No. 1119 **24 October 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

Mining and Minerals

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 17 October 2008.*** All correspondence should be marked **Standards Setting – SGB for Chemical Industries** and addressed to

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SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
Further Education and Training Certificate: Diamond Design and Evaluation

SAQA QUAL ID	***QUALIFICATION TITLE***		
64249	Further Education and Training Certificate: Diamond Design and Evaluation		
ORIGINATOR		***PROVIDER***	
SGB Mining and Minerals			
QUALIFICATION TYPE	***FIELD***	***SUBFIELD***	
Further Ed and Training Cert	6 - Manufacturing, Engineering and Technology	Fabrication and Extraction	
ABET BAND	***MINIMUM CREDITS***	***NQF LEVEL***	***QUAL CLASS***
Undefined	164	Level 4	Regular-Unit Stds Based

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

PURPOSE AND RATIONALE OF THE QUALIFICATION
Purpose:

This qualification will equip qualifying learners with the necessary knowledge, understanding and competence to evaluate, design and grade diamond gemstones to internationally recognised standards. It is aimed at people who work or intend to work within the diamond processing industry and who seek recognition for skills in processing diamond gemstones.

Recipients of this qualification should know about and are able to evaluate or design rough diamond gemstones and grade them as cut and polished diamond gemstones for sale into local and international markets. The ability of the industry to develop its potential in the beneficiation of raw materials is dependent upon the development of design, evaluation and grading skills to provide the platform for expansion of the industry and to have a base of skilled workers in the industry, including knowledgeable and competent Diamond Board inspectors.

The qualification is designed to be flexible and accessible so that people are able to consistently demonstrate the competencies required to work safely and effectively in evaluating and designing processing diamond gemstones. The role of the diamond processing sector in terms of the jewellery manufacturing and diamond distribution system will be understood as well as the importance of their role in the distribution chain.

The candidate can select the stream they wish to specialize in:

> Rough Evaluation.
> Basic Marking and Design.
> Grading of polished diamond gemstones.
> Inspecting.

Qualified learners will, subject to the elected stream, be able to:

> Communicate and solve problems by applying mathematical practical applications in a variety of ways, including communication in a secondary language.

> Understand the role of team leadership in the workplace.
> Adhere to occupational safety, health and environmental requirements.
> Examine and describe the structure and properties of diamond gemstones.
> Evaluate rough diamond gemstones.
> Conduct basic design of and mark diamond gemstones.
> Grade polished diamond gemstones.
> Perform the role of an inspector to monitor activities in the licensing and fabrication of diamond gemstones.

This qualification develops the understanding of evaluation and design of rough diamonds and the grading of cut and polished diamond gemstones which falls in the sub-field Fabrication and Extraction. It will enable learners to be informed workers in the Industry. It provides a balanced learning experience that allows flexible access to life long learning in further or higher education and productive employment in the diamond processing industry.

Rationale:

The processing of diamonds is not a mechanical process, but one which requires understanding of the nature and structure of the diamond crystal, how the processing reveals the qualities of gemstone and how impurities can affect the ultimate value of gemstone.

The need for this qualification was identified by a number of means:

> It has been identified as one of the priority areas within the Mining and Minerals Sector by means of the Sector Skills Plan.
> It has been identified by research commissioned by the Mining Qualifications Authority (MQA) and the German Technical Co-operation (GTZ) which research was published in May 2003 in a work entitled "A Skills Analysis of the Jewellery Manufacturing and Gemstone Processing Industries in South Africa".
> Unions and employers within the diamond processing industry have indicated the need to give formal recognition to the learning given to the majority of employees in the industry (most of whom are previously disadvantaged).
> The changing technology within the diamond processing industry requires that people engaged in the industry are equipped with recognised skills that are able to be applied under a variety of circumstances caused by the dynamic change in supply of rough stones for processing.
> The standards to enable the South African industry to compete favourably with overseas processing industries demand that stringent quality and operating standards are applied to enable the diamond processing sector to remain viable in South Africa and support the expansion of the wider jewellery manufacturing industry.

The FETC: Diamond Design and Evaluation at NQF Level 4 is designed to meet the needs of learners in or wishing to enter into the diamond processing industry as well as the needs of employers wishing to promote recognised levels of competence in the workforce. There has been no formal recognition of the trades that are represented in the qualification before now. Previously, workers were trained and developed using informal methods and tutelage. The associated status of a nationally recognised qualification will serve as a motivation for high-level learners to enter and develop a career in the diamond processing industry. Current markers, evaluators of rough, graders of polished and inspectors will benefit from the opportunities of assessment and subsequent recognition presented by RPL (Recognition of Prior Learning).

It is a key qualification that allows for mobility and portability within the diamond processing sector.

It is a step towards obtaining a range of qualifications in diamond processing for learners who:

> Were previously disadvantaged.
> Have worked in the diamond processing industry for many years, but have no formal qualification in their area of work.
> Wish to extend their knowledge and understanding of the diamond processing industry.
> Have acquired the level 3 qualification and wish to extend their skills within the industry.
> Have recently taken up a position in the diamond processing industry.

This qualification will also provide entrants to the industry with a structured framework to develop a measured career path within the diamond processing industry with the subsequent development of Level 5 qualifications. The majority of the candidates for this qualification are likely to be working in the diamond processing industry already. The qualification will give them the opportunity to have their skills recognised in a structured way between practical experience and theoretical understanding. This qualification would provide a launching pad for development into diamond polishing qualifications at higher levels.

There is a critical need in the industry to convert experienced personnel into qualified practitioners to raise the credibility of the industry and to enhance South Africa's reputation as a centre for diamond processing. This qualification would provide experienced, but previously unrecognised people in the industry an opportunity to establish and have recognised their skills for further development.

