coin float		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	8

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7797	Operate a chip and cash float	Level 3	8	Will occur as soon as 258035 is registered

SPECIFIC OUTCOME 1
Check the opening and return floats.

SPECIFIC OUTCOME 2
Handle chips.

SPECIFIC OUTCOME 3
Handle cash and vouchers.

SPECIFIC OUTCOME 4
Describe the possible impact of not verifying cash and checking for forgeries.

SPECIFIC OUTCOME 5
Make payments from the float.

SPECIFIC OUTCOME 6
Check and operate floats accurately.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

SAQA

UNIT STANDARD:

Demonstrate and apply knowledge of the slots department and internal procedures

SAQA US ID	UNIT STANDARD TITLE		
258036	Demonstrate and apply knowledge of the slots department and internal procedures		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	5

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7917	Demonstrate knowledge of the slots department and internal procedures	Level 3	5	Will occur as soon as 258036 is registered

SPECIFIC OUTCOME 1
Explain the staffing structure of the slots department.

SPECIFIC OUTCOME 2
Describe the interrelationship between the various support departments.

SPECIFIC OUTCOME 3
Work in a slots department team.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Batch coins and tokens

SAQA US ID	UNIT STANDARD TITLE		
258037	Batch coins and tokens		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	3

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7894	Batch coins and tokens	Level 2	3	Will occur as soon as 258037 is registered

SPECIFIC OUTCOME 1
Batch coins and tokens.

SPECIFIC OUTCOME 2
Describe verification procedure.

SPECIFIC OUTCOME 3
Describe batching procedures.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Process slots transactions and redeem and retrieve slots shorts

SAQA US ID	UNIT STANDARD TITLE		
258038	Process slots transactions and redeem and retrieve slots shorts		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7891	Process slots transactions and redeem and retrieve slots shorts	Level 3	4	Will occur as soon as 258038 is registered

SPECIFIC OUTCOME 1
Verify cash and coins.

SPECIFIC OUTCOME 2
Investigate shortages and potential fraud.

SPECIFIC OUTCOME 3
Redeem and retrieve slots shortages.

SPECIFIC OUTCOME 4
Process slots transactions.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Process table transactions

SAQA US ID	UNIT STANDARD TITLE		
258039	Process table transactions		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7890	Process table transactions	Level 3	4	Will occur as soon as 258039 is registered

SPECIFIC OUTCOME 1
Process table transactions.

SPECIFIC OUTCOME 2
Describe the relationships that exist between the different people in the gaming environment involved in table transactions.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Process cheque, credit card and bank transactions

SAQA US ID	UNIT STANDARD TITLE		
258040	Process cheque, credit card and bank transactions		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	8

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7798	Process cheque, credit card and bank transactions	Level 3	14	Will occur as soon as 258040 is registered

SPECIFIC OUTCOME 1
Process cheque transactions.

SPECIFIC OUTCOME 2
Process credit card transactions.

SPECIFIC OUTCOME 3
Process foreign currency.

SPECIFIC OUTCOME 4
Follow general procedures for processing payment.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Manage the float in a gaming environment

SAQA US ID	UNIT STANDARD TITLE		
258041	Manage the float in a gaming environment		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7911	Manage the float	Level 3	4	Will occur as soon as 258041 is registered

SPECIFIC OUTCOME 1
Implement the technical aspects of managing a float.

SPECIFIC OUTCOME 2
Describe the importance of managing a float correctly.

SPECIFIC OUTCOME 3
Explain the importance of good communication whilst managing the float.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Control the casino float

SAQA US ID	UNIT STANDARD TITLE		
258042	Control the casino float		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	8

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7899	Control the casino float	Level 4	10	Will occur as soon as 258042 is registered

SPECIFIC OUTCOME 1
Check the opening and closing float, and the float at changeover.

SPECIFIC OUTCOME 2
Follow relevant procedures when issuing or receiving floats.

SPECIFIC OUTCOME 3
Follow relevant procedures when accepting hard/soft count.

SPECIFIC OUTCOME 4
Explain the importance of following company procedures with regard to security.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Comply with security procedures for dealers

SAQA US ID	UNIT STANDARD TITLE		
258043	Comply with security procedures for dealers		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	3

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7901	Comply with security procedures for dealers	Level 3	3	Will occur as soon as 258043 is registered

SPECIFIC OUTCOME 1
Implement company security procedures for dealers and explain the importance of following these procedures at all times.

SPECIFIC OUTCOME 2
Implement Gaming Board security procedures for dealers.

SPECIFIC OUTCOME 3
Describe the role of the surveillance department in assisting with security issues.

SPECIFIC OUTCOME 4
Exercise discretion with minimum disruption in all security dealings with customers.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Deal Poker

SAQA US ID	UNIT STANDARD TITLE		
258044	Deal Poker		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7908	Deal poker	Level 3	2	Will occur as soon as 258044 is registered

SPECIFIC OUTCOME 1
Handle chips and cards correctly.

SPECIFIC OUTCOME 2
Adhere to poker dealing procedures.

SPECIFIC OUTCOME 3
Assist customers with playing Poker.

SPECIFIC OUTCOME 4
Understand the game of Poker.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

SAQA

UNIT STANDARD:

Handle casino chips

SAQA US ID	UNIT STANDARD TITLE		
258045	Handle casino chips		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
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
Make mandatory announcements.

SPECIFIC OUTCOME 2
Handle chips accurately.

SPECIFIC OUTCOME 3
Ensure good customer service.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Control a slots safe inventory

SAQA US ID	UNIT STANDARD TITLE		
258046	Control a slots safe inventory		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	6

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7898	Control a slots safe inventory	Level 4	8	Will occur as soon as 258046 is registered

SPECIFIC OUTCOME 1
Follow relevant procedures when balancing the safe float.

SPECIFIC OUTCOME 2
Apply security procedures when balancing the safe float.

SPECIFIC OUTCOME 3
Maintain and account for safe value items and contents.

SPECIFIC OUTCOME 4
Analyse and reconcile cashier float.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Monitor clearance and count procedures

SAQA US ID	UNIT STANDARD TITLE			
258055	Monitor clearance and count procedures			
ORIGINATOR		PROVIDER		
SGB Hospitality, Gaming & Leisure				
FIELD		SUBFIELD		
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL		CREDITS
Undefined	Regular	Level 2		4

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7931	Monitor clearance and count procedure	Level 2	4	Will occur as soon as 258055 is registered

SPECIFIC OUTCOME 1
Monitor the count and clearance procedure.

SPECIFIC OUTCOME 2
Identify and record any irregularities in count and clearance procedures.

SPECIFIC OUTCOME 3
Report variances in count and clearance procedures.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Understand compliance in a casino environment

SAQA US ID	UNIT STANDARD TITLE		
258056	Understand compliance in a casino environment		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	3

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7897	Demonstrate Compliance In a Casino Environment	Level 3	2	Will occur as soon as 258056 is registered

SPECIFIC OUTCOME 1
Explain Gaming Board rules and regulations.

SPECIFIC OUTCOME 2
Explain compliance to ensure licence awarding and retention.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Deal American Roulette

SAQA US ID	UNIT STANDARD TITLE		
258057	Deal American Roulette		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	16

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7905	Deal American roulette	Level 3	20	Will occur as soon as 258057 is registered

SPECIFIC OUTCOME 1
Demonstrate an understanding of the game of roulette.

SPECIFIC OUTCOME 2
Operate the game of roulette.

SPECIFIC OUTCOME 3
Take bets and make payouts.

SPECIFIC OUTCOME 4
Handle players and unexpected situations in a professional manner.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate a smart card system

SAQA US ID	UNIT STANDARD TITLE		
258058	Operate a smart card system		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7896	Operate a Smart Card System	Level 3	4	Will occur as soon as 258058 is registered

SPECIFIC OUTCOME 1
Operate the smart card system.

SPECIFIC OUTCOME 2
Deal with malfunctions.

SPECIFIC OUTCOME 3
Deal with fraud and security issues pertaining to the smart card system.

SPECIFIC OUTCOME 4
Ensure good customer service.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Deal Blackjack

SAQA US ID	UNIT STANDARD TITLE		
258059	Deal Blackjack		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	6

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7904	Deal Blackjack	Level 3	6	Will occur as soon as 258059 is registered

SPECIFIC OUTCOME 1
Handle all aspects of the dealing cycle.

SPECIFIC OUTCOME 2
Adhere to blackjack dealing procedures.

SPECIFIC OUTCOME 3
Assist customers with playing Blackjack.

SPECIFIC OUTCOME 4
Understand the game of Blackjack.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Make gaming machine payouts

SAQA US ID	*UNIT STANDARD TITLE*		
258060	Make gaming machine payouts		
ORIGINATOR		*PROVIDER*	
SGB Hospitality, Gaming & Leisure			
FIELD		*SUBFIELD*	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	4

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7915	Make gaming machine payouts	Level 3	15	Will occur as soon as 258060 is registered

SPECIFIC OUTCOME 1
Understand payout procedures.

SPECIFIC OUTCOME 2
Make payouts.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Monitor gaming operations

SAQA US ID	UNIT STANDARD TITLE			
258061	Monitor gaming operations			
ORIGINATOR		PROVIDER		
SGB Hospitality, Gaming & Leisure				
FIELD		SUBFIELD		
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL		CREDITS
Undefined	Regular	Level 3		12

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7929	Monitor Slots Operations	Level 3	12	Will occur as soon as 258061 is registered

SPECIFIC OUTCOME 1
Explain and demonstrate the role and important aspects of monitoring.

SPECIFIC OUTCOME 2
Comply with correct operational procedures and associated regulations.

SPECIFIC OUTCOME 3
Demonstrate and explain the relationship between monitoring and payouts.

SPECIFIC OUTCOME 4
Demonstrate and explain the relationship between monitoring and slot machine maintenance.

SPECIFIC OUTCOME 5
Deal with irregularities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Recognise and report customer cheat moves

SAQA US ID	UNIT STANDARD TITLE		
258062	Recognise and report customer cheat moves		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	3

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7903	Recognise and report customer cheat moves	Level 4	2	Will occur as soon as 258062 is registered

SPECIFIC OUTCOME 1
Recognise potential situations for cheat moves.

SPECIFIC OUTCOME 2
Describe the importance of identifying cheat moves and the impact of cheating on the organisation.

SPECIFIC OUTCOME 3
Identify and prevent cheat moves.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate a closed circuit television system

SAQA US ID	UNIT STANDARD TITLE		
258063	Operate a closed circuit television system		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
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 role of monitoring and monitoring procedures.

SPECIFIC OUTCOME 2
Operate a closed circuit television system excluding irregularities.

SPECIFIC OUTCOME 3
Deal with malfunctions.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Carry out fault finding, fault resolution, repair, maintenance and servicing of gaming machines and gaming related equipment and systems

SAQA US ID	UNIT STANDARD TITLE		
258064	Carry out fault finding, fault resolution, repair, maintenance and servicing of gaming machines and gaming related equipment and systems		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	8

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

SPECIFIC OUTCOME 1
Comply with relevant Gaming Board Rules and Regulations, other legislation and company policies and procedures.

SPECIFIC OUTCOME 2
Conduct maintenance, fault finding, fault resolution, servicing and repair of gaming machines and gaming related equipment and systems.

SPECIFIC OUTCOME 3
Complete repairs covered by company policy and procedure and oversee other repairs.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate the game of Dice

SAQA US ID	UNIT STANDARD TITLE		
258065	Operate the game of Dice		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	15

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

SPECIFIC OUTCOME 1
Demonstrate an understanding of the game of Dice.

SPECIFIC OUTCOME 2
Operate the game of Dice.

SPECIFIC OUTCOME 3
Take Dice bets and make payouts.

SPECIFIC OUTCOME 4
Handle players and unexpected situations in a professional manner in relation to the game of Dice.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate communication equipment

SAQA US ID	UNIT STANDARD TITLE		
258066	Operate communication equipment		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	3

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7918	Operate communication equipment	Level 2	3	Will occur as soon as 258066 is registered

SPECIFIC OUTCOME 1
Understand correct communication etiquette procedures.

SPECIFIC OUTCOME 2
Understand the procedure to be followed for equipment failure.

SPECIFIC OUTCOME 3
Use standard communication equipment correctly.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Maintain security within a gaming environment

SAQA US ID	UNIT STANDARD TITLE		
258067	Maintain security within a gaming environment		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	12

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7913	Maintain security within slots area	Level 3	12	Will occur as soon as 258067 is registered

SPECIFIC OUTCOME 1
Identify security and safety hazards in a gaming area.

SPECIFIC OUTCOME 2
Understand organisational procedure for maintaining safety and security in a gaming area.

SPECIFIC OUTCOME 3
Identify areas of access.

SPECIFIC OUTCOME 4
Deal with problems in a gaming area.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Deal Punto Banco

SAQA US ID	UNIT STANDARD TITLE		
258068	Deal Punto Banco		
ORIGINATOR		**PROVIDER**	
SGB Hospitality, Gaming & Leisure			
FIELD		**SUBFIELD**	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	**UNIT STANDARD TYPE**	**NQF LEVEL**	**CREDITS**
Undefined	Regular	Level 4	6

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

SPECIFIC OUTCOME 1
Demonstrate an understanding of the game of Punto Banco.

SPECIFIC OUTCOME 2
Deal and operate the game of Punto Banco.

SPECIFIC OUTCOME 3
Take Punto Banco bets and make payouts.

SPECIFIC OUTCOME 4
Handle players and unexpected situations in a professional manner.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate knowledge of and operate slot machines

SAQA US ID	UNIT STANDARD TITLE		
258069	Demonstrate knowledge of and operate slot machines		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	5

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
7916	Demonstrate knowledge of slot machines and operation	Level 4	10	Will occur as soon as 258069 is registered

SPECIFIC OUTCOME 1
Understand the operation of a slot machine.

SPECIFIC OUTCOME 2
Convey information to clients.

SPECIFIC OUTCOME 3
Operate a slot machine.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Install, remove, convert and upgrade gaming machines and gaming related equipment and systems

SAQA US ID	UNIT STANDARD TITLE		
258070	Install, remove, convert and upgrade gaming machines and gaming related equipment and systems		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
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
Comply with relevant internal and external rules, regulations, policies and procedures.

