

# Government Gazette Staatskoerant

REPUBLIC OF SOUTH AFRICA  
REPUBLIEK VAN SUID-AFRIKA

Vol. 512

Pretoria, 8 February 2008  
Februarie

**No. 30729**

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## GOVERNMENT NOTICES

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### SOUTH AFRICAN QUALIFICATIONS AUTHORITY

No. 102

8 February 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

#### Marketing

registered by Organising Field 03 – Business, Commerce and Management, publishes the following Qualification for public comment.

This notice contains the title, field, sub-field, NQF level, credits, and purpose of the Qualification. The full Qualification can be accessed via the SAQA web-site at [www.saqqa.org.za](http://www.saqqa.org.za). Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Qualification should reach SAQA at the address below and **no later than 7 March 2008**. All correspondence should be marked **Standards Setting – Marketing** and addressed to

<p>The Director: Standards Setting and Development SAQA <i>Attention: Mr. D. Mphuthing</i> Postnet Suite 248 Private Bag X06 Waterkloof 0145 or faxed to 012 – 431-5144 e-mail: <a href="mailto:dmpthuthing@saqa.org.za">dmpthuthing@saqa.org.za</a></p>
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DR. S. BHIKHA  
DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**QUALIFICATION:**  
**Certificate: Marketing Practice**

SAQA QUAL ID		QUALIFICATION TITLE	
60430		Certificate: Marketing Practice	
ORIGINATOR		PROVIDER	
SGB Marketing			
QUALIFICATION TYPE	FIELD	SUBFIELD	
Professional Qualification	3 - Business, Commerce and Management Studies	Marketing	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	120	Level 5	Regular-ELOAC

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

**PURPOSE AND RATIONALE OF THE QUALIFICATION**

**Purpose:**

The purpose of this qualification is to formalize the criteria against which a marketer will be certified in order to be awarded the designation "MP (SA)". A qualifying learner will be able to:

- Account for resources required to implement tactical marketing activities and apply a range of financial and/or statistical formulas to measure the results of these activities.
- Plan, prepare, and present reports to management and/or briefs to marketing team members.
- Ensure effective implementation of tactical marketing activities by understanding and meeting the requirements of marketing management briefs.
- Demonstrate that tactical marketing efforts contribute directly towards the bottom line of the organisation.
- Demonstrate professional conduct to ensure sound tactical marketing practices.

Learners qualifying with this qualification also need to subscribe to a code of professional conduct and to ensure that they are affiliated with the body that safeguards the integrity of the code.

**Rationale:**

This qualification allows learners to qualify as Marketing Practitioners in South Africa through the evaluation of their competence at an entry-level against standards that have been determined through consultation with the broader marketing industry. The definition of a profession is that of an occupation based on a unique scientific body of knowledge, whose practitioners have a service orientation as well as autonomy in the performance of their work. The specialised knowledge for this qualification is acquired through a formal education process, and the practical skills and experience are obtained through real-time work experience in a formal, recognized mentoring environment. The structured workplace experience also serves to instil the ethical standards essential to any profession.

Marketers who are professionals at this level have either qualified with a formal qualification at NQF Level 5 or have some experience, knowledge and skills as new entrants in their field. This



qualification does not aim at reassessing their knowledge, but, rather takes the assessment to another level in that the applied competence of professionals is evaluated against a set of criteria determined by the marketing industry. Marketing is about gathering and using confidential information on customers to raise awareness of products and/or services through complex and strategic marketing interventions in a way that leads to the customer investing (and re-investing) in the product and/or services.

Professionalism when gathering and using this information must be supported by the protection of customers from exploitation and abuse by unethical marketers. On the other hand, marketers need to be equipped with the applied, vocational knowledge and skills required to navigate marketing transactions and relationships through the complex South African and global legislative framework.

Successful entry-level marketers in South Africa need to build their credibility as professionals through the continuous enhancing of their skills as well as highlighting their accomplishments. Although individuals might have demonstrated their knowledge of marketing concepts and principles, this qualification offers a concrete measure of their experience and their command of marketing concepts and processes at the level of implementation and management of marketing activities in the field.

#### **RECOGNIZE PREVIOUS LEARNING?**

Y

#### **LEARNING ASSUMED IN PLACE**

It is assumed that a learner wishing to complete this professional qualification will be competent to:

- Conduct a marketing situational analysis while leading a team of Marketers and Service Providers.
- Develop, implement and manage a marketing related project and/or activity plan, and implement a generic marketing communications strategy.
- Present the features, advantages and benefits of products to customers so that a deal can be closed.
- Provide product training to others in the organisation and coach others on the principles of marketing in an organisation.
- Identify brand mix elements and financial implications for decision-making.
- Integrate marketing plans with the business process.
- Monitor and control the handling of customers, customer needs and requirements and areas of customer service impact.
- Analyse and interpret marketing information and present marketing data to stakeholders.

Learners need to be competent in their area of specialisation against the minimum criteria as stated below for each:

##### **In Marketing Communications:**

- Co-ordinate and organize marketing communications production.
- Interpret, evaluate and buy media and manage a media campaign.
- Investigate, explain and apply marketing communications concepts and lateral thinking processes.
- Demonstrate an understanding of marketing communications roles, art direction, publishing and graphic design.

##### **In Customer Management:**

- Establish and develop customer needs and relationships to improve sales and relationships.

- Develop, implement and monitor customer activity plans to meet organisational and customer requirements.

In Marketing Management:

- Identify, implement and manage marketing strategies and plans to meet organizational requirements.

In Market Research:

- Design and test samples of measuring instruments to meet objectives.
- Develop and write editing, coding and data processing and data analysis instructions.
- Plan, organize and control field staff and fieldwork to meet the required objectives.

Recognition of Prior Learning:

It is assumed that the learner has already been deemed competent at NQF Level 5. Should this not be the case (because it is recognised that successful, senior marketing managers, directors and industry champions do not necessarily have a formal, NQF registered qualification) then the RPL of the NQF Level 5 competences could be integrated into the final summative assessment used to award this professional qualification.

This qualification is aimed at assessing applied knowledge and requires evidence of professional competence through evidence generated in the workplace, over a period of time. Candidates can therefore not be RPL'd against this qualification, as this is THE form of assessment used to judge a learner as competent or not.

Access to the Qualification:

The learner wanting to access this qualification should be competent in literacy and numeracy at NQF Level 4 or equivalent. They will also need to have a good understanding of the different specialized activities within marketing that include, but are not limited to, marketing communications, marketing management, customer management, market research and direct marketing.