The intention is:

> To promote the development of knowledge and competencies that are required in the diamond processing industry.
> To develop the potential of employees in the diamond processing industry.
> To provide opportunities for life long learning for learners who work in the diamond processing industry where no general formal qualification previously existed, and who have not been given the opportunity to take up the previous qualification yet.

The FETC: Diamond Design and Evaluation will produce knowledgeable workers who are able to contribute to improved productivity within the diamond processing industry. The qualification is structured in a way that exposes learners to the different aspects of diamond evaluation, grading and the design for converting rough diamonds into polished gemstones for sale into local and international markets. It is anticipated that this qualification will promote the notion of lifelong learning by encouraging entrants to the industry and existing participants to seek recognition for and develop their skills.

This is a second tier of qualification in a learning pathway for Diamond Processing.

The learner, once equipped with the competencies of this qualification will be recognised in one of the trades of Marker, Inspector, Rough Evaluator or Polished Grader. Alternatively the learner may pursue the path of more advanced diamond design and examination and ultimately one of supervision and management in the industry.

The qualification is designed to be flexible and accessible so that people are able to demonstrate the competencies in diamond processing across the jewellery manufacturing sector of the mining and minerals sector.

Qualifying learners will be appointed according to the elected stream, to contribute to controlling the complete diamond processing activity by means of technologically advanced processes to create cut and polished diamond gemstones for sale into local or international markets.

RECOGNIZE PREVIOUS LEARNING?
Y

LEARNING ASSUMED IN PLACE

It is assumed that candidates embarking on learning towards this qualification are already competent in:

> Communication and Mathematical Literacy at NQF Level 3.

Recognition of Prior Learning:

This qualification can be obtained by completing all the required unit standards in a structured learning programme, or through recognition of prior learning (RPL). The criteria for RPL would need to be in line with the MQA's ETQA requirements.

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

All such evidence would be judged according to the general principles of assessment.

Access to the Qualification:

Access is open, however it is preferable that learners have completed the GETC: Mining and Mineral Processes. (Diamond processing stream).

QUALIFICATION RULES

Fundamentals:

> All 56 credits are compulsory and must be achieved.

Core:

> All 38 credits are compulsory.

Electives:

> A minimum of 70 elective credits as specified below must be achieved.

There are four specialisations areas:

> Rough Evaluation.
> Basic Marking and Design.
> Grading of polished diamond gemstones.
> Inspecting.

For Specialization area A: Rough Evaluation, the following unit standards (56 credits) are to be achieved:

Title; Level; Credits:

> Describe the structure and properties of diamond gemstones; Level 4; 10 Credits.
> Use a loupe for advanced applications in examining diamond gemstones; Level 4; 6 Credits.
> Clarity grade rough diamond gemstones; Level 4; 18 Credits.
> Calculate basic weight yield for rough diamond gemstones; Level 4; 10 Credits.
> Sort rough diamonds by colour, weight and shape; Level 4; 8 Credits.
> Stress test rough diamond gemstones; Level 4; 2 Credits.
> Test rough diamond gemstones for fluorescence; Level 4; 2 Credits.

Total: 56 Credits.

A further 14 credits are to be chosen from the rest of the electives to make up a minimum of 164 credits for the qualification.

For Specialization area B: Basic Marking and Design, the following unit standards (66 credits) are to be achieved:

Title; Level; Credits:

> Describe the structure and properties of diamond gemstones; Level 4; 10 Credits.
> Use a loupe for advanced applications in examining diamond gemstones; Level 4; 6 Credits.
> Use laboratory equipment to examine diamond gemstones; Level 4; 4 Credits.
> Calculate basic weight yield for rough diamond gemstones; Level 4; 10 Credits.
> Sort rough diamonds by colour, weight and shape; Level 4; 8 Credits.
> Stress test rough diamond gemstones; Level 4; 2 Credits.
> Test rough diamond gemstones for fluorescence; Level 4; 2 Credits.
> Indicate where to place a window on rough diamond gemstones; Level 4; 2 Credits.
> Use a computer to evaluate options in design for rough diamond gemstones; Level 4; 6 Credits.
> Determine whether to saw, laser cut or make rough diamond gemstones; Level 4; 2 Credits.
> Use a computer to design, mark and check diamond gemstones for parting; Level 3; 2 Credits.
> Describe the process of fabrication for polishing diamond gemstones; Level 4; 12 Credits.

Total: 66 Credits.

A further 4 credits are to be chosen from the rest of the electives to make up a minimum of 164 credits for the qualification.

For Specialization area C: Grading of polished diamond gemstones, the following unit standards (58 credits) are to be achieved:

Title; Level; Credits:

> Use a loupe to examine diamond gemstones; Level 3; 8 Credits.
> Describe the structure and properties of diamond gemstones; Level 4; 10 Credits.
> Describe process control systems for processing diamond gemstones; Level 3; 2 Credits.
> Use laboratory equipment to examine diamond gemstones; Level 4; 4 Credits.
> Test rough diamond gemstones for fluorescence; Level 4; 2 Credits.
> Describe the process of fabrication for polishing diamond gemstones; Level 4; 12 Credits.
> Grade polished diamond gemstones; Level 4; 10 Credits.
> Measure proportions of polished diamond gemstones; Level 4; 10 Credits.

Total: 58 Credits.

A further 12 credits are to be chosen from the rest of the electives to make up a minimum of 164 credits for the qualification.

For Specialization area D: Inspecting, the following unit standards (60 credits) are to be achieved:

Title; Level; Credits:

> Use a loupe to examine diamond gemstones; Level 3; 8 Credits.