SPECIFIC OUTCOME 2
Install and remove gaming machines and gaming related equipment and systems.

SPECIFIC OUTCOME 3
Convert and upgrade gaming machines and gaming related equipment and systems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Assist in dealing with problem and pathological gambling in the workplace

SAQA US ID	UNIT STANDARD TITLE		
258071	Assist in dealing with problem and pathological gambling in the workplace		
ORIGINATOR		PROVIDER	
SGB Hospitality, Gaming & Leisure			
FIELD		SUBFIELD	
11 - Services		Hospitality, Tourism, Travel, Gaming and Leisure	
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
Recognise the signs and symptoms of problem and pathological gambling.

SPECIFIC OUTCOME 2
Describe the implications and consequences of problem and pathological gambling for the individual and the organisation.

SPECIFIC OUTCOME 3
Follow proper process when dealing with gambling and pathological gambling.

SPECIFIC OUTCOME 4
Explain the recovery process and implications.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63269	National Certificate: Gaming Operations	Level 3

No. 844   **15 August 2008**

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

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

Chemical Industries

registered by Organising Field 06 – Manufacturing, Engineering and Technology, 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 15 September 2008.* All correspondence should be marked **Standards Setting – SGB for Chemical Industries** and addressed to

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

DR. S. BHIKHA
DIRECTOR: STANDARDS SETTING AND DEVELOPMENT

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
National Certificate: Molten Glass Production

SAQA QUAL ID	QUALIFICATION TITLE		
63349	National Certificate: Molten Glass Production		
ORIGINATOR		PROVIDER	
Chemical Industries SGB			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	120	Level 3	Regular-Unit Stds Based

This qualification replaces:

Qual ID	Qualification Title	NQF Level	Min Credits	Replacement Status
48434	National Certificate: Molten Glass Production	Level 3	120	Will occur as soon as 63349 is registered

PURPOSE AND RATIONALE OF THE QUALIFICATION
Purpose:

This qualification is used as an introduction to molten glass production. This competence provides the foundation needed to take responsibility for a complete glass melting operation. It also provides the basis upon which further related learning and career development can take place

On completion of this qualification learners will have a good foundational understanding of the scientific principles applicable to glass melting in order to more effectively operate and solve any problems in a glass melting plant. Learners will also be able to monitor and control a glass melting operation based on both general operating principles as well as workplace instructions and finally, learners will be able to address a range of workplace emergencies that they may encounter.

Through the employment of competent operating personnel, employers have confidence that the critical work in the industry is efficiently carried out.

Social development and economic transformation are enhanced through efficient production, and career development and personal job satisfaction of operating personnel are facilitated through the learning process used to achieve the competency specified.

Rationale:

This qualification replaces Molten Glass Production NQF Level 3, ID 48434.

The other qualifications with some relevance to this industry are those aimed at the manufacturing, chemical operations, production and pharmaceutical industries. However, not

one of these qualifications has enough relevance to molten glass production to be used as a basis for this qualification.

This qualification is for people working in molten glass production and who need to progress beyond NQF Level 2. The qualification reflects the common workplace-based and non-specific needs that learners require in molten glass production, before progressing to learning at a higher level. Typical learners are operating personnel working in a molten glass production environment.

The glass industry is well established in South Africa and its success is dependant upon the efficient production of molten glass. Achievement of this objective is largely dependant upon the competence, recognised by this qualification, of the people who operate glass melting equipment. An adequate number of people with these skills are needed to ensure that the production units in South Africa operate productively.

Competence in molten glass production requires appropriate general and glass specific knowledge as well as the practical application of this knowledge. Expertise in operating production equipment and controlling a melting process are further requirements for competence. This knowledge and expertise can form a basis for further learning, particularly in the production/operational, engineering and supervisory aspects of glass production and similar industries in the chemical and other manufacturing sectors.

RECOGNIZE PREVIOUS LEARNING?
Y

LEARNING ASSUMED IN PLACE
It is assumed that learners are already competent in communication and mathematical literacy at NQF Level 2.

Most learners accessing this qualification will be competent in operating a batch mixing facility as found in an integrated glass operation. They will also have expertise in operating equipment in a production or manufacturing environment and in the application of process related technologies in these operations.

When learners do not have this learning assumed to be in place, appropriate adjustments to the learning process are required.

Recognition of prior learning must be carried out in accordance with the policy and rules specified and used by the ETQA responsible for evaluation of people seeking RPL for a part of the whole qualification.

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. A learner wishing to be assessed towards this qualification may arrange to do so without attending any further training or education. The assessor and the learner will jointly decide on the most appropriate method to be taken.

QUALIFICATION RULES
In the compulsory Fundamental Component of the qualification, a learner must demonstrate his/her competence in the 20 credits in the field of Communication plus 16 credits in the field of Mathematical Literacy.

The unit standards in the compulsory Core Component of the qualification reflect the skills and competencies needed for building expertise in glass melting. In the Core Component, the learner must demonstrate his/her competence in the total of 37 credits.

The Elective Component of the qualification requires the learner to select additional Unit Standards covering aspects such as related technologies, quality, safety, maintenance, teamwork and computer skills. In total the learner must demonstrate his/her competence in a minimum of 47 credits selected from the Elective component.

Elective Component: Choose a minimum of 47 credits; NLRD ID; Level; Credits:

> Demonstrate understanding of electrostatic precipitator technology; ID 258077; Level 3; 6 Credits.
> Perform visual inspection checks to identify glass defects; ID 258078; Level 3; 4 Credits.
> Demonstrate an understanding of the refractory materials, products and processes; ID 13974; Level 3; 5 Credits.
> Identify and interpret instrument control loops; ID 244091; Level 3; 8 Credits.
> Monitor critical control points (CCPs) as an integral part of a hazard analysis critical control point (HACCP) system; ID 120239; Level 3; 6 Credits.
> Apply elementary statistical process control principles; ID 244076; Level 2; 6 Credits.
> Apply safety, health and environment protection procedures in a process plant; ID 244108; Level 3; 6 Credits.
> Demonstrate understanding of a work permit system; ID 244078; Level 2; 3 Credits.
> Perform and support maintenance functions; ID 244094; Level 3; 5 Credits.
> Dismantle, assemble and install basic components in a process environment; ID 244095; Level 3; 6 Credits.
> Supervise work unit to achieve work unit objectives (individuals and teams); ID 10981; Level 4; 12 Credits.
> Conduct safety and health representation activities; ID 116518; Level 2; 3 Credits.
> Capture numerical and text information on an electronic database; ID 114981; Level 2; 2 Credits.
> Use a GUI based word processor to enhance a document through tables and columns; ID 119078; Level 3; 5 Credits.
> Use a Graphical User Interface (GUI)-based spreadsheet application to create and edit spreadsheets; ID 116937; Level 2; 4 Credits.

EXIT LEVEL OUTCOMES
Demonstrate an understanding of the underlying technologies and operating principles used in glass melting, namely:

> Understand glass chemistry relevant to a glass melting operation.
> Monitor and control the glass melting process.
> Respond to the emergencies that may occur in a glass melting operation.

1. Demonstrate an understanding of glass chemistry relevant to a glass melting operation.

2. Monitor and control the glass melting process using relevant problem solving methods and standard operating procedures.

3. Apply emergency procedures in a glass melting operation.

Critical Cross-Field Outcomes:

Each critical cross-field outcome was considered in terms of its applicability to each of the specific outcomes for each unit standard. Where it was found to be applicable, the nature of the skills being developed was specified by the working group and captured in the standard.

Critical cross-field outcomes are assessed per unit standards and are part of all exit level outcomes. Critical cross-field outcomes have been addressed by the exit level outcomes as follows:

While involved in glass melting operations, qualifying learners can:

Identify and solve problems in which response displays that responsible decisions, using critical and creative thinking, have been made by:

> Solving problems experienced with the glass furnace, its ancillary systems and the quality of materials used or produced in the process.
 > Evident in Exit Level Outcome 2.
> Assessing emergency conditions and addressing equipment failure and serious injury effectively.
 > Evident in Exit Level Outcome 3

Work effectively with others as a member of a team, group, organisation or community by:

> Keeping co-workers informed of the condition of the glass melting operation.
 > Evident in Exit Level Outcome 2.
> Addressing emergencies in a coordinated way together with team members.
 > Evident in Exit Level Outcome 3.

Organise and manage oneself and one's activities responsibly and effectively by:

> Systematic organisation of glass properties and their impact on molten glass operations.
 > Evident in Exit Level Outcome 1.
> Systematic monitoring and controlling of a glass furnace, its ancillary systems and the quality of process materials.
 > Evident in Exit Level Outcome 2.
> Logical assessment and addressing of emergency conditions.
 > Evident in Exit Level Outcome 3.

Collect, analyse, organise and critically evaluate information by:

> Systematic organisation of glass properties and their impact on molten glass operations.
 > Evident in Exit Level Outcome 1.
> Systematic monitoring of a glass furnace, its ancillary systems and the quality of process materials through data collection.
 > Evident in Exit Level Outcome 2.
> Systematic collection of information to assess an emergency condition.
 > Evident in Exit Level Outcome 3.

Communicate effectively by using mathematical and/or language skills in the modes of oral and/or written presentations by:

> Communicating glass properties in appropriate scientific language and formulae.
 > Evident in Exit Level Outcome 1.
> Capturing data collected during the monitoring process accurately.
 > Evident in Exit Level Outcome 2.
> Verbally communicating emergency conditions clearly and drafting a written report.
 > Evident in Exit Level Outcome 3.

2.Use science and technology effectively and critically, showing responsibility towards the environment and health of others by:

> Understanding glass and furnace properties and its impact on the environment.
 > Evident in Exit Level Outcome 1.
> Controlling the melting process within safety and environmentally safe parameters.
 > Evident in Exit Level Outcome 2.
> Limiting the impact of emergencies on people and the environment.
 > Evident in Exit Level Outcome 3.

Demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation by:

> Understanding the impact of molten glass properties on the furnace operations and the final product produced.
 > Evident in Exit Level Outcome 1.
> Controlling material and furnace conditions in order to ensure that only quality products are produced.
 > Evident in Exit Level Outcome 2.
> Being prepared to address emergencies effectively to minimise impact on people, equipment and ultimately company viability.
 > Evident in Exit Level Outcome 3.

Contribute to the full personal development of each learner and the social and economic development of the society at large by:

> Accumulation and grasp of scientific knowledge in the community.
 > Evident in Exit Level Outcome 1.
>Efficient plant operation to maintain employment levels in local community.
 > Evident in Exit Level Outcome 2.
> Effective handling of emergencies at home and in local community.
 > Evident in Exit Level Outcome 3.

ASSOCIATED ASSESSMENT CRITERIA
Associated Assessment Criteria for Exit level outcome 1:

> The properties of the raw materials used in the glass production process are explained in terms of accepted scientific principles.
> Heat and heat transfer principles are explained in terms of relevance to glass melting and as applied in a glass melting furnace.
> Molten glass properties are explained in terms of their relevance to a glass melting furnace.

Associated Assessment Criteria for Exit level outcome 2:

> The glass furnace and its ancillary systems are monitored and controlled as per standard operating procedure requirements.
> Quality standards of materials entering and leaving the glass furnace is monitored and controlled in accordance with specifications.
> Problems experienced with the glass furnace and its ancillary systems or the quality of process materials are solved using a basic problem solving methodology.

Associated Assessment Criteria for Exit level outcome 3:

> Emergency conditions are assessed and communicated as per standard operating procedure requirements.

> Equipment failure and serious injury to personnel are addressed in such a way as to minimise further impact on human life, equipment and the environment.
> Plant and equipment is shut down or returned to normal running conditions in accordance with standard operating procedures.

Integrated Assessment:

The applied competence (practical, foundational and reflexive competencies) of this qualification will be achieved if a candidate is able to achieve all the exit level outcomes of this qualification.

Appropriate methods and tools must be used to assess practical, foundational and reflexive competence of the learner in all the exit level outcomes listed above, as well as to determine a learner's ability to solve problems, work in a team, organize him/herself, use applied science, and understand the implications of actions and reactions in the world as a set of related systems. Such an assessment process will determine development of the whole person, and the integration of applied knowledge and skills.

Assessors should develop, conduct, and ensure integration of, assessment by making use of a range of formative and summative assessment methods against the unit standards that make up the qualification. Combinations of applied, foundational and reflective competencies, including critical cross-field outcomes, should be assessed wherever possible.

Moderators should ensure that assessment is valid, consistent and integrated into work or learning, and that there is sufficient and authenticated evidence of learner competence against the whole qualification.

INTERNATIONAL COMPARABILITY
The qualification was compared against qualifications originating from the NVQ in Britain, SVQ in Scotland, the German Berufsschule and the Australian and New Zealand Qualifications Frameworks. African countries with manufacturing facilities (including SADC countries) were scanned for applicable qualifications or training programmes, but no relevant qualifications are offered in any of these countries.

A comparison with the British qualifications is particularly valuable since they also lead a European Community (EC) pilot project to establish a benchmark glass manufacturing qualification for the EC. It is therefore important to note that the current British qualifications have the following similarities to the South African qualification:

> Both have separate qualifications to address glass melting and glass forming.
> Both have a core molten glass chemistry module.
> Both have a core glass furnace operations module.

The differences are as follows:

> The proposed South African molten glass qualification includes emergency procedures and problem solving unit standards in its core, the NVQ has no further core standards.
> A variety of additional Unit Standards addressing molten glass manufacturing aspects are included in the elective component of the South African qualification.
> The British qualification prefers a variety of mechanical, business and soft skill unit standards in its elective portfolio. These were considered of secondary importance by South African stakeholders.

The other participants in the EC project, Sweden, the Czech Republic and Romania, have been amongst the world leaders in glass manufacturing for many years. Although the Czech Republic and Romania are in the process of adopting and converting the British formal qualifications to their own requirements, "glass institutes" which form part of their higher education system train

"glass technicians" (diploma and degree courses) whereas "glass artisans" are trained as a fitter and turner speciality course aimed at the building and maintenance of glass furnace ware.

The German Berufsschule offers a two year course (certificate) consisting of an in-depth theory component and a detailed mechanical (dismantle, assemble and set-up) component. This is similar to the "glass artisan" route followed by Romania and the Czech Republic. Most of these Berufsschüle also offers courses in glass sculpture which favours the more artistic approach to glass than the approach relevant to the South African industry.