#### **QUALIFICATION RULES**

N/A

#### **EXIT LEVEL OUTCOMES**

1. Account for resources required to implement tactical marketing activities and apply a range of financial and/or statistical formulas to measure the results of these activities.
2. Plan, prepare, and present reports to management and/or briefs to marketing team members.
3. Ensure effective implementation of tactical marketing activities by understanding and meeting the requirements of marketing management briefs.
4. Ensure that tactical marketing efforts contribute directly to the bottom line of the organisation.
5. Demonstrate professional conduct to ensure sound tactical marketing practices.

#### **ASSOCIATED ASSESSMENT CRITERIA**

Associated Assessment Criteria for Exit Level Outcome 1:

- 1.1 Tangible and intangible resources for tactical marketing activities are accurately identified and accounted for.

1.2 Financial and/or statistical formulas are applied as an integral part of the marketing supervisor's role in calculating budgets, sales and profitability of tactical marketing activities.

Associated Assessment Criteria for Exit Level Outcome 2:

- 2.1 Objectives of report and/or brief are identified.
- 2.2 Appropriate audience is identified.
- 2.3 Report/brief is drawn up in a clearly structured,; detailed, yet concise format to meet accepted technical, legal and linguistic standards.
- 2.4 The reports are presented using appropriate audio-visual tools.
- 2.5 Presentation is well structured, convincing and compelling.

Associated Assessment Criteria for Exit Level Outcome 3:

- 3.1 Deadlines and overall budgets, targets and performance criteria are adhered to in all marketing planning, implementation and activities.
- 3.2 All aspects of tactical marketing activities are coordinated by harnessing the marketing team's efforts towards key objectives.
- 3.3 Tactical marketing activities are integrated and co-ordinated with other departments or functions by liaising with key role players.
- 3.4 "Buy in" is secured from the marketing team and other functions.

Associated Assessment Criteria for Exit Level Outcome 4:

- 4.1 Basic indicators are measured over a period of time to elicit information/evidence that marketing efforts contribute to the organisation's bottom line.

Associated Assessment Criteria for Exit Level Outcome 5:

- 5.1 Appropriate referee reports are gathered and consulted which show that the marketer demonstrates professional conduct by adhering to the relevant internal and/or external codes of conduct.

Integrated Assessment:

Various methods of assessment will need to be integrated into the assessment strategy in order to ensure validity, authenticity, reliability, differentiability and currency of the evidence provided by the learner. The assessment will therefore need to cover all the exit level outcomes and ensure that a portfolio of evidence is one of the components used to assess the learner's competence.

### **INTERNATIONAL COMPARABILITY**

The research on other countries across the globe that certify the professional competence of marketers included the United States of America, the United Kingdom, Canada, the Netherlands and Australia. A summary of what is offered and how it compares to this professional qualification is presented below.

United States of America:

The American Marketing Association offers the Professional Certified Marketer (PCM) designation to their professional members. The process includes the passing of a comprehensive exam that covers the key areas of marketing. The emphasis is on testing knowledge as well as applied competence gained through experience on the job, as senior marketing manager or director.

Qualified PCM's must maintain their status through continuing professional marketing education and growth and need to complete 36 hours of continuing education activities every three years. The activities include attending seminars, belonging to and serving on a marketing association committee, writing articles, and any other activities that contribute to professional growth and to the industry as a whole.

#### United Kingdom:

The Chartered Institute of Marketing (CIM) awards the "Chartered marketer" designation. To gain this designation, the professional marketer is required to complete 35 hours of CPD annually for a minimum of two consecutive years; submit the completed card together with the relevant supporting evidence to the CIM.

Once qualified, CM's are required to participate in an annual 35 hours of CPD. However, only 10% of all CM's will be requested each year to make the submission.

#### Canada:

Two Canadian professional organisations were considered when researching the international comparability of this qualification, namely the Canadian Marketing Association and the Canadian Institute of Marketing:

- The Canadian Institute of Marketing (CIM):

Eight classes of membership exist for this institute. The three that equate to the content of this qualification are:

- Registered Professional Marketer (RPM): Qualifying professionals are required to be a professional member of the institute, have successfully completed the writing of a case study that confirms professional competency, understand the Institute's code of professional ethics, pay their registration fee.
- Professional Member (MCInst.M): Professionals wishing to qualify need to have acquired 5 years experience in a marketing position, the last two at a senior management level, need to have one of the following qualifications: Diploma of an Institute Marketing, BA, MA or PhD with marketing specialisation, diploma or university post-graduate diploma in Management Studies or Business Administration with marketing specialisation, other educational or professional qualification with marketing input.
- Associate Member (ACInst.M): 3 years working experience in a marketing position the last at some level of management; qualifications include sales training managers, area, divisional or assistant managers of marketing and/or sales and similar marketing experience, also qualified are full time lecturers in marketing at a college or university with three years business or consulting experience, any one of the following qualifications: Certification from an institute of marketing, BA or MA in a business related subject with a marketing component, diploma or university post-graduate diploma in Business administration of Management Studies, other educational or professional qualifications approved by the CIM or one of its affiliated institutes overseas.
- Canadian Marketing Association (CMA):

This organisation does not have professional designations that are awarded to marketers. However the CMA does offer various training programmes that contribute toward professional development.

#### The Netherlands:

The NIMA is a marketing platform for professional marketers in the Netherlands and stimulates marketers to develop and to increase their professionalism in the field of marketing.

To this end, the NIMA recognises the Registered Marketers or RMs. Very little detail was available on the requirements for the awarding of this status, or the process to be followed to maintain the status.

Australia:

The Australian Marketing Institute certifies professional marketers as "Certified Practising Marketers" or CPM's. It is the recognition of both formal education and successful application of the marketers knowledge and skills. To qualify the marketer needs to have a minimum of 5 years practical marketing management experience, a recognised marketing qualification or 10 years marketing management experience or practice. They must also have extensive marketing knowledge and background experience. A minimum of 650 points needs to be accumulated across the three different areas of educational qualifications, practising experience and professional achievements.

The assessment criteria include:

- Education qualifications: Marketing degree or post graduate diploma in marketing.
- Practicing experience: Minimum of 5 years broad marketing experience.
- Professional achievement: Provision of a resume of their professional achievements must be submitted with their application.

Qualified CPM's need to maintain their status by undertaking a minimum of 100 CPD hours over a 3 year period.

#### **ARTICULATION OPTIONS**

The designation awarded through successful completion of this route to professional recognition is the entry level of professional recognition available in South Africa for marketers at NQF Level 5. The nature of this qualification does not allow access to higher forms of traditional learning such as an NQF Level 5 qualification.

Rather this designation instrument provides the future employer assurance of the professional competence of the marketing professional. It also enhances the credibility and credentials of a professional marketer wanting to set themselves apart in the market place.