> Describe process control systems for processing diamond gemstones; Level 3; 2 Credits.
> Demonstrate a working knowledge of the Diamonds Act and understanding of the Minerals Act in relation to diamonds; Level 4; 4 Credits.
> Demonstrate understanding of the processes and obligations to trade in diamonds; Level 4; 2 Credits.
> Explain the requirements for the issuing of a licence to mine, deal in and/or process diamond gemstones; Level 4; 4 Credits.
> Sort rough diamonds by colour, weight and shape; Level 4; 8 Credits.
> Describe the process of fabrication for polishing diamond gemstones; Level 4; 12 Credits.
> Grade polished diamond gemstones; Level 4; 10 Credits.
> Measure proportions of polished diamond gemstones; Level 4; 10 Credits.

Total: 60 Credits.

A further 10 credits are to be chosen from the rest of the electives to make up a minimum of 164 credits for the qualification.

EXIT LEVEL OUTCOMES

1. Communicate and solve problems by applying practical mathematical applications in a variety of ways.

2. Adhere to occupational health, safety and environmental standards in the workplace.

3. Describe the structure and properties of diamond gemstones and evaluate against recognised price lists.

4. Evaluate rough diamond gemstones.

OR

5. Design and mark rough diamond gemstones for processing.

OR

6. Grade polished diamond gemstones.

OR

7. Inspect possession, exchange and processing of diamond gemstones.

Critical Cross-Field Outcomes have been addressed by the exit level outcomes as follows:

While conducting activities related to diamond design and evaluation operations, learners are able to:

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

> Identifying and using tools and equipment in the diamond design and evaluation process in accordance with the relevant requirements, techniques and best operating practices.
> Conducting evaluation, design and marking, grading or inspection activities related to diamond fabrication.
> Responding to non-conformances in a diamond fabrications (design and evaluation) environment.
> Apply preventative or remedial action in accordance with operating procedures.

The above is evident in Exit Level Outcomes 3,4, 5, 6 and 7.

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

> Contributing to team goals and achievements by adhering to agreed working methods and processes.
> Contributing to team efficiency by supporting other team members in the diamond fabrication environment.
> Adhering to team protocols, codes of conduct and generally promoting a positive team spirit.
> Coordinating one`s work with that of others in the direct surrounding area, internal and external operations.

The above is evident in all 7 Exit Level Outcomes.

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

> Applying operating instructions to control and respond to conditions in the diamond fabrication process.
> Taking preventive and remedial action to solve operating problems while designing and evaluating diamonds.
> Maintaining product quality with reference to key aspects and critical conditions in a diamond fabrication environment.
> Adhering to strict security and control requirements particular to the diamond industry.

The above is evident in Exit Level Outcomes 3, 4, 5, 6 and 7.

Collect, analyse, organise and critically evaluate information by:

> Applying the principles related to the properties of diamonds in terms of value and potential.
> Applying relevant basis and techniques to determine the value of diamonds.
> Use and interpret instruments such as recognised price lists.

The above is 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:

> Interpreting, recording and reporting information pertaining to diamond design and evaluation.
> Preparing and submitting reports, non-conformance reports and other required documentation.

The above is evident in Exit Level Outcomes 1, 4, 5, 6 and 7.

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

> Applying occupational health, safety and environmental requirements in the workplace.
> Using relevant terminology and adhering to standard protocols such as SI, ISO and international standards applicable in the diamond design and evaluation field.
> Controlling technologically advanced production equipment according to operating procedures.
> Deploying computers to assist in the diamond design and evaluation process.

The above is evident in Exit Level Outcomes 3, 4, 5, 6 and 7.

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 diamond processing and evaluation activities in the context of the broader diamond and gemstone industry, and his/her own role in each context.
> Requesting assistance from other team members and support personnel.
> Assisting other team members and working together with support personnel to conduct diamond fabrication activities and to investigate and resolve problem areas.

The above is evident in Exit Level Outcomes 3, 4, 5, 6 and 7.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

> Oral communication is maintained and adapted as required to promote effective interaction in a work context.
> Written communication is conducted at an appropriate level for designated target audiences.
> Oral and written communication is conducted at an appropriate level in a second language.
> Mathematical principles and techniques are applied while performing the tasks in the operational context.
> Problems and solutions are recorded and monitored for reoccurrence.
> Responsibilities of a team leader are identified and communicated in the workplace.

Associated Assessment Criteria for Exit Level Outcome 2:

> Occupational Health and Safety legislation applicable to the workplace is understood and applied at all times as per workplace requirements.
> First aid is administered appropriately in the workplace and requisite reporting takes place.
> Safe, healthy and environmentally related activities are conducted in a diamond processing environment according to the Occupational Health, Safety and Environmental requirements.

Associated Assessment Criteria for Exit Level Outcome 3:

> The properties of diamonds are explained and the implications on ultimate value of the processed diamond is interpreted against international standards.
> The structure of diamonds are described and are related to the risks and opportunities for processing to make polished diamond gemstones.
> The basis of valuation of diamond gemstones is understood; and the impact of non compliance with processing procedures is explained in terms of the loss of potential value.
> The requirements for stone security are explained when handling and possessing diamond gemstones.

Associated Assessment Criteria for Exit Level Outcome 4:

> Tools and equipment are identified and their applications explained in terms of their application for examining diamonds.
> The activities and critical aspects of sorting rough diamond gemstones for evaluation are described and demonstrated in terms of analysing the properties and associated potential value of gemstones.
> The determination of the potential clarity and associated grade of the rough diamond gemstones when it has been converted into a polished stone is demonstrated.
> The expected weight loss of the rough diamond gemstone is determined for the ultimate polished gemstone after processing.
> The potential value of the expected polished stone is projected.