Finally, worldwide training is provided by glass furnace suppliers to companies using their technology and equipment. Although these courses cover a range of operational aspects, they lack the depth and integrated approach required for a qualification in this field.

In Summary:

Good international comparability, including similar core qualification structures and progressions from NQF Level 2 to NQF Level 3, were found with the Australian, New Zealand, British, Scottish and German qualifications. However, the international qualifications have a variety of mechanical, business and soft skill electives supporting their core, whereas Unit Standards with an in-depth focus on glass manufacturing were seen as a higher priority in the proposed South African molten glass qualification.

The Molten Glass Qualification compares well with the best international qualifications and training programmes offered. The additional operational content incorporated in the qualification will serve to support qualifying learners to make better informed, autonomous decisions within a more compact time frame than international learners.

ARTICULATION OPTIONS
This qualification does not form part of a qualification suite but will allow the learner a vertical progression from the National Certificate: Chemical Manufacturing, ID 58955 at NQF Level 2, preferably obtained in a glass batch mixing environment. The qualifying learner may progress to a NQF Level 4 supervisory role in the glass manufacturing field.

There are no direct horizontal articulation possibilities due to the focussed technical nature of the training in this field; however a number of the Unit Standards are duplicated in a range of other manufacturing and processing qualifications making access easier.

MODERATION OPTIONS
> Anyone moderating the assessment of learners against this Qualification must be registered as a moderator with the relevant ETQA.

> Any institution offering learning that will enable the achievement of this Qualification must be accredited or recognised as a provider with the relevant ETQA.

> Assessment and moderation 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 ETQAs (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
In order to assess this qualification, the assessor needs:

> Well developed interpersonal-skills.
> Assessors to meet the requirements of the generic assessor standards.
> Competence against the unit standard "Conduct outcomes-based assessments".
> Detailed documentary proof of educational qualification, practical training undergone, and/or experience gained at an appropriate level in the work concerning the production of molten glass. This must meet the relevant ETQA policies and guidelines. The subject matter expertise of the assessor can be established through the recognition of prior learning.
> Registration with, or recognition by, the relevant ETQA as specified through an appropriate memorandum of understanding.

NOTES
This qualification replaces qualification 48434, "National Certificate: Molten Glass Production", Level 3, 120 credits.

Range Statements:

This qualification addresses the theoretical knowledge required by learners in glass melting operations.

Knowledge relating to glass melting includes process specific technology, communication, mathematics, applied science, and SHEQ.

This qualification may be applicable to other manufacturing operations, while concepts are applicable to a range of metallurgical melting operations. This is subject to its acceptance by appropriate subject matter experts.

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	258075	Demonstrate understanding of the scientific principles applicable to glass melting	Level 3	4
Core	258076	Monitor and control the production of molten glass	Level 3	12
Core	244085	Respond to emergencies in a process environment	Level 3	6
Core	244087	Solve operating problems in a process plant	Level 3	5
Core	244084	Use operating instructions to control process plant conditions	Level 3	10
Elective	244076	Apply elementary statistical process control principles	Level 2	6
Elective	114981	Capture numerical and text information on an electronic database	Level 2	2
Elective	116518	Conduct safety and health representation activities	Level 2	3
Elective	244078	Demonstrate understanding of a work permit system	Level 2	3

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Elective	116937	Use a Graphical User Interface (GUI)-based spreadsheet application to create and edit spreadsheets	Level 2	4
Elective	244108	Apply safety, health and environment protection procedures in a process plant	Level 3	6
Elective	13974	Demonstrate an understanding of the refractory materials, products and processes	Level 3	5
Elective	258077	Demonstrate understanding of electrostatic precipitator technology	Level 3	6
Elective	244095	Dismantle, assemble and install basic components in a process environment	Level 3	6
Elective	244091	Identify and interpret instrument control loops	Level 3	8
Elective	120239	Monitor critical control points (CCPs) as an integral part of a hazard analysis critical control point (HACCP) system	Level 3	6
Elective	244094	Perform and support maintenance functions	Level 3	5
Elective	258078	Perform visual inspection checks to identify glass defects	Level 3	4
Elective	119078	Use a GUI-based word processor to enhance a document through the use of tables and columns	Level 3	5
Elective	10981	Supervise work unit to achieve work unit objectives (individuals and teams)	Level 4	12

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate understanding of the scientific principles applicable to glass melting

SAQA US ID	UNIT STANDARD TITLE		
258075	Demonstrate understanding of the scientific principles applicable to glass melting		
ORIGINATOR		PROVIDER	
Chemical Industries SGB			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
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 the properties of the raw material used in the glass production process.

SPECIFIC OUTCOME 2
Describe heat and its application in glass melting.

SPECIFIC OUTCOME 3
Describe glass furnace heat transfer principles.

SPECIFIC OUTCOME 4
Demonstrate understanding of molten glass properties.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63349	National Certificate: Molten Glass Production	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Monitor and control the production of molten glass

SAQA US ID	UNIT STANDARD TITLE		
258076	Monitor and control the production of molten glass		
ORIGINATOR		PROVIDER	
Chemical Industries SGB			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
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
Explain the fundamental principles applicable to the glass melting process.

SPECIFIC OUTCOME 2
Monitor and control the different ancillary systems interacting with the glass melting process.

SPECIFIC OUTCOME 3
Monitor and control the quality standards of raw materials and the final molten glass product in the glass melting process.

SPECIFIC OUTCOME 4
Monitor and control the glass melting process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63349	National Certificate: Molten Glass Production	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate understanding of electrostatic precipitator technology

SAQA US ID	UNIT STANDARD TITLE		
258077	Demonstrate understanding of electrostatic precipitator technology		
ORIGINATOR		PROVIDER	
Chemical Industries SGB			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
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 fundamental principles of the ESP process.

SPECIFIC OUTCOME 2
Explain the properties of the gases treated in the process.

SPECIFIC OUTCOME 3
Explain the properties of the products generated in this process.

SPECIFIC OUTCOME 4
Describe additional mechanical equipment, electrical equipment, instrumentation and utilities used in the production process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63349	National Certificate: Molten Glass Production	Level 3

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Perform visual inspection checks to identify glass defects

SAQA US ID	UNIT STANDARD TITLE		
258078	Perform visual inspection checks to identify glass defects		
ORIGINATOR		PROVIDER	
Chemical Industries SGB			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
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 the fundamental principles applicable to visual checks.

SPECIFIC OUTCOME 2
Identify and discuss common glass defects.

SPECIFIC OUTCOME 3
Identify and discuss the cause of different glass defects.

SPECIFIC OUTCOME 4
Perform tests and record and report data related to inspections.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	63349	National Certificate: Molten Glass Production	Level 3

No. 845   **15 August 2008**

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

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

Air Defence

registered by Organising Field 08, Law Military Science and Security, publishes the following Qualification for public comment.

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

Comment on the Qualification should reach SAQA at the address below and *no later 15 September 2008.* All correspondence should be marked **Standards Setting – SGB for Air Defence** and addressed to

> The Director: Standards Setting and Development
> SAQA
> *Attention: Mr. D. Mphuthing*
> Postnet Suite 248
> Private Bag X06
> Waterkloof
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DR. S. BHIKHA
DIRECTOR: STANDARDS SETTING AND DEVELOPMENT

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
National Certificate: Defensive Mission Control

SAQA QUAL ID	QUALIFICATION TITLE		
63309	National Certificate: Defensive Mission Control		
ORIGINATOR		PROVIDER	
SGB Air Defence			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	8 - Law, Military Science and Security	Sovereignty of the State	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	151	Level 5	Regular-Unit Stds Based

This qualification replaces:

Qual ID	Qualification Title	NQF Level	Min Credits	Replacement Status
49853	National Diploma: Defensive Mission Control	Level 5	240	Will occur as soon as 63309 is registered

PURPOSE AND RATIONALE OF THE QUALIFICATION
Purpose:

From the moment a fighter aircraft takes off on an interception, it is directed to the target by the mission controller until it picks up the target on its own radar or makes visual contact with the 'bogey'. Defence mission control is the act of providing in-flight command and control to aircrew in combat from a ground- or air-based, mobile or static mission control centre. The learner enrolled on this Qualification will be trained as a defence mission control officer who will, by making use of radar and other electronic equipment, direct own combat aircraft against an insurgent aircraft with the aim of neutralising the threat posed by the insurgent aircraft. The defence mission control officer will also be required to provide assistance in defending identified flashpoints in a South African National Defence Force area of responsibility.

The learner will gain expert knowledge in the fundamentals of aircraft design and flight, the effect flight has on the human body, the use of technology and, most importantly, the application of the air-weapon. The learner will use these knowledge and skills to contribute to the defence of South African airspace and/or area of responsibility against possible air threats, thus providing a safer and secure country for social and economic growth.

Recipients of this qualification are able to:

> Apply knowledge of aviation regulations, principles and procedures.
> Plan military defensive air operations.
> Perform mission control functions.

Rationale:

This Qualification meets the needs of the Air Defence Sector by providing standards against which all defence mission control officers can be trained. Further this Qualification meets the needs of society by providing competent defence mission control officers who by providing in-

flight command and control to aircrews in combat, contribute to securing the national air space and thereby maintaining the sovereignty of the Republic of South Africa.

Learners attending the learning programme based on this Qualification will typically be new entrants into the South African Air Force who are Candidate Officers selected for their aptitude in the highly specialised and stressful environment of the defence mission control officer. Such a learner would have completed the FETC: Military Operations upon entry into the South African Air Force and prior to completing this Qualification. This Qualification will allow the leaner access to further South African National Defence Force developmental qualifications such as the National Diploma: Joint and Multi-National Operations, NQF Level 6. Further, upon completion of service in the South African Air Force, this Qualification allows the learner access to job opportunities in the civilian aviation environment in positions such as air traffic controllers, operations officers and flight dispatchers.

This Qualification has been purpose-built for the Sovereignty of the State sub-field, the Air Defence Sector and the defence mission control officer. Further this Qualification contributes to an integrated National Qualifications Framework; provides for access, mobility and progression within the South African National Defence Force career path; enhances the quality of training within the South African Air Force; allows for the redress of the past and contributes to the development of the learner as an officer within the South African National Defence Force.

RECOGNIZE PREVIOUS LEARNING?
Y

LEARNING ASSUMED IN PLACE
> Communication at NQF Level 4.
> Mathematics at NQF Level 4.
> Physical Science at NQF Level 4.
> Map Reading at NQF Level 3.
> Computer Literacy at NQF Level 3.

Recognition of Prior Learning:

This Qualification makes the Recognition of Prior Learning possible, if the learner is able to demonstrate competence in the knowledge, skills, values and attitudes implicit in this Qualification. Recognition of Prior Learning will be done by means of an Integrated Assessment as mentioned in the previous paragraph.

This Recognition of Prior Learning may allow:

> For accelerated access to further learning.
> Gaining of credits towards a unit standard.
> For full or partial recognition of the Qualification.

All recognition of Prior Learning is subject to quality assurance by the relevant accredited Education, Training, Quality, and Assurance Body and is conducted by a registered workplace assessor. Because the standards are only core and fundamental, these standards may have been acquired in a range of economic sectors and these will be recognizes as appropriate.

Access to the Qualification:

There is open access to this qualification for learners:

> Who have successfully completed the National Senior Certificate or the National Certificate: Vocational, NQF Level 4.
> Who have successfully completed the FETC: Military Operations.

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 151 credits as detailed below.

Fundamental component:
> The Fundamental Component consists of Unit Standards to the value of 45 credits all of which are compulsory.

Core component:
> The Core Component consists of Unit Standards to the value of 96 credits all of which are compulsory.

Elective component:
> The Elective Component consists of individual unit standards from which the learner must choose unit standards totalling a minimum of 10 credits.

EXIT LEVEL OUTCOMES

1. Apply knowledge of aviation regulations, principles and procedures.

2. Plan military defensive air operations.

3. Perform mission control functions.

This qualification promotes, in particular, the following Critical Cross-Field Outcomes:

Identifying and solving problems in which responses display that responsible decisions using critical and creative thinking have been made when:

> Planning military defensive air operations.
> Performing mission control functions.

Working effectively with others as a member of a team, group, organisation, and community during:

> The application of aviation regulations, principles and procedures.
> The planning of military defensive air operations.
> The performing of mission control functions.

Organising and managing oneself and one's activities responsibly and effectively when:

> Planning military defensive air operations.
> Performing mission control functions.

Communicate effectively using visual, mathematical and/or language in the modes of oral and/or written persuasion when:

> Applying aviation regulations, principles and procedures.
> Planning military defensive air operations.
> Performing mission control functions.

Collecting, analysing, organising and critically evaluating information to better understand and explain:

> Aviation regulations, principles and procedures.
> Military defensive air operations.

Using science and technology effectively and critically, showing responsibility towards the environment and health of others when:

> Planning military defensive air operations.
> Performing mission control functions.

Demonstrating an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation when:

> Applying knowledge of aviation regulations, principles and procedures.
> Planning military defensive air operations.
> Performing mission control functions.

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

1.1 Civil Aviation Authority and Military Aviation Authority regulations and standards are applied in all aviation practices.
1.2 The principles of flight are incorporated in flight and mission planning.
1.3 Aviation procedures are applied during air defence missions.

Associated Assessment Criteria for Exit Level Outcome 2:

2.1 Flight details are calculated while taking into consideration the aircraft capabilities and the meteorological conditions.
> Range: Flight details include but are not limited to direction and flying time.
2.2 Military defensive air operations are planned in accordance with the international laws of armed conflict.
2.3 Aerial warfare principles are incorporated in the planning of the defensive mission.
2.4 Military intelligence information is appreciated and incorporated in the planning.
2.5 Navigation is conducted in accordance with accepted aviation procedures.

Associated Assessment Criteria for Exit Level Outcome 3:

3.1 Mission control is described in terms of aerial warfare concepts.
3.2 Mission control functions are performed in accordance with the international laws of armed conflict.
3.3 Aircraft are controlled on various missions.
> Range: Controlled includes but is not limited to positive control of the mission, the constant monitoring of the mission and the constant provision of information to the mission.
> Range: Various missions include but are not limited to war time and peace time missions.