#### **MODERATION OPTIONS**

- Moderators responsible for the moderation of this qualification must be registered with the relevant ETQA and therefore meet their requirements for the registration of constituent moderators at NQF Level 5.
- The moderators must therefore have a minimum of 3 years experience at supervisor level in marketing, an NQF Level 6 marketing qualification or equivalent and should be a practicing MP (SA) or CM(SA).
- The moderators used to quality assure this process must subscribe to the Code of Professional Conduct for Marketing Professionals. A professional marketer that is found guilty of misconduct under this code will not be able to perform the moderating function for the awarding of this qualification.

#### **CRITERIA FOR THE REGISTRATION OF ASSESSORS**

Assessors wanting to assess learners against this qualification must be registered as constituent assessors with the relevant ETQA and must be qualified and current Marketing Practitioners (SA) or Chartered Marketers (SA).

**NOTES**

N/A

**UNIT STANDARDS**

*This qualification is not based on Unit Standards.*

**LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION**

**None**

No. 103

8 February 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

**Marketing**

registered by Organising Field 03 – Business, Commerce and Management, publishes the following Qualification for public comment.

This notice contains the title, field, sub-field, NQF level, credits, and purpose of the Qualification. The full Qualification can be accessed via the SAQA web-site at [www.saga.org.za](http://www.saga.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 7 March 2008**. All correspondence should be marked **Standards Setting – Marketing** 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](mailto:dmphuthing@saqa.org.za)

**DR. S. BHIKHA****DIRECTOR: STANDARDS SETTING AND DEVELOPMENT**





## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**QUALIFICATION:**  
***Certificate: Chartered Marketing***

SAQA QUAL ID		QUALIFICATION TITLE	
60429		Certificate: Chartered Marketing	
ORIGINATOR		PROVIDER	
SGB Marketing			
QUALIFICATION TYPE	FIELD	SUBFIELD	
Professional Qualification	3 - Business, Commerce and Management Studies	Marketing	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	120	Level 7	Regular-ELOAC

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

**PURPOSE AND RATIONALE OF THE QUALIFICATION**

Purpose:

The purpose of this qualification is to formalize the criteria against which a professional marketer will be certified in order to be awarded the designation "CM (SA)".

A qualifying learner will be able to:

- Apply a range of financial and/or statistical formulas to plan and measure the results of strategic marketing efforts.
- Plan, prepare, and present high level proposals to role players and stakeholders.
- Integrate all aspects of marketing in meeting the broad objectives of the organisation and ensure that marketing strategies and activities are integrated and co-ordinated with those of other key parts of the organisation.
- Demonstrate that strategic marketing efforts contribute directly towards the bottom line of the organisation.
- Demonstrate professional conduct to ensure sound strategic marketing practices.
- Conduct research into global and/or national marketing practices and use findings to add value the organisation.

Learners qualifying with this qualification also need to subscribe to a code of professional conduct and to ensure that they are affiliated with the body that safeguards the integrity of the code.

Rationale:

This qualification allows learners to qualify as Chartered Marketers in South Africa through the evaluation of their competence at a senior level against standards that have been determined through consultation with the industry.

The definition of a profession is that of an occupation based on a unique scientific body of knowledge, whose practitioners have a service orientation as well as autonomy in the performance of their work. The specialised knowledge for this qualification is acquired through a



formal education process, and the practical skills and experience are obtained through real-time work experience in a formal, recognized mentoring environment. The structured workplace experience also serves to instil the ethical standards essential to any profession.

Marketers who are professionals at this level have either qualified with a formal qualification at NQF Level 7 or have extensive experience, knowledge and skills as professionals in their field. This qualification does not aim at reassessing their knowledge, but, rather takes the assessment to another level in that the applied competence of professionals is evaluated against a set of criteria determined by the marketing industry.

Marketing is about gathering and using confidential information on customers to raise awareness of products and/or services through complex and strategic marketing interventions in a way that leads to the customer investing (and re-investing) in the product and/or services.

Professionalism when gathering and using this information must be supported by the protection of customers from exploitation and abuse by unethical marketers. On the other hand, marketers need to be equipped with the applied, vocational knowledge and skills required to navigate marketing transactions and relationships through the complex South African and global legislative framework.

Successful senior marketing professionals in South Africa need to build their credibility as industry leaders through the continuous enhancing of their skills as well as highlighting their accomplishments. Although individuals might have demonstrated their expertise throughout their career, this qualification offers a concrete measure of their experience and their command of marketing concepts and processes at a strategic and complex level.

#### **RECOGNIZE PREVIOUS LEARNING?**

Y

#### **LEARNING ASSUMED IN PLACE**

It is assumed that a learner wishing to complete this professional qualification will be competent to:

- Analyse and evaluate global trends and develop a vision for an organization.
- Develop a monitoring system and evaluate and monitor a strategic marketing plan.
- Monitor and control all aspects of an internal or external marketing unit.
- Interpret a brief and develop a public relations and marketing campaign.
- Develop, plan and review alternative marketing opportunities.
- Assess current marketing culture and set marketing culture and ethics objectives to instil a marketing culture and ethics in all stakeholder groups.
- Create and maintain a positive culture of customer service in the supply chain and conceptualise innovative customer service strategies.

Learners also need to be competent in their area of specialisation against the minimum criteria as stated below for each:

#### **Marketing Communications:**

- Develop, assess and write research policies and sponsor research activities for market research projects.
- Develop an integrated Marketing Communications strategy and global Marketing Communications strategy.
- Manage specialized areas in Marketing Communications and the Marketing Communications strategies.

#### **Customer Management:**

- Develop, assess and write research policies and sponsor research activities for market research projects.
- Design and develop customer acquisition and retention strategies and manage specialized areas in Customer Management processes to meet corporate business objectives.
- Set sales procedures and policies for the organization and develop and monitor annual sales plans and objectives.

#### Marketing Management:

- Develop, assess and write research policies and sponsor research activities for market research projects.
- Set marketing policy to meet business strategic plan and co-ordinate position and synergize the strategic marketing plan.
- Manage specialized areas in Marketing Management.

#### Market Research:

- Develop, assess and write research policies and sponsor research activities for market research projects.
- Develop and integrate all aspects of marketing research programmes and manage specialized areas in marketing research to meet corporate business objectives.

#### Recognition of Prior Learning:

It is assumed that the learner has already been deemed competent at NQF Level 7. Should this not be the case (because it is recognised that successful, senior marketing managers, directors and industry champions do not necessarily have a formal, NQF registered qualification) then the RPL of the NQF Level 7 competences could be integrated into the final summative assessment used to award this professional qualification.

This qualification is aimed at assessing applied knowledge and requires evidence of professional competence through evidence generated in the workplace, over a period of time. Candidates can therefore not be RPL's against this qualification, as this is THE form of assessment used to judge a learner as competent or not.