Associated Assessment Criteria for Exit Level Outcome 5:

> The tools and equipment are identified and their use is explained in terms of their application for designing and marking rough diamonds.
> The activities and critical aspects of sorting rough diamond gemstones for evaluation and design described and demonstrated in terms of analysing the properties and associated potential design of the polished gemstone.
> The expected weight loss of the rough diamond gemstone is determined for the ultimate polished gemstone after processing.
> The places are indicated where windows are to be opened in order to provide deeper understanding of the properties of the rough gemstone.
> Computers are deployed to assist in the selection of the design of the fabricated gemstone and the decisions on if, where and how to cut or part the rough gemstone.
> The process of fabrication to convert rough diamonds into cut and polished gemstones is described with reference to key aspects and critical controls required to ensure the quality of the finished product.

Associated Assessment Criteria for Exit Level Outcome 6:

> The tools and equipment are identified and their use is explained in terms of their application for grading polished diamond gemstones.
> The characteristics of diamond gemstones are described in terms of properties and activities in crossworking diamond gemstones are explained and the importance to the process demonstrated in terms of the properties and value of the finished gemstone.
> The process of fabrication to convert rough diamonds into cut and polished gemstones is described with reference to key aspects and critical controls required to ensure the quality of the finished product.
> The potential impact of proportion on the ultimate value of the diamond gemstone is explained.
> Polished diamond gemstones are graded against internationally established standards.

Associated Assessment Criteria for Exit Level Outcome 7:

> The tools and equipment are identified and their use is explained in terms of their application for monitoring and grading diamond gemstones.
> The registry requirements of associated legislation and its application is explained in terms of practices, legal requirements and licensing to hold, trade in and process diamond gemstones.
> The activities and critical aspects of sorting rough diamond gemstones for evaluation are described and demonstrated in terms of analysing the properties of the polished gemstone.
> The process of fabrication to convert rough diamonds into cut and polished gemstones is described with reference to key aspects and critical controls required to ensure the quality of the finished product.
> The potential impact of proportion on the ultimate value of the diamond gemstone is explained.
> Polished diamond gemstones are graded against internationally established standards.

Integrated Assessment:

Integrated assessment at the level of the qualification provides an opportunity for learners to show they are able to integrate concepts, actions and. ideas achieved across a range of unit standards and contexts.

Integrated assessment must evaluate the quality of observable performance as well as the thinking behind the performance, and must be based on a summative assessment guide.

The guide will spell out how the assessor will assess different aspects of the performance and will include:

> Observing the learner at work (both in the primary activity as well as other interactions).

> Asking questions and initiating short discussions to test understanding.
> Looking at records and reports in the portfolio and reviewing previous assessments.

In some cases interference will be necessary to determine competence depending on the nature and context within which performance takes place.

It is necessary to ensure that the fundamental part of the qualification is also targeted to ensure that while the competence may have been achieved in a particular context, learners are able to apply it in a range of other contexts and for future learning. The assessment should also ensure that all the critical cross-field outcomes have been achieved.

The learner may choose in which language s/he wants to be assessed. This should be established as part of a process of preparing the learner for assessment and familiarising the learner with the approach being taken.

While this is primarily a workplace-based qualification, evidence from other areas of endeavour may be introduced if pertinent to any of the exit-level outcomes. The assessment process should cover both the explicit tasks required for the qualification as well as the understanding of the concepts and principles that underpin the activities associated with processing diamonds.

INTERNATIONAL COMPARABILITY

The search for internationally comparable qualifications indicates that there are a number of institutions offering courses in rough evaluation and polished grading. None could be found that offer any qualifications in marking or for regulatory inspecting. There are a number of gemmological societies and institutes that offer courses and these have been listed below. Whilst some of them have approval from state or national education authorities, none appear to have accreditation as national qualifications of the countries concerned.

The Gemological Institute of America (GIA) (www.gia.edu) offers diplomas in Diamond Essentials that familiarizes learners with their own GIA clarity grading system to facilitate grading diamonds and colour and how colour affects value, Diamonds and Diamond Grading, also teaches learners skills of judging and grading the colour, clarity, and cut of diamonds, how to determine proportions and estimate weight. It addresses the fundamentals of diamond treatments, synthetics, and simulants, the effect of fluorescence on colour in diamonds, the role played by cut in the marketplace. The Diamond Grading Lab and the Advanced Grading Lab courses teaches learners how to grade clarity, colour, and cut quality factors of round brilliant diamonds and advanced grading techniques. The GIA offers grading courses in South Africa through the auspices of the Harry Oppenheimer Diamond Training School. These programmes would be equivalent to the Grading stream contained in this qualification and the Advanced Grading Lab to the intended Level 5 Grading stream that is planned.

The Gemological Institute of America (GIA) is a non-profit, private, postsecondary educational institution incorporated for the purpose of promoting education and research in gemology and related subjects. It is accredited by the Accrediting Commission of Career Schools and Colleges of Technology (ACCSCT). (The ACCSCT is listed by the U.S. Department of Education as a nationally recognized accrediting agency). GIA New York is licensed by the New York State Education Department.

The Swiss Gemmological Institute (SSEF) (www.ssef.ch) offers various courses in gemmology that include a Basic Diamond Course that serves as introduction to diamonds covering formation, properties and grading. This would be less detailed that the Grading stream contained in this qualification. The Scientific Diamond Course addresses some of the features covered in this qualification dealing with the properties of diamonds. None of their programmes addresses rough evaluation. They claim no accreditation.

The Indian Institute of Gemology (IMI) (email: iig@nda.vsnl.net.in) offers a course in Diamonds and Diamond Grading that addresses gem identification and diamond properties. This programme would not attain the level of this qualification. They claim no accreditation.