Integrated Assessment:

Because assessment practices must be open, transparent, fair, valid, and reliable and ensure that no learner is disadvantaged in any way whatsoever, an integrated assessment approach is incorporated into the Qualification. Learning, teaching and assessment are inextricably linked. Whenever possible, the assessment of knowledge, skills, attitudes and values shown in the unit standards should be integrated.

Assessment of the communication, language, literacy and numeracy should be conducted in conjunction with other aspects and should use authentic selling and specific economic sector 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. 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.

The term 'Integrated Assessment' implies that theoretical and practical components should be assessed together. During integrated assessments the assessor should make use of formative and summative assessment methods and assess combinations of practical, applied, foundational and reflective competencies.

Assessors and moderators should make use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.

Assessment should ensure that all specific outcomes, embedded knowledge and critical cross-field outcomes are assessed. The assessment of the critical cross-field outcomes should be integrated with the assessment of specific outcomes and embedded knowledge.

INTERNATIONAL COMPARABILITY
Best Practice:

The international comparability for this Qualification focused specifically on information received from South African Air Force personnel who have conducted staff visits to foreign countries in order to compare the methods and standards of training.

United Kingdom:

The United Kingdoms Royal Air Force is the oldest air force in the world and has established standard training methods and approaches. The Royal Air Force has been involved in all major conflicts of the 20th and 21st century and has therefore adapted its training methods and approaches to the continually changing environment of conflict.

Australia:

The Royal Australian Air Force is the second oldest air force in the world and has recently played an active role in Peace Support Operations along the Pacific Rim and the Middle East. The Royal Australian Air Force's training methods and approaches, although based on the United Kingdoms Royal Air Force, are very similar to that of the South African Air Force.

Canada:

Once referred to as the "Aerodrome of Democracy", Canada's Air Force continues to contribute knowledge, technology and skilled training to many developing countries including South Africa.

Germany:

As a role-player in the development and use of the Gripen, South Africa's new multi-role fighter, the German Luftwaffe's, the generic German term for the air force, training techniques and approaches were scrutinised.

Southern African Development Community:

The South African Air Force has in the past and presently provides Mission Control Training of the Trainer training to all Southern African Development Community member countries with established air forces. Any training that therefore takes place in any of these member countries is against South African Air Force standards.

United Kingdom:

The Royal Air Force refers to its Defensive Mission Control Officers as Fighter Control Officers. Fighter Control Officers are trained at the Royal Air Force College in Cranwell.

The courses main focus areas are:

> Fundamental air traffic control.
> Meteorology.
> Navigation.
> Aircraft types and profiles.
> Air tactics.
> Air campaign planning.

Findings:

The National Certificate: Defensive Mission Control, Level 5 is identical to the Royal Air Force's Fighter Control Officer Course.

Australia:

The Royal Australian Air Force refers to its Defensive Mission Control Officers as Air Combat Officers. Training of these officers takes place at the School of Air Warfare (SAW) at RAAF Base East Sale, Gippsland, Victoria.

The major components of the Air Combat Officers course include:

> Aviation fundamentals.
> Mission systems management.
> Mission command.
> Fundamentals of air power.
> Basic air campaign planning.
> Future air and space operating concepts.

Following completion of the Air Combat Officers common course, students are streamed into one of three specialist modules. These are Air Battle Management, Maritime Patrol and Response and Air Combat and Tactical Support.

Air Battle Management:

Students streamed to Air Battle Management train in the fundamentals of air surveillance and fighter control.

Maritime Patrol and Response:

Students streamed to Maritime Patrol and Response train in the nature and type of operational missions flown in the maritime environment.

Air Combat and Tactical Support:

Students streamed to Air Combat and Tactical Support will train in type of operational missions performed by fast jets and tactical transport aircraft.

Findings:

The National Certificate: Defensive Mission Control, Level 5 is identical to the Royal Australian Air Force's Air Combat Officers course in all aspects except the specialisation Maritime Patrol and Response which is not included.

Canada:

The Canadian Air Force refers to its Defensive Mission Control Officers as Aerospace Control Officers. Training of these officers primarily takes place at the Canadian Forces School of Aerospace Control Operations in Cornwall, Ontario. The course consists of two phases:

Phase I - Basic Aerospace Control Course: The learner receives training in:

> Control techniques for both air defence and air traffic control duties.
> Airborne weapons systems.
> Ground control systems and radar.
> Meteorology.
> Radiotelephony and procedures.
> Air regulations and navigation orders.
> Aircraft performance characteristics.
> Command and control directives governing the control of interceptor aircraft.
> States of alert.

Phase II - On-the-Job Training:

Learners are posted to an Aerospace Control Facility where they will continue to hone their controller skills to an acceptable level of practical control proficiency and pass an examination on local operating procedures. Upon successful completion of this on-the-job training, they will be granted a license authorizing you to control live aircraft.

Findings:

The National Certificate: Defensive Mission Control, Level 5 is identical to the Canadian Air Force's Aerospace Control Officers course.

Germany:

The German Luftwaffe conducts their Mission Control Officer training at Holloman, New Mexico.

The Mission Control Officers receive training in the following aspects:

> Command and control.
> Geometry of the interception.
> Pattern control.
> Air defence operations.
> Electronic warfare.
> Aircraft instruments and own equipment.

Findings:

The National Certificate: Defensive Mission Control, Level 5 is very similar to the German Luftwaffe Mission Control Officers course. The only difference is that the Luftwaffe, within electronic warfare, emphasises the vocabulary of electronic warfare, radar and communications principles, electronic countermeasures and electronic protection measures, infrared theory and countermeasures, electronic reconnaissance as well as its relationship in air defence systems.

Conclusion:

It has been found that the National Certificate: Defensive Mission Control compares very favourably with established world air forces and that training content and approaches are very similar, if not identical.

ARTICULATION OPTIONS
This Qualification lends itself to both vertical and horizontal articulation possibilities.

Horizontal articulation is possible with the following Qualifications:

> ID 58580: National Certificate: Aerodrome Control, NQF Level 5.
> ID 58581: National Certificate: Air Traffic Support, NQF Level 5.

Vertical articulation is possible with the following qualifications:

> ID 58579: National Diploma: Air Traffic Control, NQF Level 6.
> ID 49783: National Diploma: Joint and Multi-National Operations, NQF Level 6.

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 Education, Training, Quality, and Assurance (ETQA) Body.

> 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, the integrated competence described in the Qualification and will include competence within core sales and the elective standards relevant to the economic sector.

> 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 needs:

> A minimum of 2 (two) years' practical, relevant occupational experience.
> A relevant Qualification at NQF Level 5 or higher.
> To be registered as an assessor with the relevant ETQA.

NOTES

This qualification replaces qualification 49853, "National Diploma: Defensive Mission Control", Level 5, 240 credits.

The International Civil Aviation Organisation (ICAO) and the Civil Aviation Authority (CAA) requires that all applicants for a pilots licences, all current pilot licence holders, Air Traffic Controllers and Station Operators Licences shall demonstrate, in a manner acceptable to the licensing authority, the ability to speak and understand the English language used for radiotelephony communications in compliance with the holistic descriptions contained in the International Civil Aviation Organisation operational level (Level 4) of the International Civil Aviation Organisation Language Proficiency Rating Scale Document. Although Mission Controllers are not licensed by the Civil Aviation Authority they are licensed by the Military Aviation Authority (MAA) and the Civil Aviation Authority requirements therefore apply:

International Civil Aviation Organisation operational Level 4 English:

> Pronunciation (Assumes a dialect and/or accent intelligible to the aeronautical community): Pronunciation, stress, rhythm and intonation are influenced by the first language or regional variation but only sometimes interfere with ease of understanding.

> Structure (Relevant grammatical structures and sentence patterns): Basic grammatical structures and sentence patterns are used creatively and are usually well controlled. Errors may occur, particularly in unusual or unexpected circumstances, but rarely interfere with meaning.

> Vocabulary: Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete and work related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances.

> Fluency: Produces stretches of language at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction, but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting.

> Comprehension: Comprehension is accurate on common, concrete and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies.

> Interaction: Responses are usually immediate, appropriate and informative. Initiates and maintains exchanges even when dealing with an unexpected turn of events. Deals adequately with apparent misunderstandings by checking, confirming or clarifying.

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	257136	Demonstrate knowledge of Air Power within the context of air operations	Level 5	10
Fundamental	120045	Demonstrate understanding of aircraft instrumentation	Level 5	6
Fundamental	120047	Demonstrate understanding of human performance and limitations in aviation	Level 5	5
Fundamental	120041	Demonstrate understanding of the principles of flight	Level 5	6
Fundamental	120058	Demonstrate understanding of the principles of navigating an aircraft	Level 5	7
Fundamental	120042	Interpret meteorology for aviation	Level 5	7
Fundamental	120048	Provide a Flight Authorisation Service	Level 5	4
Core	120055	Conduct mission control for combat profiles	Level 5	15
Core	120049	Conduct mission control for practice patterns	Level 5	8
Core	120056	Conduct mission control for recovery control profiles	Level 5	5
Core	120050	Control missions outside controlled airspace	Level 5	5

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Core	120059	Demonstrate an understanding of the principles of operation and use of radio aids in air navigation	Level 5	8
Core	120057	Demonstrate knowledge of electronic emission theory	Level 5	12
Core	120054	Demonstrate understanding of the components of aerial warfare in mission control	Level 5	8
Core	120039	Determine the integrated influence of the operational environment on a flight operation in accordance with South African Air Force doctrine	Level 5	5
Core	120043	Integrate the functions of the Air Picture Display System	Level 5	20
Core	120053	Scramble aircraft for air defence missions	Level 5	5
Core	120051	Conduct mission control for a combination of profiles	Level 6	5
Elective	115468	Interpret a topographical map for navigational purposes	Level 4	2
Elective	10622	Conduct communication within a business environment	Level 5	8
Elective	7876	Conduct on-the-Job-Training	Level 5	8
Elective	115753	Conduct outcomes-based assessment	Level 5	15
Elective	15096	Demonstrate an understanding of stress in order to apply strategies to achieve optimal stress levels in personal and work situations	Level 5	5
Elective	117985	Demonstrate an understanding of the Law of Armed Conflict during multi-national operations	Level 5	10
Elective	120492	Demonstrate the application of performance management	Level 5	6
Elective	120150	Demonstrate the use of short-range communications specific to aircraft	Level 5	3
Elective	120040	Demonstrate understanding of the concepts of operational command and control	Level 5	2
Elective	7859	Lead and manage teams of people	Level 6	6
Elective	120060	Manage HF, UHF and data communication specific to aeroplanes	Level 6	4
Elective	7881	Manage workplace diversity	Level 6	5
Elective	7888	Monitor staff performance	Level 6	5

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION
None

No. 846   **15 August 2008**

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

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

Bomb Disposal and Explosive Control

registered by Organising Field 08, Law Military Science and Security, 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 15 September 2008.* All correspondence should be marked **Standards Setting – SGB for Bomb Disposal and Explosives Control** and addressed to

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

DR. S. BHIKHA
DIRECTOR: STANDARDS SETTING AND DEVELOPMENT

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
National Diploma: Bomb Disposal

SAQA QUAL ID	QUALIFICATION TITLE		
63229	National Diploma: Bomb Disposal		
ORIGINATOR		PROVIDER	
SGB Bomb Disposal and Explosives Control			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Diploma	8 - Law, Military Science and Security	Safety in Society	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	245	Level 5	Regular-Unit Stds Based

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

PURPOSE AND RATIONALE OF THE QUALIFICATION
Purpose:

This is the first qualification for bomb disposal officials. The purpose of this qualification is for the learner to obtain their initial nationally recognised qualification in bomb disposal and explosives control.

The Fundamental and Core Component of this qualification will equip the learner with the required competencies of recognising explosive devices in order to safely dispose of them thus providing society with a safe environment were economic development and transformation can manifest.

A learner acquiring this qualification will have skills and knowledge to:

> Analyse the impact of legislation on the bomb disposal and explosives control environment.
> Handle bomb incidents and explosives control.
> Demonstrate the ability to make critical decisions under pressure.
> Apply safety measures during bomb disposal and explosives control.

Rationale:

This qualification reflects the workplace needs for bomb disposal officials in the sub-fields Safety in Society and Sovereignty of the State. The typical learner completing this qualification will either come from the junior and middle ranks of the South African Police Services or the South African National Defence Force.

This qualification allows such a learner to specialise in the field of bomb disposal and explosives control thus providing them with a specialised career path in the South African Police Services or the South African National Defence Force or alternatively, upon further learning, to seek employment opportunities in commercial mining and commercial blasting.

The qualification benefits society by providing South Africa with competent and professional bomb disposal officials who are able to react to, handle and investigate any bomb threat and/or

incident. Further more, learners will be empowered to dispose of explosive ordnances and weapons and/or weapon cashes that could pose a hazard to society.

This qualification will standardise learning in the above mentioned services and enhance the quality of the training in bomb disposal. The qualification will allow for transformation within the broader Safety in Society and Sovereignty of the State environment through the recognition of prior learning that will allow for the recognition of formal, non-formal and in-formal learning leading to the achievement of a national qualification.

RECOGNIZE PREVIOUS LEARNING?
Y

LEARNING ASSUMED IN PLACE
> Communication at NQF Level 4.
> Mathematics at NQF Level 4.
> Physical Science at NQF Level 4.

Recognition of Prior Learning:

The structure of this Unit Standard based Qualification makes the Recognition of Prior Learning possible, if the learner is able to demonstrate competence in the knowledge, skills, values and attitudes implicit in this Qualification. Recognition of Prior Learning will be done by means of an Integrated Assessment as mentioned in the previous paragraph.

This Recognition of Prior Learning may allow:

> For accelerated access to further learning.
> Gaining of credits towards a unit standard.
> For full or partial recognition of the Qualification.

All recognition of Prior Learning is subject to quality assurance by the relevant accredited Education, Training, Quality and Assurance Body and is conducted by a registered workplace assessor. Because the standards are only core and fundamental, these standards may have been acquired in a range of economic sectors and these will be recognised as appropriate.

Access to the Qualification:

There is an open access to this qualification for learners:

> Who have successfully completed the National Senior Certificate or the National Certificate: Vocational, NQF Level 4.
> Who have successfully completed the National Certificate: Policing, NQF Level 5 or the FETC: Military Operations.
> Who meet the psychological and physical requirements of a bomb disposal officer.