#### Access to the Qualification:

The professional marketer wanting to access this qualification should be competent in literacy and numeracy at NQF Level 6 or equivalent. Learners will also need to have a deep understanding of the different specialized activities within marketing that include, but are not limited to, marketing communications, marketing management, customer management, market research and direct marketing.

#### **QUALIFICATION RULES**

N/A

#### **EXIT LEVEL OUTCOMES**

1. Apply a range of financial and/or statistical formulas to plan and measure the results of strategic marketing efforts.
2. Plan, prepare, and present high level proposals to role players and stakeholders.
3. Integrate all aspects of marketing in meeting the broad objectives of the organisation and ensure that marketing strategies and activities are integrated and co-ordinated with those of other key parts of the organisation.

4. Demonstrate that strategic marketing efforts contribute directly towards the bottom line of the organisation.
5. Demonstrate professional conduct to ensure sound strategic marketing practices.
6. Conduct research into global and/or national marketing practices and use findings to add value to the organisation.

#### **ASSOCIATED ASSESSMENT CRITERIA**

##### **Associated Assessment Criteria for Exit Level Outcome 1:**

- 1.1 Financial and/or statistical formulas are applied as an integral component of the marketing effort.
- 1.2 Financial and/or statistical formulas are used for planning and measuring performance and/or benchmarking and/or comparison against best practice.

##### **Associated Assessment Criteria for Exit Level Outcome 2:**

- 2.1 Objectives of proposal and presentation are identified.
- 2.2 Appropriate role players and stakeholders are identified.
- 2.3 Proposal documents are drawn up to be clearly structured, detailed, yet concise and to meet accepted technical, legal and linguistic standards.
- 2.4 Presentation are prepared and given using appropriate audio-visual tools.
- 2.5 Presentation is well structured, compelling and presents a convincing argument in favour of the proposal.

##### **Associated Assessment Criteria for Exit Level Outcome 3:**

- 3.1 Rigorous critical and analytical thinking is applied at a strategic level in the organisation.
  - 3.2 "Buy in" is secured from marketing team and other functions and, if necessary, capacity is built within marketing and other functions to ensure marketing's integration throughout the business.
- Range:
    - "Marketing" includes marketing management, marketing research, customer relationship management, marketing communications, brand management, and direct marketing.
    - "Other key parts of the organisation" include other divisions or departments or functions relevant to the strategy at hand, including but not limited to finance, human resources, manufacturing, procurement, research & development, etc.

##### **Associated Assessment Criteria for Exit Level Outcome 4:**

- 4.1 Strategic marketing efforts initiated and managed by the candidate are drawn up and designed to contribute to the profits of the organisation.
- 4.2 Evidence is collated using key financial indicators over a period of time to indicate the contribution of the marketing strategy to the organisation's bottom line.

##### **Associated Assessment Criteria for Exit Level Outcome 5:**

- 5.1 Appropriate referee reports are gathered and used to show that the marketer demonstrates professional conduct by adhering to the relevant internal and/or external codes of conduct.
- 5.2 Interactions with employer, employees and customers of the business reflect a consistent adherence to the professional code of conduct.

##### **Associated Assessment Criteria for Exit Level Outcome 6:**

- 6.1 Research is conducted into global or national best practice and applied in the SA context.
- 6.2 Research is initiated by defining the problem, setting the research parameters and directly or indirectly briefing the research team.
- 6.3 Evidence of personal decision-making (or contribution to top management decision-making) based on the research is shown.

#### Integrated Assessment:

Various methods of assessment will need to be integrated into the assessment strategy in order to ensure validity, authenticity, reliability, differentiability and currency of the evidence provided by the learner. The assessment will therefore need to cover all the exit level outcomes and ensure that a portfolio of evidence is one of the components used to assess the learner's competence.

#### **INTERNATIONAL COMPARABILITY**

The research on other countries across the globe that certify the professional competence of marketers included the United States of America, the United Kingdom, Canada, the Netherlands and Australia. A summary of what is offered and how it compares to this qualification is presented below.

##### United States of America:

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Qualified PCM's must maintain their status through continuing professional marketing education and growth and need to complete 36 hours of continuing education activities every three years. The activities include attending seminars, belonging to and serving on a marketing association committee, writing articles, and any other activities that contribute to professional growth and to the industry as a whole.

##### United Kingdom:

The Chartered Institute of Marketing (CIM) awards the "Chartered marketer" designation. To gain this designation, the professional marketer is required to complete 35 hours of CPD annually for a minimum of two consecutive years; submit the completed card together with the relevant supporting evidence to the CIM.

Once qualified, CM's are required to participate in an annual 35 hours of CPD. However, only 10% of all CM's will be requested each year to make the submission.

##### Canada:

Two Canadian professional organisations were considered when researching the international comparability of this qualification, namely the Canadian Marketing Association and the Canadian Institute of Marketing.

- The Canadian Institute of Marketing (CIM):

Eight classes of membership exist for this institute. The three that equate to the content of this qualification are:

- **Registered Professional Marketer (RPM):** Qualifying professionals are required to be a professional member of the institute, have successfully completed the writing of a case study that confirms professional competency, understand the Institute's code of professional ethics, pay their registration fee.
- **Professional Member (MCInst.M):** Professionals wishing to qualify need to have acquired 5 years experience in a marketing position, the last two at a senior management level, need to have one of the following qualifications: Diploma of an Institute Marketing, BA, MA or PhD with marketing specialisation, diploma or university post-graduate diploma in Management Studies or Business Administration with marketing specialisation, other educational or professional qualification with marketing input.
- **Associate Member (ACInst.M):** 3 years working experience in a marketing position the last at some level of management, qualifications include sales training managers, area, divisional or assistant managers of marketing and/or sales and similar marketing experience, also qualified are full time lecturers in marketing at a college or university with three years business or consulting experience; any one of the following qualifications: Certification from an institute of marketing, BA or MA in a business related subject with a marketing component, diploma or university post-graduate diploma in Business administration of Management Studies, other educational or professional qualifications approved by the CIM or one of its affiliated institutes overseas.
- **Canadian Marketing Association (CMA):**

This organisation does not have professional designations that are awarded to marketers. However the CMA does offer various training programmes that contribute toward professional development.

The Netherlands:

The NIMA is a marketing platform for professional marketers in the Netherlands and stimulates marketers to develop and to increase their professionalism in the field of marketing.

To this end, the NIMA recognises the Registered Marketers or RMs. Very little detail was available on the requirements for the awarding of this status, or the process to be followed to maintain the status.

Australia:

The Australian Marketing Institute certifies professional marketers as "Certified Practising Marketers" or CPM's. It is the recognition of both formal education and successful application of the marketers knowledge and skills. To qualify the marketer needs to have a minimum of 5 years practical marketing management experience, a recognised marketing qualification or 10 years marketing management experience or practice. They must also have extensive marketing knowledge and background experience. A minimum of 650 points needs to be accumulated across the three different areas of educational qualifications, practising experience and professional achievements.