The International Gemological Institute (IGI) (www.igiworldwise.com) offers a course in Polished Diamonds that teaches learners how to grade polished diamonds and would appear to cover the contents of the Grading stream of this qualification. The Rough Diamond Course covers sorting, sorting for parting and identification of diamonds. It covers some of the aspects of the Rough Evaluation stream contained in this qualification, but does not cover the depth of this qualification. Whilst the IGI has its own school of Gemology, it does not cite any accreditation.

The Hode Raad voor Diamant (HRD) (www.hrd.be) offers courses in rough sorting, diamond grading, diamond treatments which would appear to cover the scope of some of the Rough Evaluation stream and the Grading stream of this qualification. The HRD was recognised by the Flemish community as an educational institute, but they do not claim national accreditation for their programmes.

The MSU Gemological Center (MSU) (www.gemology.ru) offers courses in diamond grading and Rough diamonds. These courses appear to cover the general scope of the Grading and Rough Evaluation streams of this qualification, but the MSU claims no accreditation. The duration of the programmes would indicate that the scope may be less comprehensive that this qualification.

The Canadian Institute of Gemmology (CIG) (www.cigem.ca) offers a Diamond Grading course that appears to cover the scope of the Grading stream of this qualification. They claim no national accreditation for their programmes.

The EGL College of Gemology (EGL) (www.egl.co.za) is part o fan international laboratory and consulting service that offers courses in Diamonds and Diamond Grading. The programme covers the scope of the Grading stream of this qualification. EGL is accredited with the MQA.

The search indicates that whilst there are a number of organisations offering certification programmes in rough diamonds and polished grading, none of these appear to be nationally accredited, although some have international reputation for their standards and would offer programmes at the level of this qualification in these streams. None, however, offer marking qualifications or regulator inspection qualifications.

In seeking to establish whether qualifications in diamond design and evaluation exist elsewhere the following channels have been pursued:

> Waonline.com: diamond links identified international diamond institutes.
> Contact with established payers in the South African industry, including leading diamond cutting operations, internationally linked gemstone valuators, internationally linked training institutions, and people with many years established connections to De Beers, the leading role-player in the distribution of diamond gemstones in the world.
> There are established diamond trading centres in the world and the diamond clubs and employer associations from the following countries were contacted with a view to establish comparable qualifications:
> Austria: World Federation of Diamond Clubs: info@worldfed.com.
> Belgium: Beurs Voor Diamanthandel: info@diamondbourse.be, Syndikaat Der Belgische Diamantnijverheid (SDB): sdb@sdb.be and HRD Antwerp NV: info@hrd.be.
> Canada: Canadian Jewellers Institute: cji@canadianjewellers.com.
> China: Shanghai Diamond Exchange: members@cnsde.com.
> England: The London Diamond Bourse: Maxime@londonbourse.com.
> India: Bharat Diamond Bourse: info@bdbindia.org.

> Israel: Israel Diamond Exchange Ltd: irit@isde.co.il and The Israel Manufacturers Association Ltd: besser@isdma.com.
> Netherlands: Vereniging Beurs Voor Den Diamonthandel: Diamondbourse. Amsterdam@inter.NL.net and Algemene Juweliersvereniging: royal@asscher.nl.
> Sri Lanka: Sri Lanka Diamond Manufacturers Association: nigel.austin@nisol.lk.
> Thailand: Bangkok Diamond and Precious Stones Exchange: bdpe@ksc.th.com and The Thai Diamond Diamond Manufacturers Association: tdma@loxinfo.co.th.
> USA: New York Diamond Dealers Club: mhochbaum@ddcny.com and Diamond Manufacturers and importers Association of America: wfdiamonds@aol.com.

These countries were contacted because they are the countries where major diamond processing takes place.

Feedback from associates of South African training and professional service providers from Belgium and Canada has indicated that the unit standards developed in South Africa are of a high standard. Experienced managers and craftsmen in South Africa with international experience have also indicated that the standard of unit standards that make up this qualification are at a level that is comparable to best practices in countries such as Belgium, Israel, China and India. Sources of this information come from experienced people working with international connections from organisations that include:

> Diamond Education College: Mr. Teinie Barnes.
> EGL: Mr. Alan Lowe and Mr. Brian Lyle.
> Harry Oppenheimer Diamond Training School: Mr. Koos Rademeyer.
> RosyBlue: Mr. Ravi Samarakone and Mr. Collin Sellwood.
> Safdico: Mr. Derek Henderson.
> UASA: Mr. John Leenaerts and Mr. Jan Swanpoel.
> Vancut Diamond Cutting Works: Mr. Ilan Richer.
> Zlotowskis Diamond Cutting Works: Mr. Daan Royffe and Mr. Howard Bell.

Contact has been made with organisations in SADC countries who are also seeking to establish recognition for the same skills as covered by this qualification. Neither Namibia nor Botswana, who are rapidly developing diamond processing skills, have a formal system and the MQA has been approached to establish whether through SADC qualifications developed in South Africa could be used to establish regional standards.

In conclusion, it appears that South Africa has been the first country to establish formal national qualifications in diamond design and evaluation and that, outside of rough evaluation and polished grading, no other comparable international qualifications yet exist.

ARTICULATION OPTIONS
This qualification allows for both vertical and horizontal articulation.