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 245 credits as detailed below:

Fundamental Component:

The Fundamental Component consists of Unit Standards to the value of 26 credits all of which are compulsory.

Core Component:

The Core Component consists of Unit Standards to the value of 194 credits all of which are compulsory.

Elective Component:

The Elective Component consists of a number of specialisations each with its own set of Unit Standards. Learners are to choose a specialisation area and complete all the Unit Standards within that specialisation. The specialisations are:

Policing Skills 27 credits:

> ID 120483: Conduct preliminary investigations.
> ID 120485: Receive and attend to complaints.
> ID 120487: Use firearms in a military and law enforcement environment.
> ID 120476: Adhere to professional conduct and organizational ethics.

Handling of Dangerous Goods 25 credits:

> ID 119032: Identify and deal with dangerous goods.
> ID 244031: Manage dangerous goods logistics.

Explosives Control 25 credits:

> ID 117478: Demonstrate an understanding of explosives control.
> ID 117476: Demonstrate an understanding of explosives classification, marking and packaging requirements.
> ID 117470: Demonstrate an understanding of explosives transportation legislation and regulations.
> ID 117465: Demonstrate an understanding of explosives storage legislation and regulations.
> ID 117464: Demonstrate an understanding of explosives importation and exportation requirements.
> ID 117459: Control the use of explosives on a blasting site.
> ID 117478: Control the use of and trade in pyrotechnics.

EXIT LEVEL OUTCOMES
1. Analyse and enforce legislation in the bomb disposal and explosives control environment.

> Note: The term Act includes all accompanying Regulations.

2. Handle bomb incidents and explosives control.

3. Demonstrate the ability to make critical decisions under pressure.

4. Apply safety measures during bomb disposal and explosives control.

Critical Cross-Field Outcomes:

This qualification promotes, in particular, the following Critical Cross-Field Outcomes. The way in which the Critical Cross-Field Outcomes are addressed is presented in detail in the unit standards:

Identifying and solving problems in which responses display that responsible decisions using critical and creative thinking have been made when:

> Handling bomb incidents and explosives control.
> Demonstrating the ability to make critical decisions under pressure.
> Applying safety measures with bomb disposal and explosives control.

Working effectively with others as a member of a team, group, organization, or community during:

> The handling of bomb incidents and explosives control.

Organizing and managing oneself and one's activities responsibly and effectively when:

> Handling bomb incidents and explosives control.
> Demonstrating the ability to make critical decisions under pressure.
> Applying safety measures with bomb disposal and explosive control.

Communicate effectively using visual, mathematical and/or language in the modes of oral and/or written persuasion when:

> Analysing the impact of legislation on the bomb disposal and explosives control environment.
> Handling bomb incidents and explosives control.
> Demonstrating the ability to make critical decisions under pressure.
> Applying safety measures with bomb disposal and explosives control.

Collecting, analyzing, organizing and critically evaluating information to better understand and explain:

> The impact of legislation on the bomb disposal and explosives control environment.
> The abilities required to make critical decisions under pressure.

Using science and technology effectively and critically, showing responsibility towards the environment and health of others when:

> Handling bomb incidents and explosives control.
> Applying safety measures with bomb disposal and explosives control.

Demonstrating an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation when:

> Analysing the impact of legislation on the bomb disposal and explosives control environment.

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

1.1. The Explosives Act is analysed in order to determine which parts are applicable in the handling of explosives.
> Range: Handling refers to but is not limited to acquisition, storage, use, transportation, import and export.
1.2. The Occupational Health and Safety Act is analysed in order to determine which parts are applicable in the handling of explosives.
1.3. An explanation is given of the South African Constitution in terms of human rights.
1.4. Explosives Control legislation is imposed according to the Explosives Act.

Associated Assessment Criteria for Exit-Level-Outcome 2:

2.1. Risks and threats are assessed to determine methods of handling explosives and bomb incidents.

2.2. Characteristics of explosives and bombs are examined in order to ascertain their limitations, possible application and operating principles.

2.3. An explosive device is neutralised using bomb disposal techniques and explosives control measures.

2.4. Post blast investigation is conducted for forensic and research purposes.

2.5. New trends are examined to enable future developments in the field of bomb disposal and explosives.

Associated Assessment Criteria for Exit-Level-Outcome 3:

3.1. Strategies to handle stressful situations are applied so as to ensure safety at all times.

3.2. Independent decisions made are justified while still displaying the ability to work as a member of team.

3.3. An operational plan is drawn up for bomb disposal and explosives control operations.

3.4. Bomb disposal and explosives control scenarios are assessed in order to influence future decisions and actions.

3.5. Self-readiness is evaluated in order to determine operational preparedness.

Associated Assessment Criteria for Exit-Level-Outcome 4:

4.1. Safety equipment is used according to standard operating procedures.

4.2. Safety prescripts are enforced in line with the Explosives Act and standard operating procedures.

4.3. Situational awareness is demonstrated so as to ensure information is gathered for decision making.

4.4. The potential immediate environmental impact of explosives and explosions are analysed for safety purposes.

4.5. Safety surveys are conducted so as to ensure compliance with the Explosives Act.

> Range: Surveys refer to but are not limited to inspections and risks assessments.

Integrated Assessment:

Because assessment practices must be open, transparent, fair, valid, and reliable and ensure that no learner is disadvantaged in any way whatsoever, an integrated assessment approach is incorporated into the Qualification. Learning, teaching and assessment are inextricably linked. Whenever possible, the assessment of knowledge, skills attitudes and values shown in the unit standard should be integrated.

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. 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.

The term "Integrated Assessment" implies that theoretical and practical components should be assessed together. During integrated assessments the assessors should make use of formative and summative assessment methods and assess combinations of practical, applied, foundational and reflective competencies.

Assessors and moderators should make use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.

Assessment should ensure that all specific outcomes, embedded knowledge and critical cross-field outcomes are assessed. The assessment of the critical cross-field outcomes should be integrated with the assessment of specific outcomes and embedded knowledge.

INTERNATIONAL COMPARABILITY

The international comparison focused specifically on information received from bomb disposal officials in the law enforcement environment. International comparison was conducted firstly from staff reports compiled by bomb disposal officials visiting foreign various police forces and secondly by means of a questionnaire which was completed by bomb disposal officers who had visited foreign countries.

Best Practice:

The following countries were chosen for the international comparison fro the following reasons:

Israel:

> Due to the constant threat of bombings Israel has developed a highly skilled and competent bomb disposal system. This country currently presents training to specialised members of the police service to be able to dispose of bombs in the most difficult of circumstances.

Scotland:

> Scotland has developed and registered qualifications in the field of explosives and bomb disposal techniques.

The United Kingdom:

> The United Kingdom has a well-established police service that has bomb disposal experience stemming from the Northern Ireland conflict and is renowned for its expertise in national and international operations in bomb disposal and investigation.

India:

> Due to the ongoing conflict with Pakistan, the Indian Defence Force has developed a formal qualification for bomb disposal.

United Stated Of America:

> With the increased threat of terrorism the United States of America, the Federal Bureau of Investigation and the Bureau of Alcohol, Tobacco and Firearms have become world wide specialists in bomb disposal.

Australia:

Australian has developed standards for bomb disposal which are registered on the Australian Qualifications Framework.

Israel:

The specialised topics regarding bomb disposal presented by the Israeli Police Service include:

> Identification of explosives.
> Improvised explosive devices.
> Explosive ordnance.
> Searching and sweeping.

> Bomb disposal.
> Post blast investigations.
> Electronics.
> Switches and trigger devices.
> Robotics.
> Explosives vulnerability.

Findings: The National Diploma: Bomb Disposal, NQF Level 5 covers most of the outcomes of the Israeli training. However the National Diploma: Bomb Disposal, NQF Level 5 qualification is more specific and adds learning such as:

> Electronics.
> Switches and trigger devices.
> Robotics.
> Explosives vulnerability.

Scotland:

Within Scotland the following bomb disposal qualification is in existence:

> G71Y 22: Level 2: Contribute to the Search and/or Disposal Function.

This qualification has the following mandatory units which have the following outcomes:

> D9V6 04:
 > Use and Maintain Search or Munition Clearance Equipment.
 > Gather and prepare search or munition clearance equipment.
 > Operate search and or munition clearance equipment.
 > Maintain search and or munition clearance equipment.

> D1VG 04:
 > Work Safely.
 > Minimise the risks to health and safety.
 > Minimise the risks to the environment in the workplace.

> D9TF 04:
 > Contribute to Finding Specified Targets.
 > Assist in gathering and analysing information on the location of specified targets.
 > Assist in defining the specific area to be searched.
 > Record actions taken.

> D9TK 04:
 > Contribute to Locating and Gaining Access to Specified Targets.
 > Contribute to gaining safe access to specified targets.
 > Contribute to confirming or denying the presence of specified targets and other risks.

> D9TJ 04:
 > Contribute to Locating and Gaining Access to Munitions.
 > Contribute to the detection of possible munitions and other risks.
 > Assist in locating munitions or confirming their absence.
 > Contribute to the identification of the specific hazard posed by the environs in which munitions are located.
 > Contribute to gaining safe access to munitions.

> D9TL 04:

> Contribute to Removing the Threat of Munitions.
> Contribute to confirming the threat posed by munitions.
> Contribute to the planning and implementation of protective measures.
> Assist in the disposal of munitions.
> Optional units.

> D9TH 04:
> Contribute to Finding the Disposition of Munitions.
> Assist in gathering and analysing information on the location of munitions.
> Assist in defining the specific area to be searched.
> Record the possible location and general disposition of munitions.

> D9TY 04:
> Move or Transport Munitions.
> Assist in moving munitions within the designated area.
> Transport munitions.
> Additional units.

> D9TR 04:
> Evacuate Casualties.
> Assess the nature of the evacuation action needed.
> Implement evacuation process.

Finding: It is clear from the above-mentioned that the Scottish Qualification solely focuses on the disposing of bombs. The National Diploma: Bomb Disposal, NQF Level 5 covers much wider aspect regarding bomb disposal such as analysing the impact of legislation on the bomb disposal and explosives control environment, demonstrating the technical competencies necessary to handle bomb incidents and explosives control, demonstrating the ability to make critical decision making under pressure as well as applying safety measures within a bomb disposal and explosives control environment.

United Kingdom:

Bomb disposal in the United Kingdom is a function of the British Army. The Defence Explosive Ordnance Disposal School of the British Army's Royal Engineers Corps offer bomb disposal programmes at two levels the first level being an intermediate level and the second level being an advanced level.

The first level bomb disposal programme concentrates purely on the disposal of explosive munitions.

The second level bomb disposal programme concentrates more on the disposal of explosive devices both improvised and manufactured.

Finding: The National Diploma: Bomb Disposal, NQF Level 5 covers both the intermediate level and the advanced level of the bomb disposal programmes offered in the British Army.

India:

Indian Police Service:

As in the United Kingdom bomb disposal is the primary responsibility of the Indian Army. The bomb disposal programme offered by the Indian Army covers the following aspects:

> Detecting improvised explosive devices.
> Arrange isolation, neutralisation, rendering safe and disposal of the explosive devices.

> Carry out anti-sabotage checks.
> Assist investigating agencies in analysing composition of the explosive substance and the design of explosive devices.
> Orientation training in detection and handling of explosive substances.
> Liaison abilities.
> Offer expert advice on all matters pertaining to explosives.
> Render assistance in dealing with bombs/explosives and the threat thereof.
> Keep abreast with latest developments in the world pertaining to methods employed by terrorists and counter measures thereof including rendering safe procedures.
> Effective supervision of Bomb Detection and Disposal Units.

Finding: Although India presents more detailed aspects of bomb disposal, it is very clear that the National Diploma: Bomb Disposal, NQF Level 5 covers most of these aspects and additional competencies such as post blast investigation and electronic and electronic devices.

United States of America:

The Federal Bureau of Investigation's Bomb Data Centre provides bomb technician training to governmental organisations. During the programme, training is provided in the handling of, use and the safe disposal of explosives, pyrotechnic mixtures, improvised explosive devices and various chemicals. Technicians also are trained and certified to handle hazardous materials and understand the complexities of nuclear, biological, chemical and radiological attacks.

At the Redstone Army Arsenal Hazardous Devices School in Huntsville, Alabama the Explosive Ordnance Clearance Agent Course is resented to Army personnel. The purpose of the course is to train Combat Engineers and select Engineer Officers with the basic skills and knowledge required to perform as Explosive Ordnance Clearance Agents.

This course trains students in the following areas: react to the Unexploded Ordnance Hazard, Explosive Ordnance Clearance Agents roles and responsibilities, ordnance terminology, safety, colour codes and markings, explosives and explosive effects, ordnance identification, remote charge placement, common improvised explosive devise components, protective measures, reconnaissance, marking and disposal, reporting and current IED trends.

In the state of Florida, formal learning programmes are presented to police officers in the field of bomb disposal. The programme covers the following aspects:

> A basic understanding of bombing trends and bomber profiles.
> A basic understanding of explosives, explosions and their effects.
> A general understanding of the current physics behind explosives detection and associated problems.
> Developing a bomb threat plan to cover vulnerability assessments, contingency planning, evacuations, searches, and damage control.
> Providing basic training for personnel to handle and cope with bomb threats.
> A general understanding in the basics of threat assessment and management decision making for bomb threats or bombing incidents.

Findings: The programme presented covers all aspects in the National Diploma: Bomb Disposal, NQF Level 5 with the exception of advanced training in rocket systems and understanding the complexities nuclear, biological, chemical and radiological attacks.

In terms of the Army's Explosive Ordnance Clearance Agent Course the National Diploma: Bomb Disposal, NQF Level 5 addresses all key aspects as presented.

Compared with the Florida State's learning programme the following content is additional to the National Diploma: Bomb Disposal, NQF Level 5.

> Analysing the impact of legislation on the bomb disposal and explosives control environment.
> The technical competencies necessary to handle bomb incidents and explosives control.
> Apply safety measures within a bomb disposal and explosive control environment.

Australia:

The following unit standards were found within the Australian qualifications framework and compared to the exit level outcomes and unit standards within the National Diploma: Bomb Disposal, NQF Level 5.