The assessment criteria include:

- **Education qualifications:** Marketing degree or post graduate diploma in marketing.
- **Practicing experience:** Minimum of 5 years broad marketing experience.
- **Professional achievement:** Provision of a resume of their professional achievements must be submitted with their application.

Qualified CPM's need to maintain their status by undertaking a minimum of 100 CPD hours over a 3 year period.

#### **ARTICULATION OPTIONS**

The designation awarded through successful completion of this route to professional recognition is the highest form of professional recognition available at present in South Africa for marketers at NQF Level 7. The nature of this qualification does not allow access to higher forms of traditional learning such as a doctorate. Rather this designation instrument provides the future employer assurance of the professional competence of the marketing professional. It also enhances the credibility and credentials of professional marketers wanting to set themselves apart in the market place.

#### **MODERATION OPTIONS**

- Moderators responsible for the moderation of this qualification must be registered with the relevant ETQA and therefore meet their requirements for the registration of constituent moderators at NQF Level 7.
- The moderators must therefore have a minimum of 5 years experience at management level in marketing, an NQF Level 8 qualification in Marketing or equivalent and should be a practicing CM (SA).
- The moderators used to quality assure this process must subscribe to the relevant Code of Professional Conduct for Chartered Marketers.
- A professional marketer that is found guilty of misconduct under this code will not be able to perform the moderating function for the awarding of this qualification.

#### **CRITERIA FOR THE REGISTRATION OF ASSESSORS**

Assessors wanting to assess learners against this qualification must be registered as constituent assessors with the relevant ETQA and must be qualified and current Chartered Marketer (SA)'s.

#### **NOTES**

N/A

#### **UNIT STANDARDS**

*This qualification is not based on Unit Standards.*

#### **LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION**

**None**



**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

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

**Manufacturing and Assembly**

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.saga.org.za](http://www.saga.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 7 March 2008**. All correspondence should be marked **Standards Setting – Manufacturing and Assembly** and addressed to

The Director: Standards Setting and Development  
SAQA

Attention: Mr. D. Mphuthing

Postnet Suite 248

Private Bag X06

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**DR. S. BHIKHA**

**DIRECTOR: STANDARDS SETTING AND DEVELOPMENT**



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**QUALIFICATION:**  
**National Certificate: Tyre Retreading (Hot or Precure)**

SAQA QUAL ID		QUALIFICATION TITLE	
60389		National Certificate: Tyre Retreading (Hot or Precure)	
ORIGINATOR		PROVIDER	
SGB Manufacturing and Assembly Processes			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	120	Level 2	Regular-Unit Stds Based

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

**PURPOSE AND RATIONALE OF THE QUALIFICATION**

Purpose:

Individuals achieving this qualification will be able to carry out all aspects of the retreading process, within a particular retreading context, and to meet quality and quantity requirements.

Qualifying learners would have the skills, knowledge and values to:

- Inspect and select tyres suitable for retreading.
- Prepare the casing through removal of old rubber to achieve the required profile.
- Perform a range of repair techniques to restore the integrity of the casing.
- Apply new tread.
- Cure and perform final finishing and inspection of the retreaded tyre.

Qualifying learners will be able to contribute to the achievement of workplace objectives by maintaining quality standards and applying safe, efficient and productive work practices. They will have a basic understanding of the scientific and technological principles and concepts which underpin tyre retreading processes, and will be able to relate these to their own work activities. They will also understand how they should operate within the management, quality and safety systems which govern their workplace.

This qualification may be assessed in terms of either the Hot or the Precure retreading process and in the following tyre contexts:

- Passenger vehicles.
- Light or heavy commercial vehicles.
- Agricultural machines/equipment.
- Off-road machines/equipment (including but not limited to military applications, cranes, earthmoving equipment, mining equipment).

This qualification will contribute to social upliftment and development by allowing employees to gain recognition for their skills and knowledge through the recognition of prior learning. It also



provides a basis for further learning and career development, as described below under the heading 'Articulation possibilities'.

**Rationale:**

This qualification recognizes the skills, knowledge and values required by the tyre retreading industry. It covers the retreading of passenger, light and heavy commercial vehicle and agricultural and off-road machine tyres and includes both the hot and the precure retreading processes. Qualifying learners will be equipped with the full range of competencies required to work effectively in a retreading environment. At the same time the qualification is sufficiently flexible to accommodate the particular requirements of the various contexts within the retreading industry.

Within the work environment, tyre retreaders usually specialise in a type of tyre and in a particular aspect of the process. The broad base of skills, knowledge and values that this qualification provides will equip qualifying learners to work effectively within the retreading environment and will enable them to adapt to changes within their working environment. Qualifying learners would be competent to operate a range of machinery, to use a range of tools, materials and techniques and to apply a range of specialised handskills required to produce quality retreaded tyres.

The outcomes of this qualification combine practical and theoretical learning in the technical, inter-personal and business spheres, which will enable the qualifying learner to perform the operational aspects of the work, function within an organisational context and contribute to value-adding processes in the workplace.

Typical learners would be persons who are currently employed in a tyre retreading environment who have not received formal recognition for their skills and knowledge, and new entrants to the industry.

This qualification recognises skills, knowledge and values relevant to a workplace and requires workplace experience. It is suitable for learners who:

- Attend courses and then apply the knowledge gained to activities in the workplace (Portfolio to reflect formative assessment).
- Are already workers and have acquired the skills and knowledge without attending formal courses (RPL can be done through the summative assessment and portfolio of evidence).
- Participate in skills programmes and have the appropriate work experience.
- Are part of a learnership programme which integrates structured learning and work experience.
- Acquire their learning through any combination of the above.

Although this is a single qualification which specifically addresses the needs of the retreading industry, it also provides a sound basis for further learning and career path development, both within the retreading industry and in the broader tyre servicing and rubber manufacturing industries. Qualifying learners would be equipped for further career development in the retreading industry in such areas as training, management and stores. The understanding and skills related to tyres and tyre repair contained in the elective component would also provide a foundation for small business development in the tyre servicing field. Further technical development would be possible in the new tyre and industrial rubber manufacturing fields.

This qualification will benefit society and the economy as the skills and understanding gained by qualifying learners will improve work standards and productivity, and contribute to economic growth and the upliftment of employees within the tyre retreading environment. The emphasis in the qualification on product quality will enhance the safety and well-being of all road users. Qualifying learners will also develop an awareness of their role in conserving resources, in

behaving responsibly towards the environment in general, and in observing safety and legal requirements.