Vertical articulation exists with:

> ID National Certificate: Design and Evaluation NQF Level 5. (Under construction)
> ID National Certificate: Diamond Trading NQF Level 5. (Under construction)

Horizontal articulation exists between the four specialisation areas contained in this qualification and:

> ID FETC: Diamond Processing NQF Level 4. (Under construction)

MODERATION OPTIONS
> Anyone assessing a learner or moderating the assessment of a learner against the qualification must be registered as an assessor with the relevant Education, Training, Quality,

Assurance (ETQA) Body, or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

> Any institution offering learning that will enable the achievement of this qualification must be accredited as a provider with the relevant Education, Training, Quality, Assurance (ETQA) Body, or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

> Assessment and moderation of assessment will be overseen by the relevant Education, Training, Quality, Assurance (ETQA) Body, or by an ETQA that has a Memorandum of Understanding with the relevant ETQA, according to the ETQA's policies and guidelines for assessment and moderation.

> Moderation must include both internal and external moderation of assessments, unless ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described in the associated unit standards.

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

CRITERIA FOR THE REGISTRATION OF ASSESSORS
Assessors should be in possession of:

> An appropriate qualification above the level of the qualification and preferably relevant workplace practical experience.
> Registration as an assessor with the relevant ETQA.

NOTES
N/A

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	5
Fundamental	119457	Interpret and use information from texts	Level 3	5
Fundamental	119467	Use language and communication in occupational learning programmes	Level 3	5
Fundamental	119465	Write/present/sign texts for a range of communicative contexts	Level 3	5
Fundamental	9015	Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems	Level 4	6
Fundamental	119462	Engage in sustained oral/signed communication and evaluate spoken/signed texts	Level 4	5
Fundamental	119469	Read/view, analyse and respond to a variety of texts	Level 4	5
Fundamental	9016	Represent analyse and calculate shape and motion in 2- and 3-dimensional space in different contexts	Level 4	4
Fundamental	119471	Use language and communication in occupational learning programmes	Level 4	5
Fundamental	7468	Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues	Level 4	6
Fundamental	119459	Write/present/sign for a wide range of contexts	Level 4	5
Core	116534	Carry out basic first aid treatment in the workplace	Level 3	2
Core	253855	Understand the characteristics of gem diamonds	Level 3	10
Core	259837	Use a microscope to examine diamond gemstones	Level 3	4
Core	242668	Demonstrate knowledge and application of the Occupational Health and Safety Act, 85 of 1993 (OHSA) (as amended) and the responsibilities of management in terms of the Act	Level 4	4
Core	259757	Evaluate diamond gemstones against recognised price lists	Level 4	8

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Core	259727	Explain the requirements for the security of diamond gemstones	Level 4	4
Core	242821	Identify responsibilities of a team leader in ensuring that organisational standards are met	Level 4	6
Elective	253815	Describe process control systems for processing diamond gemstones	Level 3	2
Elective	259726	Use a computer to design, mark and check diamond gemstones for parting	Level 3	2
Elective	253817	Use a loupe to examine diamond gemstones	Level 3	8
Elective	259839	Calculate Basic Weight Yield for Rough Diamond Gemstones	Level 4	10
Elective	259738	Clarity Grade Rough Diamond Gemstones	Level 4	18
Elective	259817	Demonstrate a working knowledge of the Diamonds Act and understanding of the Minerals Act in relation to diamonds	Level 4	4
Elective	259857	Demonstrate understanding of processes and obligations to trade in diamonds	Level 4	2
Elective	253794	Describe the process of fabrication for polishing diamond gemstones	Level 4	12
Elective	259777	Describe the structure and properties of gem diamonds	Level 4	10
Elective	259797	Determine whether to saw, laser cut or make rough diamond gemstones	Level 4	2
Elective	259689	Explain the requirements to issue a licence to mine, deal and/or process diamonds	Level 4	4
Elective	259699	Grade polished diamond gemstones	Level 4	10
Elective	259758	Indicate where to place a window on Rough Diamond Gemstones	Level 4	2
Elective	259693	Measure proportions of polished diamond gemstones	Level 4	10
Elective	259760	Sort rough diamond gemstones by colour, weight and shape	Level 4	8
Elective	259778	Stress test rough diamond gemstones	Level 4	2
Elective	259759	Test Rough Diamond Gemstones for Fluorescence	Level 4	2
Elective	259798	Use a computer to evaluate options in design for rough diamond gemstones	Level 4	6
Elective	259761	Use a loupe for advanced applications in examining diamond gemstones	Level 4	6
Elective	259838	Use laboratory equipment to examine diamond gemstones	Level 4	4

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Explain the requirements to issue a licence to mine, deal and/or process diamonds

SAQA US ID	*UNIT STANDARD TITLE*		
259689	Explain the requirements to issue a licence to mine, deal and/or process diamonds		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	4

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
110220	Explain the requirements to issue a licence to mine, deal and/or process diamonds	Level 3	8	Will occur as soon as 259689 is registered

SPECIFIC OUTCOME 1
Identify and describe the legislation governing the licensing of activities relating to diamonds.

SPECIFIC OUTCOME 2
Explain the requirements and obligations for obtaining the various diamond licenses.

SPECIFIC OUTCOME 3
Explain the powers to control the currency of licenses.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Measure proportions of polished diamond gemstones

SAQA US ID	*UNIT STANDARD TITLE*		
259693	Measure proportions of polished diamond gemstones		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	10

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

SPECIFIC OUTCOME 1
Identify the equipment and tools used to measure proportions of diamond gemstones and describe their application.

SPECIFIC OUTCOME 2
Measure dimensions of polished diamond gemstones.

SPECIFIC OUTCOME 3
Calculate proportions of polished diamond gemstones.