> PUABTE009: Manage evidence at improvised hazardous device incidents.
> PUABTE002A: Use and maintain specialists equipments.
> PUABTE001A: Manage information related to reported improvised hazardous device incidents.
> PUABTE008: Respond to a chemical, biological, or radiological improved hazardous device incidents.
> PUABTE004A: Conduct post incident improvised hazardous device information requirements.
> PUABTE003A: Manage improvised hazardous device incidents.

Findings: In comparing with the abovementioned unit standards, it become evident that similar unit standards in the National Diploma: Bomb Disposal, NQF Level 5 contain more detail and learning.

Conclusion:

Taking into consideration all aspects as mentioned above the National Diploma: Bomb Disposal, NQF Level 5 addresses more specific competencies such as the analysis of the impact of legislation on the bomb disposal and explosives control environment, demonstrating the technical competencies necessary to handle bomb incidents and explosives control, demonstrating the ability to make critical decisions under pressure and the application of safety measures within a bomb disposal and explosive control environment. This qualification is equal to and in most instances surpasses that which is presented internationally.

ARTICULATION OPTIONS
This Qualification lends itself to both vertical and horizontal articulation possibilities.

Horizontal articulation is possible with the following Qualifications:

> ID 50122: National Certificate: Policing, NQF Level 5.
> ID 57651: National Certificate: Forensic Science, NQF Level 5.

Vertical articulation is possible with the following Qualifications:

> ID 62408: National Diploma: Policing, NQF Level 6.
> ID 49783: National Diploma: Joint and Multi National Operations, NQF Level 6.

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 Education, Training, Quality and Assurance (ETQA) Body.

> 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 guidelines detailed immediately below.

> Moderation must include both internal and external moderation of assessments and exit points of the Qualification, unless ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described both in individual unit standards, the integrated competence described in the Qualification and will include competence within core and the elective standards relevant to the economic sector.

Anyone whishing 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 needs:

> A minimum of 5 (five) year's practical, relevant occupational experience.
> A relevant Qualification at NQF Level 6 or higher.
> To be registered as an assessor with the relevant ETQA.

NOTES
N/A

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	9407	Communicate with clients and discuss work	Level 5	5
Fundamental	257282	Demonstrate an understanding of explosives	Level 5	5
Fundamental	15096	Demonstrate an understanding of stress in order to apply strategies to achieve optimal stress levels in personal and work situations	Level 5	5
Fundamental	258015	Demonstrate an understanding of the dynamics in the field of explosives	Level 5	5
Fundamental	120492	Demonstrate the application of performance management	Level 5	6
Core	116486	Explain personal and social responsibility in decision making	Level 4	5
Core	257279	Apply chemical, biological and radiological countermeasures	Level 5	10
Core	257278	Apply knowledge of switches and triggering devices	Level 5	11
Core	257277	Apply robotics in the bomb disposal field	Level 5	10
Core	242707	Assimilate and present specialised evidence in a court of law	Level 5	6
Core	257276	Breach an obstacle using explosives	Level 5	9
Core	258018	Conduct a post-blast investigation	Level 5	11
Core	117460	Conduct an analysis of explosives vulnerability	Level 5	4
Core	257275	Conduct bomb disposal	Level 5	15
Core	258017	Conduct briefing and debriefing sessions	Level 5	3
Core	258016	Conduct searching and sweeping	Level 5	10
Core	258014	Demonstrate an understanding of Improvised Explosive Devices	Level 5	12
Core	258013	Demonstrate knowledge of blasting accessories	Level 5	8
Core	258009	Demonstrate knowledge of explosive ordnances	Level 5	9
Core	257735	Demonstrate the use of demolition techniques	Level 5	8
Core	257283	Demonstrate the use of electronic systems	Level 5	9
Core	257284	Demonstrate the use of initiating systems	Level 5	8
Core	257281	Dispose of explosives and munitions	Level 5	9
Core	257280	Handle bomb incidents	Level 5	3
Core	258008	Handle mines	Level 5	8
Core	117466	Identify and explain non-destructive testing techniques	Level 5	9
Core	253980	Investigate a crime or incident	Level 5	8
Core	257736	Secure caches	Level 5	9

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Elective	120476	Adhere to professional conduct and organisational ethics	Level 5	4
Elective	120483	Conduct preliminary investigations	Level 5	6
Elective	117459	Control the use of and trade in pyrotechnics	Level 5	4
Elective	117464	Control the use of explosives on a blasting site	Level 5	4
Elective	117476	Demonstrate an understanding of explosives classification, marking and packaging requirements	Level 5	5
Elective	117478	Demonstrate an understanding of explosives control	Level 5	2
Elective	117465	Demonstrate an understanding of explosives importation and exportation requirements	Level 5	2
Elective	117470	Demonstrate an understanding of explosives storage legislation and regulations	Level 5	4
Elective	117473	Demonstrate an understanding of explosives transportation legislation and regulations	Level 5	4
Elective	119032	Identify and deal with dangerous goods	Level 5	13
Elective	244031	Manage dangerous goods logistics	Level 5	12
Elective	120485	Receive and attend to complaints	Level 5	5
Elective	120487	Use firearms in a military and law enforcement environment	Level 5	12

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Conduct bomb disposal

SAQA US ID	UNIT STANDARD TITLE			
257275	Conduct bomb disposal			
ORIGINATOR		PROVIDER		
SGB Bomb Disposal and Explosives Control				
FIELD		SUBFIELD		
8 - Law, Military Science and Security		Safety in Society		
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
117462	Conduct and execute bomb disposal	Level 5	17	Will occur as soon as 257275 is registered

SPECIFIC OUTCOME 1
Analyse bomb disposal techniques.

SPECIFIC OUTCOME 2
Use bomb disposal equipment.

SPECIFIC OUTCOME 3
Prepare the charges.

SPECIFIC OUTCOME 4
Dispose of bombs.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Breach an obstacle using explosives

SAQA US ID	UNIT STANDARD TITLE			
257276	Breach an obstacle using explosives			
ORIGINATOR		PROVIDER		
SGB Bomb Disposal and Explosives Control				
FIELD		SUBFIELD		
8 - Law, Military Science and Security		Safety in Society		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL		CREDITS
Undefined	Regular	Level 5		9

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117477	Apply explosives tactically for the breaching of obstacles	Level 5	9	Will occur as soon as 257276 is registered

SPECIFIC OUTCOME 1
Analyse the obstacle.

SPECIFIC OUTCOME 2
Prepare breaching charges.

SPECIFIC OUTCOME 3
Apply breaching techniques.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	.	LEVEL
Core	63229	National Diploma: Bomb Disposal		Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Apply robotics in the bomb disposal field

SAQA US ID	UNIT STANDARD TITLE		
257277	Apply robotics in the bomb disposal field		
ORIGINATOR		PROVIDER	
SGB Bomb Disposal and Explosives Control			
FIELD		SUBFIELD	
8 - Law, Military Science and Security		Safety in Society	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	10

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117479	Apply the dynamics of robotics in the bomb disposal field	Level 5	10	Will occur as soon as 257277 is registered

SPECIFIC OUTCOME 1
Describe the functionality and components of the remote operated vehicle.

SPECIFIC OUTCOME 2
Conduct maintenance.

SPECIFIC OUTCOME 3
Identify possible hazards and operating limitations.

SPECIFIC OUTCOME 4
Deploy and recover operationally.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Apply knowledge of switches and triggering devices

SAQA US ID	UNIT STANDARD TITLE		
257278	Apply knowledge of switches and triggering devices		
ORIGINATOR		PROVIDER	
SGB Bomb Disposal and Explosives Control			
FIELD		SUBFIELD	
8 - Law, Military Science and Security		Safety in Society	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	11

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117483	Identify and explain switches and/or triggering devices	Level 5	13	Will occur as soon as 257278 is registered

SPECIFIC OUTCOME 1
Explain the various switches and triggering devices.

SPECIFIC OUTCOME 2
Identify hazards associated with the various switches and triggering devices.

SPECIFIC OUTCOME 3
Construct and neutralise switches and triggering devices.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Apply chemical, biological and radiological countermeasures

SAQA US ID	UNIT STANDARD TITLE			
257279	Apply chemical, biological and radiological countermeasures			
ORIGINATOR		PROVIDER		
SGB Bomb Disposal and Explosives Control				
FIELD		SUBFIELD		
8 - Law, Military Science and Security		Safety in Society		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL		CREDITS
Undefined	Regular	Level 5		10

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117480	Apply Chemical, Biological and Radiological Countermeasures	Level 5	7	Will occur as soon as 257279 is registered

SPECIFIC OUTCOME 1
Demonstrate knowledge of agents.

SPECIFIC OUTCOME 2
Demonstrate knowledge of radiation.

SPECIFIC OUTCOME 3
Detect agents.

SPECIFIC OUTCOME 4
Apply decontamination procedures.

SPECIFIC OUTCOME 5
Perform sampling.

SPECIFIC OUTCOME 6
Apply countermeasures.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Handle bomb incidents

SAQA US ID	*UNIT STANDARD TITLE*			
257280	Handle bomb incidents			
ORIGINATOR		*PROVIDER*		
SGB Bomb Disposal and Explosives Control				
FIELD		*SUBFIELD*		
8 - Law, Military Science and Security		Safety in Society		
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*		*CREDITS*
Undefined	Regular	Level 5		3

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117487	Handle bomb incidents	Level 5	20	Will occur as soon as 257280 is registered

SPECIFIC OUTCOME 1
Explain bomb incident procedures.

SPECIFIC OUTCOME 2
Describe the utilisation of different resources in a bomb incident.

SPECIFIC OUTCOME 3
Compile a bomb incident plan.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Dispose of explosives and munitions

SAQA US ID	UNIT STANDARD TITLE		
257281	Dispose of explosives and munitions		
ORIGINATOR		PROVIDER	
SGB Bomb Disposal and Explosives Control			
FIELD		SUBFIELD	
8 - Law, Military Science and Security		Safety in Society	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	9

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117475	Dispose of explosives and munition	Level 5	9	Will occur as soon as 257281 is registered

SPECIFIC OUTCOME 1
Demonstrate an understanding of relevant legislation regarding the disposal of explosives and munitions.

SPECIFIC OUTCOME 2
Demonstrate an understanding of disposal methods.

SPECIFIC OUTCOME 3
Demonstrate an understanding of disposal techniques.

SPECIFIC OUTCOME 4
Dispose explosives and munitions.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate an understanding of explosives

SAQA US ID	*UNIT STANDARD TITLE*			
257282	Demonstrate an understanding of explosives			
ORIGINATOR		*PROVIDER*		
SGB Bomb Disposal and Explosives Control				
FIELD		*SUBFIELD*		
8 - Law, Military Science and Security		Safety in Society		
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*		*CREDITS*
Undefined	Regular	Level 5		5

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117469	Identify and explain explosives	Level 5	9	Will occur as soon as 257282 is registered

SPECIFIC OUTCOME 1
Describe explosives.

SPECIFIC OUTCOME 2
Describe improvised explosives.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Fundamental	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate the use of electronic systems

SAQA US ID	UNIT STANDARD TITLE			
257283	Demonstrate the use of electronic systems			
ORIGINATOR		PROVIDER		
SGB Bomb Disposal and Explosives Control				
FIELD		SUBFIELD		
8 - Law, Military Science and Security		Safety in Society		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL		CREDITS
Undefined	Regular	Level 5		9

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117481	Identify, explain and apply basic electronics relevant to the bomb disposal field	Level 5	9	Will occur as soon as 257283 is registered

SPECIFIC OUTCOME 1
Describe electronic systems.

SPECIFIC OUTCOME 2
Explain the functions of electronic systems.

SPECIFIC OUTCOME 3
Compile a drawing of an electronic system.

SPECIFIC OUTCOME 4
Set up electronic systems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate the use of initiating systems

SAQA US ID	UNIT STANDARD TITLE		
257284	Demonstrate the use of initiating systems		
ORIGINATOR		PROVIDER	
SGB Bomb Disposal and Explosives Control			
FIELD		SUBFIELD	
8 - Law, Military Science and Security		Safety in Society	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	8

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

SPECIFIC OUTCOME 1
Describe initiating systems.

SPECIFIC OUTCOME 2
Explain the functions of initiating systems.

SPECIFIC OUTCOME 3
Compile a drawing of an initiating system.

SPECIFIC OUTCOME 4
Set up initiating systems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate the use of demolition techniques

SAQA US ID	UNIT STANDARD TITLE		
257735	Demonstrate the use of demolition techniques		
ORIGINATOR		PROVIDER	
SGB Bomb Disposal and Explosives Control			
FIELD		SUBFIELD	
8 - Law, Military Science and Security		Safety in Society	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	8

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

SPECIFIC OUTCOME 1
Describe demolition techniques.

SPECIFIC OUTCOME 2
Assess the target.

SPECIFIC OUTCOME 3
Prepare the charges.

SPECIFIC OUTCOME 4
Apply demolition techniques.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Secure caches

SAQA US ID	UNIT STANDARD TITLE		
257736	Secure caches		
ORIGINATOR		PROVIDER	
SGB Bomb Disposal and Explosives Control			
FIELD		SUBFIELD	
8 - Law, Military Science and Security		Safety in Society	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	9

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117474	Handling and securing of weaponry caches	Level 5	9	Will occur as soon as 257736 is registered

SPECIFIC OUTCOME 1
Conduct planning.

SPECIFIC OUTCOME 2
Approach a cache.

SPECIFIC OUTCOME 3
Lift a cache.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Handle mines

SAQA US ID	UNIT STANDARD TITLE			
258008	Handle mines			
ORIGINATOR		PROVIDER		
SGB Bomb Disposal and Explosives Control				
FIELD		SUBFIELD		
8 - Law, Military Science and Security		Safety in Society		
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
117471	Handle unconventional mine warfare incidents	Level 5	7	Will occur as soon as 258008 is registered

SPECIFIC OUTCOME 1
Survey the area.

SPECIFIC OUTCOME 2
Uncover mines and booby traps.