This qualification will help to achieve the objectives of the NQF as it will contribute to the full development of the learner and provide recognition for skills and knowledge achieved, thereby forming the basis for further advancement in the workplace. It will also allow access to additional learning and career paths within the broader rubber and tyre related industry.

### **RECOGNIZE PREVIOUS LEARNING?**

Y

### **LEARNING ASSUMED IN PLACE**

The following competencies are assumed for a learner embarking on this qualification:

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

### **Recognition of Prior Learning:**

This qualification may be obtained through a process of RPL. The learner should be thoroughly briefed prior to the assessment and support should be provided to assist the learner in the process of developing a portfolio. The guidelines for integrated assessment should be used to develop the RPL assessment process. As with integrated assessment, while this is primarily a workplace-based qualification, evidence from other areas of endeavour may be introduced if pertinent to any of the Exit Level Outcomes.

### **Access to the Qualification:**

There is open access to this qualification. A workplace is, however, a prerequisite to obtaining the relevant work experience and evidence required for the assessment of the Exit Level Outcomes.

### **QUALIFICATION RULES**

The total number of credits for this qualification is 120.

The learner is required to achieve the unit standards listed in the compulsory Fundamental component (39 Credits).

The learner is required to achieve the unit standards listed in the compulsory Core component (68 Credits).

The learner is required to achieve a minimum of 13 Elective credits. The elective unit standards should be chosen in accordance with the requirements of the selected context and the interests of the learner.

The core unit standards which address the retreading process are generic in order to accommodate both the Hot and the Precure processes.

### **EXIT LEVEL OUTCOMES**

1. Perform routine processes related to repairing and retreading worn and/or damaged tyres.
2. Recognise and respond to routine problems related to tyre repair and retreading processes.
3. Use and care for tools, accessories, equipment and materials.
4. Contribute to maintaining a safe and productive work environment.

### **Critical Cross-Field Outcomes:**

Critical Cross-Field Outcomes have been addressed by the Exit Level Outcomes as follows:

While performing tyre retreading activities, qualifying learners can:

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

- Identifying and taking appropriate action in response to routine problems related to tyre retreading processes, tool and material use, equipment operation and product quality.

Evident in all Exit Level Outcomes.

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

- Participating in co-operative work practices to achieve group objectives.

Evident in all Exit Level Outcomes.

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

- Carrying out activities in a systematic manner, in accordance with procedures and safe work practices.

Evident in all Exit Level Outcomes.

Collect, analyse, organise and critically evaluate information by:

- Collecting and processing information related to the tyre retreading process and determining an appropriate response.

Evident in all Exit Level Outcomes.

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

- Recording and reporting information related to the tyre retreading process.
- Interpreting instructions and communicating information.

Evident in all Exit Level Outcomes.

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

- Applying knowledge of underpinning principles to the use of tools and materials, operation of equipment and quality of the product.
- Working in accordance with health and safety regulations.

Evident in all Exit Level Outcomes.

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

- Applying knowledge of tyre types and characteristics and of repair and retreading processes to produce quality retreaded tyres.

Evident in all Exit Level Outcomes.

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

- Providing a structured environment within which the learner is able to develop a range of skills which will enhance the learner's contribution to society and the workplace.

Evident in all Exit Level Outcomes.

#### **ASSOCIATED ASSESSMENT CRITERIA**

Associated Assessment Criteria for Exit Level Outcome 1:

- Routine tasks are performed safely and effectively and in accordance with company standards.
- Tasks are performed so that product quality conforms to company requirements, manufacturers' specifications and relevant standards.
- Own activities are performed so as to contribute to maintaining overall workflow.
- Information related to the process is gathered, interpreted and responded to.
- Understanding is demonstrated of the purpose of quality, safety and productivity standards.

Associated Assessment Criteria for Exit Level Outcome 2:

- A variety of routine problems are identified and responded to in a manner appropriate to the nature of the problem.
- Where applicable, problems are accurately reported to relevant personnel in accordance with company procedures.
- The need to take appropriate action in response to routine problems is understood and explained focussing on the consequences of not taking appropriate action.

Associated Assessment Criteria for Exit Level Outcome 3:

- Tools are selected and used in accordance with the requirements of the task.
- Equipment is operated in accordance with standard operating procedures.
- Machines are set up in accordance with process requirements.

Associated Assessment Criteria for Exit Level Outcome 4:

- All required documentation is completed in accordance with company requirements.
- Instructions received are accurately interpreted and acted upon in accordance with requirements.
- The work station is maintained in a clean and organised manner.
- Group objectives are understood as well as the way own role contributes to their achievement.

Integrated Assessment:

The integrated assessment should be based on a summative assessment guide. The guide will specify how the assessor will assess different aspects of the performance and will include:

- Evaluating evidence in a portfolio of evidence, particularly projects which integrate various aspects of the qualification and which demonstrate the integration of all aspects of learning: fundamental and core; knowledge, skills and values; the development of the critical outcomes.
- Observing and listening to the learner at work, both in primary activities as well as in other interactions, or in relevant simulations.
- Asking questions and initiating short discussions to test understanding and to verify other evidence.

- Looking at records and reports.
- Formative and summative assessment of unit standards.

Assessment of competence for this qualification is based on experience acquired by the learner in the workplace, within the particular context. The assessment process should cover the explicit tasks required for the qualification as well as the learner's understanding of the relevant concepts and principles. The assessment process should also establish how the learning process has advanced the Critical Cross-Field Outcomes.

The learner may choose in which language he/she 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 presented if pertinent to any of the Exit Level Outcomes.

Assessors should also evaluate evidence that the learner is able to perform consistently over a period of time.

### **INTERNATIONAL COMPARABILITY**

Internationally, the tyre industry is characterised by large multinational companies which extend their influence throughout the world. The quality and scope of training is thus determined by international standards for safety and quality in addition to specific product or process issues and localised statutory requirements.

Research was carried out to identify the scope, methods and trends in training for tyre retreading in countries which have a retreading industry, such as Australia, Europe, the United Kingdom, India, Canada, the United States of America, South America and Africa. Nearly all of this training is either in-house or in the form of short courses offered by industry associations and product or material suppliers, with only a few countries, such as the United Kingdom and Australia, offering national qualifications.

#### **Australia:**

Australia has been selected for detailed comparison because it has a national qualification which covers tyre retreading, and conditions in the industry are similar to those in South Africa.

The 'Certificate II in Rubber' (PMB20201), is part of a series of qualifications for Plastics, Rubber and Cablemaking. It is generic in nature and flexible in order to meet the needs of a range of sectors within the rubber industry. This is achieved through a design based on units of competency which are clustered into 'competency groupings' covering three areas:

- Core: Competencies that are essential to working in any type of industry (compulsory).
- Production: Competencies that relate specifically to the equipment and processes of the particular industry.
- Support: Competencies that have a broader application, such as those relating to interpersonal relationships or the environment.