SPECIFIC OUTCOME 4
Conduct post-measuring reconciliation, checking and security activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Grade polished diamond gemstones

SAQA US ID	*UNIT STANDARD TITLE*		
259699	Grade polished diamond gemstones		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	10

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
110190	Grade polished diamond gemstones	Level 3	34	Will occur as soon as 259699 is registered

SPECIFIC OUTCOME 1
Identify the systems, equipment and tools used to grade diamond gemstones and describe their application.

SPECIFIC OUTCOME 2
Assess and plot characteristics of polished diamond gemstones.

SPECIFIC OUTCOME 3
Grade polished diamond gemstones.

SPECIFIC OUTCOME 4
Conduct post-grading reconciliation, checking and security activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Use a computer to design, mark and check diamond gemstones for parting

SAQA US ID	*UNIT STANDARD TITLE*		
259726	Use a computer to design, mark and check diamond gemstones for parting		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 3	2

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
10506	Use a computer to design, mark and check diamond gemstones for parting	Level 2	2	Will occur as soon as 259726 is registered

SPECIFIC OUTCOME 1
Identify the computer equipment and tools used to rough analyse diamond gemstones for parting and describe their application.

SPECIFIC OUTCOME 2
Determine the optimum shape of polished diamonds from rough diamond gemstones and check the marking line for parting.

SPECIFIC OUTCOME 3
Present rough analysed stones for examination.

SPECIFIC OUTCOME 4
Conduct post-rough analysing reconciliation, checking and security activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Explain the requirements for the security of diamond gemstones

SAQA US ID	*UNIT STANDARD TITLE*		
259727	Explain the requirements for the security of diamond gemstones		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	4

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
110220	Explain the requirements to issue a licence to mine, deal and/or process diamonds	Level 3	8	Will occur as soon as 259727 is registered

SPECIFIC OUTCOME 1
Describe the general requirements for safeguarding diamonds in the workplace.

SPECIFIC OUTCOME 2
Explain the importance and implications of acknowledging receipt of diamond gemstones.

SPECIFIC OUTCOME 3
Explain the workplace procedures for receiving and issuing of diamonds.

SPECIFIC OUTCOME 4
Describe the consequences of failing to take due care of diamonds in their possession.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Clarity Grade Rough Diamond Gemstones

SAQA US ID	*UNIT STANDARD TITLE*		
259738	Clarity Grade Rough Diamond Gemstones		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	18

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

SPECIFIC OUTCOME 1
Identify the equipment and tools used to examine and grade the clarity of rough diamond gemstones and describe their application.

SPECIFIC OUTCOME 2
Differentiate types and categories of diamond gemstones in the rough.

SPECIFIC OUTCOME 3
Evaluate the clarity grade of rough diamond gemstones.

SPECIFIC OUTCOME 4
Conduct post-grading reconciliation, checking and security activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Evaluate diamond gemstones against recognised price lists

SAQA US ID	*UNIT STANDARD TITLE*		
259757	Evaluate diamond gemstones against recognised price lists		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
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
Identify the recognised price lists applicable in the industry and describe their application and currency.

SPECIFIC OUTCOME 2
Explain how the different characteristics of diamond gemstones influences value.

SPECIFIC OUTCOME 3
Evaluate different processing options for rough diamonds in terms of optimal value of different potential processing outcomes.

SPECIFIC OUTCOME 4
Determine the value of various outcomes if sold into different markets.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Indicate where to place a window on Rough Diamond Gemstones

SAQA US ID	*UNIT STANDARD TITLE*		
259758	Indicate where to place a window on Rough Diamond Gemstones		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	2

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

SPECIFIC OUTCOME 1
Identify the need for putting a window on a rough diamond gemstone.

SPECIFIC OUTCOME 2
Determine the location(s) where the window(s) must be placed.

SPECIFIC OUTCOME 3
Issue instructions for the opening of a window(s) on a rough diamond gemstone.

SPECIFIC OUTCOME 4
Conduct post-window placing reconciliation, checking and security activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Test Rough Diamond Gemstones for Fluorescence

SAQA US ID	*UNIT STANDARD TITLE*		
259759	Test Rough Diamond Gemstones for Fluorescence		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	2

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

SPECIFIC OUTCOME 1
Identify the equipment used to test rough diamond gemstones for fluorescence and describe their application.

SPECIFIC OUTCOME 2
Prepare for fluorescence testing of rough diamond gemstones.

SPECIFIC OUTCOME 3
Conduct fluorescence testing of rough diamond gemstones.

SPECIFIC OUTCOME 4
Conduct post-fluorescence testing reconciliation, checking and security activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Sort rough diamond gemstones by colour, weight and shape

SAQA US ID	*UNIT STANDARD TITLE*		
259760	Sort rough diamond gemstones by colour, weight and shape		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
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
Identify the systems, equipment and tools used to rough sort diamond gemstones and describe their application.

SPECIFIC OUTCOME 2
Sort rough diamond gemstones by size.

SPECIFIC OUTCOME 3
Sort rough diamond gemstones by colour.

SPECIFIC OUTCOME 4
Sort rough diamond gemstones by shape.

SPECIFIC OUTCOME 5
Conduct post-rough-sorting reconciliation, checking and security activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Use a loupe for advanced applications in examining diamond gemstones

SAQA US ID	*UNIT STANDARD TITLE*		
259761	Use a loupe for advanced applications in examining diamond gemstones		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
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
Identify loupes and explain their application for examination of diamond gemstones.

SPECIFIC OUTCOME 2
Examine and describe advanced characteristics of diamond gemstones.

SPECIFIC OUTCOME 3
Protect and maintain loupes.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Describe the structure and properties of gem diamonds

SAQA US ID	*UNIT STANDARD TITLE*		
259777	Describe the structure and properties of gem diamonds		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	10

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

SPECIFIC OUTCOME 1
Identify and describe the main categories and groups of diamond gemstones.