SPECIFIC OUTCOME 3
Explain the safe rendering of mines and booby traps.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate knowledge of explosive ordnances

SAQA US ID	UNIT STANDARD TITLE			
258009	Demonstrate knowledge of explosive ordnances			
ORIGINATOR		PROVIDER		
SGB Bomb Disposal and Explosives Control				
FIELD		SUBFIELD		
8 - Law, Military Science and Security		Safety in Society		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL		CREDITS
Undefined	Regular	Level 5		9

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117472	Identify and explain explosive ordnance (EO)	Level 5	9	Will occur as soon as 258009 is registered

SPECIFIC OUTCOME 1
Describe explosive ordnances.

SPECIFIC OUTCOME 2
Describe the components of explosive ordnance.

SPECIFIC OUTCOME 3
Identify and describe markings of ordnance.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate knowledge of blasting accessories

SAQA US ID	UNIT STANDARD TITLE		
258013	Demonstrate knowledge of blasting accessories		
ORIGINATOR		PROVIDER	
SGB Bomb Disposal and Explosives Control			
FIELD		SUBFIELD	
8 - Law, Military Science and Security		Safety in Society	
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
117467	Identify, apply and implement different blasting accessories, initiating systems and blasting techniques	Level 5	22	Will occur as soon as 258013 is registered

SPECIFIC OUTCOME 1
Describe blasting accessories.

SPECIFIC OUTCOME 2
Handle blasting accessories.

SPECIFIC OUTCOME 3
Compile a drawing of a firing train.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate an understanding of Improvised Explosive Devices

SAQA US ID	UNIT STANDARD TITLE		
258014	Demonstrate an understanding of Improvised Explosive Devices		
ORIGINATOR		PROVIDER	
SGB Bomb Disposal and Explosives Control			
FIELD		SUBFIELD	
8 - Law, Military Science and Security		Safety in Society	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	12

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117485	Identify and explain Improvised Explosive Devices (IED)	Level 5	18	Will occur as soon as 258014 is registered

SPECIFIC OUTCOME 1
Describe Improvised Explosive Devices.

SPECIFIC OUTCOME 2
Design an Improvised Explosive Device.

SPECIFIC OUTCOME 3
Construct an Improvised Explosive Device.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate an understanding of the dynamics in the field of explosives

SAQA US ID	UNIT STANDARD TITLE		
258015	Demonstrate an understanding of the dynamics in the field of explosives		
ORIGINATOR		PROVIDER	
SGB Bomb Disposal and Explosives Control			
FIELD		SUBFIELD	
8 - Law, Military Science and Security		Safety in Society	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	5

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117463	Demonstrate an understanding of the history and the impact of explosives and explosions	Level 5	3	Will occur as soon as 258015 is registered

SPECIFIC OUTCOME 1
Demonstrate an understanding of the history of explosives.

SPECIFIC OUTCOME 2
Demonstrate an understanding of the legal framework pertaining to explosives and explosives control.

SPECIFIC OUTCOME 3
Demonstrate an understanding of explosions.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Fundamental	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Conduct searching and sweeping

SAQA US ID	UNIT STANDARD TITLE			
258016	Conduct searching and sweeping			
ORIGINATOR		PROVIDER		
SGB Bomb Disposal and Explosives Control				
FIELD		SUBFIELD		
8 - Law, Military Science and Security		Safety in Society		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL		CREDITS
Undefined	Regular	Level 5		10

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117489	Conduct searching and sweeping	Level 5	10	Will occur as soon as 258016 is registered

SPECIFIC OUTCOME 1
Apply searching and sweeping methods.

SPECIFIC OUTCOME 2
Evacuate an area or premises.

SPECIFIC OUTCOME 3
Describe the utilisation of different resources in a search and sweep.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Conduct briefing and debriefing sessions

SAQA US ID	UNIT STANDARD TITLE		
258017	Conduct briefing and debriefing sessions		
ORIGINATOR		PROVIDER	
SGB Bomb Disposal and Explosives Control			
FIELD		SUBFIELD	
8 - Law, Military Science and Security		Safety in Society	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	3

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117468	Conduct planning, briefing and debriefing sessions	Level 5	3	Will occur as soon as 258017 is registered

SPECIFIC OUTCOME 1
Prepare and plan for a briefing session.

SPECIFIC OUTCOME 2
Facilitate a briefing session.

SPECIFIC OUTCOME 3
Facilitate a debriefing session.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Conduct a post-blast investigation

SAQA US ID	*UNIT STANDARD TITLE*			
258018	Conduct a post-blast investigation			
ORIGINATOR			*PROVIDER*	
SGB Bomb Disposal and Explosives Control				
FIELD			*SUBFIELD*	
8 - Law, Military Science and Security			Safety in Society	
ABET BAND	*UNIT STANDARD TYPE*		*NQF LEVEL*	*CREDITS*
Undefined	Regular		Level 5	11

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
117482	Conduct post-blast investigations	Level 5	11	Will occur as soon as 258018 is registered

SPECIFIC OUTCOME 1
Prepare for a blast investigation.

SPECIFIC OUTCOME 2
Take control of the scene.

SPECIFIC OUTCOME 3
Conduct a safety sweep.

SPECIFIC OUTCOME 4
Investigate the scene.

SPECIFIC OUTCOME 5
Reconstruct the explosive device.

SPECIFIC OUTCOME 6
Conclude the administration process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63229	National Diploma: Bomb Disposal	Level 5

No. 847   15 August 2008

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

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

Agricultural Extension

registered by Organising Field 01, Agriculture and Nature Conservation, publishes the following Qualification 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 can be accessed via the SAQA web-site at **www.saqa.org.za**. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Qualification should reach SAQA at the address below and *no later than 15 September 2008.* All correspondence should be marked **Standards Setting – Agricultural Extension** and addressed to

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

DR. S. BHIKHA
DIRECTOR: STANDARDS SETTING AND DEVELOPMENT

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

SAQA

QUALIFICATION:
National Diploma: Agricultural Extension

SAQA QUAL ID	QUALIFICATION TITLE		
63249	National Diploma: Agricultural Extension		
ORIGINATOR		PROVIDER	
SGB Agricultural Extension			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Diploma	1 - Agriculture and Nature Conservation	Primary Agriculture	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	256	Level 5	Regular-Unit Stds Based

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

PURPOSE AND RATIONALE OF THE QUALIFICATION
Purpose:

Qualifying learners will gain competencies that will promote extension expertise in a sub field in the context of plant/animal production or Land Care by being able to:

> Apply integrated knowledge, skills and values of the Principles & Philosophy of extension in an intervention.
> Select and apply inter personal skills which are conducive to an extension setting.
> Interact with a group towards fulfilling their objectives and goals within their own potential.
> Apply knowledge of extension management to complement the role of all stakeholders and role players towards sustainable development.
> Implement and manage an extension project plan, meeting the objectives and criteria within an extension programme.
> Design a farm plan based on natural resources for the development and implementation of a sound production strategy ensuring sustainable resource utilization.
> Collect and analyze appropriate data to provide support and to participate in the development of an agri business plan.
> Implement an integrated sustainable production system to ensure the quality and quantity of the produce.

Rationale:

Learners who wish to enter extension as a profession need knowledge and skills to work in the complex and rapidly changing agricultural environment.

The Department of Agriculture initiated the development of this qualification based on a research study conducted in all the provinces suggesting active skills enhancement. The research culminated in "An Agricultural Education and Training Strategy" which outlines the need for training of extension officers to support small scale farmers to be able to produce for profit including addressing poverty, managing food security and natural resources.

This qualification is aimed at learners who wish to enter a career in extension and have acquired experience in related sub fields of technical skills, experience and knowledge. Qualifying

learners could render services to: Farmers, farm workers, Rural communities, Departments of Agriculture (National and Provincial), Community Based Organisations, NGOs, Faith-based organisations, Universities, Agricultural Colleges, Local Governments, Department of Water Affairs and Forestry, Social and Economic cluster departments, Private sector (e.g. producer orgs. Coops, service provider), Agricultural Research Council, Department of Economic/Environmental Affairs and Tourism.

Extension is recognised to be multi- and inter-disciplinary in nature. It overlaps largely with other behavioural sciences, which have the common purpose of understanding human behaviour, and in this regard it shares certain interests with disciplines in the human and natural science.

However, because extension is an applied discipline it focuses not only on the understanding, but also on the change of behaviour.

Services rendered by a qualifying learner would further the participation of target communities in development programmes and increase the sustainability of specific development projects and programmes for improved and accelerated upliftment of their livelihoods.

This qualification provides benefits to the economy and society as it addresses the skills shortage as identified in the National Skills Development Act of 1998 and the Critical and Scarce skills identified by the Department of Labour. Furthermore, it supports the national initiatives of the National Department of Agriculture as explained in the following strategic documents:

> National Education and Training Strategy for Agriculture and Rural Development in South Africa - Department of Agriculture 2005.
> Norms and Standards for Extension and Advisory Services in Agriculture - Department of Agriculture June 2005.
> The Strategic Plan for South African Agriculture - Department of Agriculture 2003.

This qualification more generally supports the following national initiatives:

> Land reform initiatives and programmes.
> Black economic empowerment.
> Integrated Sustainable Rural Development Strategy.

RECOGNIZE PREVIOUS LEARNING?
Y

LEARNING ASSUMED IN PLACE
It is assumed that the learner is competent in Communication and Mathematical Literacy at NQF Level 4 and in other related technical knowledge such as animal production, plant production, or nature conservation.

Recognition of Prior Learning:

The structure of this unit standards based qualification makes the Recognition of Prior Learning possible. 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 this qualification.

If the learner is able to demonstrate competence in the knowledge, skills, values and attitudes implicit in this qualification the appropriate credits should be assigned to the learner. Recognition of Prior Learning will be done by means of Integrated Assessment as mentioned above.

Access to the Qualification:

Open Access.

QUALIFICATION RULES
This qualification consists of:

> Fundamental 24 credits.
> Core 178 credits.

Electives:
The leaner must choose any of the Specialization:

> Plant production: A minimum of 54 credits.
Or
> Animal production: A minimum of 54 credits.
Or
> Land Care Management: A minimum of 54 credits.
> Other Electives - Or electives for any relevant technical sub-field or work setting.

To obtain this qualification a minimum of 256 credits is required.

EXIT LEVEL OUTCOMES
1. Apply integrated knowledge, skills and values of the Principles & Philosophy of extension in an intervention.
> Range for intervention includes but not limited to: Programmes, projects, setting, plan.

2. Select and apply interpersonal skills which are conducive to an extension setting.
> Range for inter personal skills includes but not limited to: One to one; face to face, group, mass media.

3. Interact with a group towards fulfilling their objectives and goals within their own potential.

4. Apply knowledge of extension management to complement the role of all stakeholders and role players towards sustainable development.

5. Implement and manage an extension project plan, meeting the objectives and criteria within an extension programme.

6. Design a farm plan based on natural resources for the development and implementation of a sound production strategy ensuring sustainable resource utilization.

7. Collect and analyze appropriate data to provide support and to participate in the development of a business plan.
> Range for data: Financial, input, price tendencies, production volumes; export opportunities, market access; climate.

8. Implement an integrated sustainable production system to ensure the quality and quantity of the produce.
> Range for system not limited to: Plant production, animal production, land use.

Critical Cross-field Outcomes (CCFO):

Unit Standard CCFO Identifying:
> Identify and solve problems using critical and creative thinking to address extension project contingencies.

Unit Standard CCFO Working:
> Work effectively with others when participating on project teams as well as multi-disciplinary teams.

Unit Standard CCFO Organizing:
> Organize and manage one-self and activities when participating as project team member.

Unit Standard CCFO Collecting:
> Collect, organise and evaluate information when delivering reports.

Unit Standard CCFO Communicating:
> Communicate effectively and responsibly whilst reporting on project milestones.

Unit Standard CCFO Science:
> Use science and technology when reporting on extension practices.

Unit Standard CCFO Demonstrating:
> Demonstrate an understanding of the world as a set of related systems when functioning in the extension environment.

Unit Standard CCFO Contributing:
> Be culturally and aesthetically sensitive across a range of social contexts when interacting with communities.

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

> Community dynamics are observed and interpreted to plan an intervention which mobilizes community participation.
> Extension approaches are selected and applied according to the interpretation of organizational and institutional structures.
> The philosophies and principles of extension are described and considered for different settings.
> Extension ethics are explained and applied in a professional manner.

Associated Assessment Criteria for Exit Level Outcome 2:

> The theory of basic communication is interpreted and applied in an extension intervention.
> Coaching and mentoring strategies are developed to promote experimentation and learning within communities.
> The fundamentals of behavior are applied when interacting with beneficiaries of an extension intervention.
> The effect of personal characteristics and traits is identified and counteractive approaches are considered for different target groups.

Associated Assessment Criteria for Exit Level Outcome 3:

> The principles of group dynamics are considered and applied when working with a group in an extension programme.

> Range principles not limited to: Leadership, atmosphere, communication, group size, cohesion.
> Relevant processes to change are considered to enhance development in communities.
> Group facilitation skills are applied to explore the full potential of a group.
> The role of groups are recognized and explored in the broader context of community development.
> Group participation is encouraged to ensure optimum functionality and empowerment of a group.
> Group activities within different groups are coordinated to ensure optimum development.

Associated Assessment Criteria for Exit Level Outcome 4:

> The political, institutional and legislative environment is considered and adhered to in the designing and planning of extension/development programmes.
> Context within which the client/beneficiaries operates is explained within a macro setting with reference to the impact of all systems on development.
> Range for systems includes but not limited to: Funding, agricultural input/output, value chain, resources, extension agents, economy.
> The role and functions of multi-disciplinary teams are considered to interact and participate meaningfully in development initiatives.
> Networks are established to improve the support base in extension management.
> Full pro-active participation in the analysis, planning and management of a sustainable enterprise is obtained taking into consideration a volatile and competitive business environment.
> Range for enterprise includes but is not limited to agri-business, value-adding enterprise, craft enterprise, service industry.

Associated Assessment Criteria for Exit Level Outcome 5:

> All the phases of a project cycle are managed to meet the objectives and criteria as identified with the beneficiaries.
> Range project cycle; Initiation, Planning, design, execution and evaluation.
> Managerial principles are applied to ensure the effective and efficient implementation of the project plan.
> Range managerial principles not limited to: Plan, organize, lead and control.
> Communication structures within the project are followed to support the flow of information to all stakeholders.
> All relevant data is collected and recorded in a format suitable for analysis and interpretation.
> Interventions and opportunities for the transfer of technology are integrated in the project plan.