This allows a selection to be made for the particular industry sector, ie tyre retreading, while allowing flexibility for enterprises and individuals to select combinations relevant to their training needs. Learning may comprise a wide range of learning methods and programmes, provided that an integration of theoretical learning, practical application and workplace experience is achieved. Assessment is workplace based and includes the use of portfolios of evidence.

A typical selection of units of competency for an individual who operates machines and performs related duties for retreading tyres would be as follows:



**Core Units:**

- Shift materials safely by hand.
- Follow OH&S policies and procedures.
- Apply quality processes.
- Apply work procedures and practices.
- Complete workplace documents.

**Production Units:**

- Inspect tyres for retreading.
- Prepare tyre casings for retreading.
- Lay on retreads.
- Operate retread curing equipment.
- Undertake basic maintenance.
- Use materials and process knowledge to complete work operations.

**Support Units:**

- Work with others in a team.
- Collect waste for recycling or safe disposal.

The 'Employability Skills' defined for the 'Certificate 11' provide insight into the level of skills, knowledge and generic abilities required for this qualification. Some examples are as follows:

- Teamwork: Work as part of a team; identify own role and responsibility within a team.
- Problem solving: Recognise known faults that occur during the operation; identify and take action on causes of routine faults; identify non-routine process and quality problems and take appropriate action; respond to routine problems.
- Initiative and enterprise: Determine problems needing action; report problems outside area of responsibility.
- Planning and organising: Achieve production targets; recognise hazards and follow appropriate hazard control methods.
- Self-management: Identify work requirements; operate within appropriate time constraints and work standards; select and use appropriate equipment, materials, processes and procedures; identify task outcomes and work role.
- Technology: Carry out pre-operational checks on equipment; monitor equipment operation; use appropriate instruments, power tools and electrical systems; monitor and adjust machine functions.

**United States of America:**

The USA has been selected for comparison because it has a well-established retreading industry as well as a strong international presence in retreading technology and training through the relationships between American companies and their counterparts worldwide. In the USA, training for tyre retreading is provided through companies and associations. For example, the 'Tire Industry Association' and the 'Rubber Manufacturers Association' supply a variety of reference and learning materials for in-company use. They also certificate learning achieved for regulatory purposes. Training of new entrants is typically company-based and in-house, with individuals learning on-the-job under the guidance of experienced practitioners and with the support of learning resources and materials supplied by the parent company or industry association. Short courses for on-going professional development of industry members are also available.

**Conclusion:**

The South African qualification is very similar in content and scope to the retreading aspect of the Australian 'Certificate 11 in Rubber'. Both qualifications require an integration of theoretical learning and workplace experience, and they share a common approach to assessment. The Australian version does not specify fundamental learning of the type that the South African qualification does. The content and level of the associated 'Employability Skills' shows a close correspondence with the Critical Cross-Field Outcomes embedded in the South African qualification.

South African company-based training is similar in nature, content and scope to that provided in the United States of America.

South Africa's expertise in tyre retreading is recognised internationally, with South Africa being viewed as the market leader in some areas of technology. The quality of training within South Africa is similarly well-regarded. This expertise, both in technology and in training, is now being reflected in this qualification.

### **ARTICULATION OPTIONS**

This qualification has been designed and structured so that qualifying learners can move from one context within the tyre retreading field to another. They would have to acquire the specific knowledge related to the new context and adjust their skills and values accordingly.

Employers or institutions should be able to evaluate the outcomes of this qualification against the needs of their context and structure top-up learning appropriately. Holders of other qualifications may be evaluated against this qualification for the purpose of RPL and placement in learning programmes.

This qualification articulates horizontally with the following qualifications:

- ID 60390: National Certificate: Tyre and Tube Repairing and Fitting at NQF Level 2.
- ID 23257: National Certificate: Industrial Rubber Manufacturing at NQF Level 2.
- ID 48800: National Certificate: Quality Checking and Finishing of Manufactured Tyres at NQF Level 2.
- ID 48793: National Certificate: Tyre and Tyre Component Manufacturing at NQF Level 2.

In the non-technical area, horizontal articulation would be possible with the:

- ID 49280: National Certificate: Wholesale and Retail Distribution at NQF Level 2.

Vertical articulation would first require the individual to obtain relevant experience and/or learning at NQF Level 2, after which articulation would be possible with the:

- ID 23258: National Certificate: Industrial Rubber Manufacturing at NQF Level 3.
- ID 48794: National Certificate: Quality Checking of Tyres and Tyre Components at NQF Level 3.
- ID 48795: National Certificate: Tyre Assembly at NQF Level 3.
- ID 48798: National Certificate: Tyre and Tyre Component Manufacturing at NQF Level 3.

### **MODERATION OPTIONS**

• Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with the relevant 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.

- 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 ETQA, according to the ETQA's policies and guidelines for assessment and moderation.

- 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 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:

- An appropriate qualification with a minimum of 2 years' practical, relevant occupational experience in the field of tyre retreading. The subject matter expertise of the assessor can also be established by recognition of prior learning.
- Be active in the industry and be familiar with the particular aspect of tyre retreading and technology in which the learner has contextualised his/her skills and knowledge.
- To be declared competent in all the outcomes of the National Assessor Unit Standards as stipulated by South African Qualifications Authority.

### NOTES

N/A

### UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119463	Access and use information from texts	Level 2	5
Fundamental	9009	Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems	Level 2	3
Fundamental	12461	Communicate at work	Level 2	5
Fundamental	7480	Demonstrate understanding of rational and irrational numbers and number systems	Level 2	3
Fundamental	9008	Identify, describe, compare, classify, explore shape and motion in 2-and 3-dimensional shapes in different contexts	Level 2	3
Fundamental	119454	Maintain and adapt oral/signed communication	Level 2	5
Fundamental	12463	Understand and deal with HIV/AIDS	Level 2	3
Fundamental	7469	Use mathematics to investigate and monitor the financial aspects of personal and community life	Level 2	2
Fundamental	9007	Work with a range of patterns and functions and solve problems	Level 2	5
Fundamental	119456	Write/present for a defined context	Level 2	5
Core	255458	Apply tread rubber to casings	Level 2	8
Core	13222	Deal with safety, health and environmental emergencies in the workplace	Level 2	4
Core	12465	Develop a learning plan and a portfolio for assessment	Level 2	6
Core	12466	Explain the individual's role within business	Level 2	4
Core	13220	Keep the work area safe and productive	Level 2	8
Core	13258	Participate in work group activities	Level 2	4
Core	255459	Perform activities to cure retreaded and repaired tyres	Level 2	6
Core	110078	Plan, organise and manage oneself in the organisation	Level 2	2
Core	255455	Prepare casings for retreading	Level 2	16
Core	9879	Use and care for tools and equipment	Level 2	10
Elective	13202	Apply study and learning techniques	Level 2	3
Elective	120313	Investigate work opportunities in order to make a personal employment or work decision	Level 2	2
Elective	9268	Manage basic personal finance	Level 2	6
Elective	117898	Move, pack and maintain stock in a distribution centre/warehouse	Level 2	12