SPECIFIC OUTCOME 2
Identify the different diamond types and describe their differences.

SPECIFIC OUTCOME 3
Explain the effects of nitrogen on diamond type and colour.

SPECIFIC OUTCOME 4
Explain the colour obtained by treatment on the different diamond types.

SPECIFIC OUTCOME 5
Describe the various properties of the different types of diamond gemstones and explain these properties in relation to the processing of diamond gemstones.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Stress test rough diamond gemstones

SAQA US ID	*UNIT STANDARD TITLE*		
259778	Stress test rough diamond gemstones		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	2

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

SPECIFIC OUTCOME 1
Identify the systems, equipment and tools used to stress test rough diamond gemstones and describe their application.

SPECIFIC OUTCOME 2
Prepare for stress testing of rough diamond gemstones.

SPECIFIC OUTCOME 3
Conduct stress testing of rough diamond gemstones.

SPECIFIC OUTCOME 4
Conduct post-stress testing reconciliation, checking and security activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Determine whether to saw, laser cut or make rough diamond gemstones

SAQA US ID	*UNIT STANDARD TITLE*		
259797	Determine whether to saw, laser cut or make rough diamond gemstones		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	2

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

SPECIFIC OUTCOME 1
Assess information relating to the characteristics and properties of rough diamond gemstones.

SPECIFIC OUTCOME 2
Evaluate the optimum shape of polished diamonds from rough diamond gemstones.

SPECIFIC OUTCOME 3
Determine the strategy for processing.

SPECIFIC OUTCOME 4
Conduct post-evaluation reconciliation, checking and security activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Use a computer to evaluate options in design for rough diamond gemstones

SAQA US ID	*UNIT STANDARD TITLE*		
259798	Use a computer to evaluate options in design for rough diamond gemstones		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
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
Identify the computer equipment and tools used to evaluate options in design for rough diamond gemstones and describe their application.

SPECIFIC OUTCOME 2
Determine the optimum shape of polished diamonds from rough diamond gemstones.

SPECIFIC OUTCOME 3
Present analysed stones for examination.

SPECIFIC OUTCOME 4
Conduct post-computer evaluation reconciliation, checking and security activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate a working knowledge of the Diamonds Act and understanding of the Minerals Act in relation to diamonds

SAQA US ID	*UNIT STANDARD TITLE*		
259817	Demonstrate a working knowledge of the Diamonds Act and understanding of the Minerals Act in relation to diamonds		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	4

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
110212	Demonstrate a working knowledge of the Diamonds Act and understanding of the Minerals Act in relation to diamonds	Level 3	8	Will occur as soon as 259817 is registered

SPECIFIC OUTCOME 1
Describe the main features of the Diamonds Act.

SPECIFIC OUTCOME 2
Explain the requirements of the Diamonds Act regarding country of origin of diamonds.

SPECIFIC OUTCOME 3
Explain the requirements of the Diamonds Act regarding processing of diamond gemstones.

SPECIFIC OUTCOME 4
Explain the requirements of the Diamonds Act regarding trade in diamonds.

SPECIFIC OUTCOME 5
Describe the main features of the Minerals Act.

SPECIFIC OUTCOME 6
Explain the requirements of the Minerals Act regarding diamonds.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Use a microscope to examine diamond gemstones

SAQA US ID	*UNIT STANDARD TITLE*		
259837	Use a microscope to examine diamond gemstones		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
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
Identify the microscopes used to examine diamond gemstones and describe their application.

SPECIFIC OUTCOME 2
Describe the features of diamond gemstones using a microscope.

SPECIFIC OUTCOME 3
Conduct post-examination reconciliation, checking and security activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Use laboratory equipment to examine diamond gemstones

SAQA US ID	*UNIT STANDARD TITLE*		
259838	Use laboratory equipment to examine diamond gemstones		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	4

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

SPECIFIC OUTCOME 1
Identify the equipment used in a laboratory to examine diamond gemstones and describe their application.

SPECIFIC OUTCOME 2
Describe the features of diamond gemstones using laboratory equipment.

SPECIFIC OUTCOME 3
Conduct post-examination reconciliation, checking and security activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Calculate Basic Weight Yield for Rough Diamond Gemstones

SAQA US ID	*UNIT STANDARD TITLE*		
259839	Calculate Basic Weight Yield for Rough Diamond Gemstones		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	10

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

SPECIFIC OUTCOME 1
Identify the equipment and tools used to examine rough diamond gemstones and describe their application.

SPECIFIC OUTCOME 2
Differentiate types and categories of diamond gemstones in the rough.

SPECIFIC OUTCOME 3
Predict the size and weight of the polished diamond gemstones from the rough.

SPECIFIC OUTCOME 4
Conduct post-examination reconciliation, checking and security activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate understanding of processes and obligations to trade in diamonds

SAQA US ID	*UNIT STANDARD TITLE*		
259857	Demonstrate understanding of processes and obligations to trade in diamonds		
ORIGINATOR		*PROVIDER*	
SGB Mining and Minerals			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 4	2

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
110214	Demonstrate understanding processes and obligations to trade in diamonds	Level 3	6	Will occur as soon as 259857 is registered

SPECIFIC OUTCOME 1
Identify the diamond exchanges and describe their nature.

SPECIFIC OUTCOME 2
Explain the tendering processes for diamonds and the obligations on the parties involved.

SPECIFIC OUTCOME 3
Explain the processes for collection of diamond gemstones.

SPECIFIC OUTCOME 4
Explain the requirements regarding customs, excise and taxation relating to trade in diamonds.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	64249	Further Education and Training Certificate: Diamond Design and Evaluation	Level 4