Associated Assessment Criteria for Exit Level Outcome 6:

> Natural resources are evaluated according to existing scientific criteria.
> Range scientific criteria not limited to: Carrying capacity, soil classification; physical and chemical properties; climatic data; topography; water, catchments.
> A physical farm plan is designed based on the evaluation of the resources.
> A land-use plan is designed and implemented for sustainable production.
> A production plan is designed and implemented considering the impact of resources and markets on the sustainability of the production process.
> Range of resources: Technology, economic, human, natural and physical resources.
> A strategic management and maintenance plan for equipment, infrastructure and implements is designed and implemented for economic and sustainable production.

Associated Assessment Criteria for Exit Level Outcome 7:

> Financial statements are analyzed and interpreted with the view to generate sound managerial information.

> A data collection plan is developed and managed to identify suitable enterprises to make sound managerial decisions.

> Range for enterprise includes but is not limited to agri-business, value-adding enterprise, craft enterprise, service industry.

> An input chain is planned and managed to support the economic viability of an enterprise.

> Various farming systems and trends are optimized and integrated within related enterprises.

Associated Assessment Criteria for Exit Level Outcome 8:

> Risk management plans are developed to reduce vulnerability and insecurity against the disastrous effects of hazards such as, climatic extremes, fires, theft, problem animals and plants.

> The anatomical, physiological and bio-chemistry processes are interpreted to improve production processes within an ecological system/situation.

> Scientific re-production and manipulation practices and sound selection criteria are considered for sustainable and economical yield.

> Scientific nutrition principles are implemented to support quantity and quality of production.

> Integrated pest and disease management principles are implemented to ensure a healthy and safe production environment and products.

> Sound physical maintenance practices and sanitation are applied for qualitative and quantitative production.

> Effective Harvest/utilization practices are performed to ensure sustainable quality and quantity of the produce.

Integrated Assessment:

> To ensure that assessment practices are open, transparent, fair, valid, and reliable and to ensure that no learner is disadvantaged in any way whatsoever, an integrated assessment approach in incorporated into the qualification. Assessment practices will also integrate practical and theoretical assessment.

> Learning, teaching and assessment are inextricably interwoven. Whenever possible, the assessment of knowledge, skills, attitudes and values shown in the unit standards should be integrated.

> Assessment of communication should be integrated as far as possible with other aspects and should use practical administration 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 term 'integrated assessment' implies that theoretical and practical components should be assessed together. During integrated assessments, the assessor should make use of a range of formative and summative assessment tools, methods and assess combinations of practical, applied, foundational and reflective competencies.

> Assessors must assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.

> Assessment should ensure that all specific outcomes, embedded knowledge and critical cross-field outcomes are evaluated in an integrated manner.

INTERNATIONAL COMPARABILITY
Comparison with similar qualifications internationally is difficult to establish. Traditionally extension is treated in one of three ways internationally:

> As a top-up qualification to a previously acquired agricultural qualification.

> As modules within a technical agricultural qualification (e.g. National Diploma: Plant Production).
> A general qualification without a technical agricultural focus.

Further, internationally extension is usually either offered as agricultural extension or as extension education. The qualifications sit within agricultural faculties of universities, education faculties of universities and in agricultural training institutes. In other cases, extension is offered as an area of learning within an agricultural qualification. This qualification fits into the third category cited above. It is aimed at a more generic qualification that can be applied to a number of technical specialisations and qualifications. It is also designed to accommodate the unique transitional issues facing South Africa.

Comparison within SADC:

No one-year diplomas or certificates were found in the SADC region (other than within South Africa) that could be compared to this qualification.

The Universities of Namibia and Swaziland each offer a 3-year diploma in agriculture in which agricultural extension features significantly. The areas of learning covered are similar to those in this qualification but to a very limited degree. Again, however, these are both 3-year diplomas unlike the proposed diploma.

Comparison with other International Institutions:

> University of Mauritius:
> Certificate in Agricultural Extension:
> One-Year Qualification:

The University or Mauritius offers a Certificate of Agricultural extension. The course is designed to train the students to develop a good understanding of the principles and theory underlying agricultural extension. On successful completion of the programme, they will be able to apply these practical extension works and have the ability to evaluate extension activities and programmes.

Although the qualification is grounded in agriculture, this certificate closely resembles the proposed diploma in many ways. The areas of greatest similarity to the proposed diploma are:

> Basic principles of extension. Human behaviour and learning. The Communication process. Communication and extension. Approaches, methods and techniques of extension. Adult education. Design and running of Training courses.
> Information transfer (in agriculture). Communication and information technologies - Print & audiovisual communication. Emerging trends. Multimedia. Internet and Worldwide Web. Design and production of communication material.
> Working objectives and preparation of extension programmes. Selection of appropriate methods, tools and techniques. Monitoring & evaluation. Staff Management. Extension organisation in Mauritius.
> Urban and rural areas. Characteristics of rural communities. Gender issues. Traditional farming and Modern agriculture. Rural organisations & cooperatives. Rural Development and policy implications.
> Institutions (agricultural). Producer groups. Institutional development. Legislation (agricultural). Emerging issues, concepts & technologies.

It covers areas of learning similar to those in the SAQA qualifications including:

> Extension principles and methods.
> Management of extension programmes.

> Communication and media in extension.
> Farming systems research.
> Social aspects of agriculture.
> Data analysis and computing techniques.
> Agricultural organisation and services.

Areas not directly covered in the proposed diploma, but covering the similar concepts:

> Farming systems research. Participatory rural appraisal. Participatory diagnosis of farm problems. Farmer - extension - research linkages. On-farm research. Agricultural information systems. Sustainable agricultural development.

Areas not covered in the proposed diploma:

> Basic economic principles. Farm Management. Planning, implementation & control functions. Planning tools. Records. Farm development and project preparation. Capital and credit. Marketing. Implications of Government Support Policies.
> Collection, organisation and presentation of data. Data handling and analysis. Computer hardware operation. Application Softwares e.g. wordprocessing, spreadsheet and database. Computer applications in agriculture.

North Carolina State University, USA:
Graduate Certificate in Agricultural Education:
One-Year Qualification:

The qualification is grounded in agriculture and is more directly concerned with education. As such it is dissimilar to the proposed certificate.

One area of similarity to the proposed diploma is:

> Programme Planning in Agricultural and Extension Education.

Areas of marginal similarity are:

> Practicum in Agricultural and Extension Education.
> Youth Program Management.

Areas of dissimilarity:

> Agricultural Education, Schools and Society.
> Occupational Experience in Agriculture.
> Instructional Design in Agricultural and Extension Education.
> Curriculum Development in Agricultural and Extension Education.
> Teaching Agriculture in Secondary Schools.
> Effective Teaching in Agriculture and Life Sciences.

University of the West Indies:
Diploma in Agricultural Extension:
One-year qualification:

This qualification is open to learners who have completed a first degree or who hold a recognised technical or professional qualification in addition to practical experience or other qualifications of special relevance to the course of studies. This is a very similar approach to the proposed certificate in that it is intended for learners (especially learners with field experience) in

a technical field to which they can add an extension qualification. Again, although it is embedded in agriculture, this diploma has much in common with the proposed certificate.

The areas of similarity to the proposed diploma are:

> Community Analysis.
> Extension Philosophy and Principles.
> Communications Theory and Practice.
> Current Issues in Agricultural & Rural Development.
> Managing Extension for Agricultural and Rural Development.
> Rural Social Systems.

This qualification has a Field Research Project which the proposed diploma does not have.

Other institutions included in the search for international comparability included the following:

> Bahir Dar University, Ethiopia (Management Department: Business Economics Faculty).
> Bangladesh Open University, Bangladesh.
> Botswana College of Agriculture, Botswana.
> Bukalasa Agric College, Uganda.
> Ewing Christian College, India (Allahabad Agricultural Institute).
> Guru Ghasidas University, India (Faculty of Adult, Continuing Education and Extension).
> Indian Institute of Technology, Kharagpur, India (Rural Development Centre).
> Maharajah Sayajirao University of Baroda, India (Department of Extension and Communication: Faculty of Home Science).
> Ministry of Agriculture, India (Institute of Agricultural Extension Management).
> Ohio State University, USA.
> University of Bath, UK.
> University of Kerala, India (Centre for Adult, Continuing Education and Extension).
> University or Mauritius.
> University of Melbourne, Australia (Institute of Land and Food Resources).
> University of New South Wales, Australia, (Hawkesbury College of Advanced Education).
> University of Queensland, Australia.
> University of Reading, UK (International and Rural Development Department).
> University of Science and Technology, Ghana.
> University of the West Indies, Trinidad & Tobago (Department of Agricultural Economics and Extension).

Conclusion:

In conclusion, the proposed Diploma compares very favourably with similar level extension qualifications offered by numerous institutions internationally. It covers the essential areas of extension that are used internationally, but in addition to accommodating more traditional agricultural extension (including agribusiness, and plant and animal production), it is constructed to address areas of particular concern to South Africa such as Land Care as well at the transformational issues peculiar to South Africa particularly in agriculture, land reform and Black economic empowerment.

ARTICULATION OPTIONS
The Diploma: Extension Level 5 articulates horizontally and vertically with the following learning programmes and qualifications in the "Extension field".

Horizontal Articulation:

> ID 49011: National Diploma: Animal Production at NQF Level 5.

> ID 49010: National Diploma: Plant Production at NQF Level 5.
> ID 49626: National Certificate: Land Care Facilitation at NQF Level 5.
> ID 59949: National Certificate: Natural Resource Management: Terrestrial at NQF Level 5.

Vertical Articulation:

> ID 59550: National Certificate: Agricultural Extension at NQF Level 6.
> Bachelor of Agriculture: Extension at NQF Level 6.
> Bachelor of Science: Agriculture: Livestock Science and Agricultural Extension at NQF Level 6.

MODERATION OPTIONS
> A person 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 if this Qualification must be accredited as a provider with the relevant ETQA.

> Assessment and moderation of assessment will be overseen by the relevant ETQA and/or HEQAC according to the ETQAs and/or HEQAC policies and guidelines for assessment and moderation; in terms of agreements reached around assessment and moderation between ETQAs and/or HEQAC (including professional bodies); and in terms of the moderation guideline.

> Moderation must include both internal and external moderation of assessments at exit points of the qualification, unless ETQA and/or HEQAC 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.

CRITERIA FOR THE REGISTRATION OF ASSESSORS
For an applicant to register as an assessor, the applicant needs:

> To be competent in the planning and conducting assessment of learning outcomes as described in the unit standard: Plan and conduct assessment of learning outcomes NQF Level 5.
> A relevant tertiary qualification above the level of the qualification and/or 3 years experience in the relevant field.
> To be registered with the relevant Education and Training Quality Assurance Body.

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	8662	Analyse and communicate workplace data	Level 5	5
Fundamental	8648	Demonstrate an understanding of professional values and ethics	Level 5	4
Fundamental	252894	Use non-verbal communication in extension and development	Level 6	5
Fundamental	252994	Use verbal communication in extension and development	Level 6	5
Fundamental	252954	Use written communication in extension and development	Level 6	5
Core	116428	Analyse and interpret the financial statements and physical records in an agri-business to generate managerial information	Level 5	11
Core	252469	Apply group dynamic principles in order to guide a group towards independence and sustainability	Level 5	8
Core	252463	Apply the fundamentals in the practice of extension as a profession	Level 5	8
Core	252490	Demonstrate an understanding of extension management	Level 5	12
Core	116425	Design a natural resource management plan	Level 5	8
Core	116426	Develop a production and strategic plan for the agricultural business	Level 5	11

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Core	252476	Develop and implement an extension programme plan	Level 5	10
Core	116412	Develop and manage a data collection plan to support an agricultural enterprise	Level 5	4
Core	252473	Develop and update networks for extension delivery	Level 5	10
Core	252471	Display cultural awareness in dealing with clients and extensionists	Level 5	4
Core	252478	Establish sustainable extension structures in a community	Level 5	10
Core	252475	Evaluate an extension programme in a simple setting	Level 5	5
Core	252477	Facilitate a group to achieve a stated objective or solve a problem	Level 5	10
Core	252474	Implement strategies for behaviour change and innovation	Level 5	5
Core	116382	Manage an input chain	Level 5	6
Core	116384	Manage and control resources in a sustainable manner	Level 5	5
Core	116337	Optimise and integrate various farming systems and trends within related enterprises	Level 5	11
Core	116324	Plan a farm and select a site	Level 5	9
Core	8663	Plan and conduct a research project	Level 5	6
Core	252464	Plan and implement interventions and opportunities for transfer of technology	Level 5	5
Core	252897	Facilitate behaviour change and innovation in extension	Level 6	20
Elective	14600	Analyse community and conservation issues	Level 5	12
Elective	116430	Apply and plan animal nutrition	Level 5	12
Elective	13649	Apply fundamental knowledge of environmental ethics to a field of work or study	Level 5	6
Elective	116429	Apply integrated pest management principles	Level 5	10
Elective	253972	Control soil erosion	Level 5	5
Elective	116431	Describe biological processes in plant physiology	Level 5	9
Elective	116427	Develop a propagation plan for any agricultural production system	Level 5	9
Elective	116419	Develop and implement a food safety and quality management system in an agricultural supply chain	Level 5	7
Elective	116409	Develop and implement plant manipulation methods	Level 5	8
Elective	116414	Develop suitable irrigation systems	Level 5	10
Elective	116399	Dissect animals	Level 5	5
Elective	116388	Evaluate animal anatomy and physiology systems	Level 5	10
Elective	116393	Evaluate animal health systems	Level 5	8
Elective	117871	Facilitate learning using a variety of given methodologies	Level 5	10
Elective	116390	Harvest animal products: animal products systems	Level 5	9
Elective	116385	Integrate sustainable breeding and selection methods	Level 5	10
Elective	13647	Investigate options for improved environmental management and sustainable living	Level 5	16
Elective	116371	Manage soil systems	Level 5	10
Elective	116373	Manage the harvesting process of agricultural crops	Level 5	10
Elective	14020	Monitor budgets related to community projects	Level 5	8
Elective	116336	Understand juvinile animal rearing practices	Level 5	8

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION
None