	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Elective	114902	Operate a computer in a Wholesale/Retail outlet	Level 2	6
Elective	242981	Operate defined purpose lift trucks	Level 2	4
Elective	242976	Operate overhead/gantry cranes	Level 2	5
Elective	12484	Perform basic fire fighting	Level 2	4
Elective	12483	Perform basic first aid	Level 2	4
Elective	12481	Sling loads	Level 2	4
Elective	9868	Demonstrate knowledge of, and rectify faults in motor vehicle tyres and wheels	Level 3	7
Elective	255454	Operate equipment for repairing and retreading off-road tyres	Level 3	4
Elective	242978	Operate truck-mounted cranes	Level 3	8

**LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION****None**



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

*Operate equipment for repairing and retreading off-road tyres*

SAQA US ID	UNIT STANDARD TITLE		
255454	Operate equipment for repairing and retreading off-road tyres		
ORIGINATOR	PROVIDER		
SGB Manufacturing and Assembly Processes			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

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

**SPECIFIC OUTCOME 1**

Determine equipment parameters and set up the equipment.

**SPECIFIC OUTCOME 2**

Operate buffing equipment, repair systems, tread winding and curing equipment.

**SPECIFIC OUTCOME 3**

Monitor equipment operations and adjust equipment settings as required.

**SPECIFIC OUTCOME 4**

Finalise the process.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	ID	QUALIFICATION TITLE	LEVEL
Elective	60389	National Certificate: Tyre Retreading (Hot or Precure)	Level 2



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

*Prepare casings for retreading*

SAQA US ID	UNIT STANDARD TITLE		
255455	Prepare casings for retreading		
ORIGINATOR		PROVIDER	
SGB Manufacturing and Assembly Processes			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Manufacturing and Assembly	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	16

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

**SPECIFIC OUTCOME 1**

Prepare workstation for work activity.

**SPECIFIC OUTCOME 2**

Carry out initial inspection of tyre.

**SPECIFIC OUTCOME 3**

Use buffing machine to remove oxidised rubber.

**SPECIFIC OUTCOME 4**

Identify and skive imperfections and damage.

**SPECIFIC OUTCOME 5**

Identify repair requirements and repair injuries to tyres.

**SPECIFIC OUTCOME 6**

Apply cement to buffed surfaces and skived areas.

**SPECIFIC OUTCOME 7**

Apply quality checks on completed casing and complete work operations.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	ID	QUALIFICATION TITLE	LEVEL
Core	60389	National Certificate: Tyre Retreading (Hot or Precure)	Level 2



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

*Apply tread rubber to casings*

SAQA US ID	UNIT STANDARD TITLE		
255458	Apply tread rubber to casings		
ORIGINATOR	PROVIDER		
SGB Manufacturing and Assembly Processes			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	8

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

**SPECIFIC OUTCOME 1**

Prepare workstation for work activity.

**SPECIFIC OUTCOME 2**

Prepare tread rubber.

**SPECIFIC OUTCOME 3**

Apply tread rubber to prepared casing.

**SPECIFIC OUTCOME 4**

Complete work operations.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	ID	QUALIFICATION TITLE	LEVEL
Core	60389	National Certificate: Tyre Retreading (Hot or Precure)	Level 2



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:***Perform activities to cure retreaded and repaired tyres*

SAQA US ID	UNIT STANDARD TITLE		
255459	Perform activities to cure retreaded and repaired tyres		
ORIGINATOR	PROVIDER		
SGB Manufacturing and Assembly Processes			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	6

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

**SPECIFIC OUTCOME 1**

Prepare for work activity.

**SPECIFIC OUTCOME 2**

Prepare equipment and tyre for curing process

**SPECIFIC OUTCOME 3**

Load prepared tyre and initiate the curing process.

**SPECIFIC OUTCOME 4**

Complete curing process and unload tyre.

**SPECIFIC OUTCOME 5**

Perform final inspection and trimming of tyre and complete work process.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	ID	QUALIFICATION TITLE	LEVEL
Core	60389	National Certificate: Tyre Retreading (Hot or Precure)	Level 2

No. 105

8 February 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

**Manufacturing and Assembly**

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](http://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 7 March 2008**. All correspondence should be marked **Standards Setting – Manufacturing and Assembly** 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](mailto:dmphuthing@saqa.org.za)

  
DR. S. BHIKHA  
DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**QUALIFICATION:****National Certificate: Tyre and Tube Repair and Fitting**

SAQA QUAL ID		QUALIFICATION TITLE	
60390		National Certificate: Tyre and Tube Repair and Fitting	
ORIGINATOR		PROVIDER	
SGB Manufacturing and Assembly Processes			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	120	Level 2	Regular-Unit Stds Based

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

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

Individuals achieving this qualification will be able to carry out all aspects of tyre replacement, maintenance, repair and fitting processes, within a particular tyre servicing context, and to meet safety, quality and productivity requirements. Qualifying learners will understand tyre construction types and characteristics and fault rectification and will have the skills, knowledge and values to:

- Inspect tyres and determine servicing/repair suitability and requirements.
- Use a range of tools, equipment, materials, products/components and techniques to perform the services required.
- Apply a range of specialised handskills.

The range of options within the elective component will enable the qualifying learner to acquire additional skills required for a particular context.

Qualifying learners will be able to contribute to the achievement of workplace objectives by maintaining quality standards and applying safe, efficient and productive work practices. They will have a basic understanding of the scientific and technological principles and concepts which underpin tyre replacement, maintenance, repair and fitting processes, and will be able to relate these to their own work activities. They will also understand how they should operate within the management, quality and safety systems which govern their workplace.

This qualification will contribute to social upliftment and development by allowing employees to gain recognition for their skills and knowledge through the recognition of prior learning. It provides a basis for further learning and career development.

**Rationale:**

This qualification recognizes the skills, knowledge and values required to work effectively within the tyre servicing industry. This field is characterized by the provision of tube and tyre

maintenance, repair and fitting services for a range of tyre contexts including passenger, light and heavy commercial vehicles, and industrial, agricultural and off-the-road (OTR) machine/equipment tyres. The qualification is designed to accommodate the particular requirements of each of these contexts.

This qualification provides a broad base of skills, knowledge and values related to tyre and tube repair and fitting as well as enabling the individual to achieve the more specialised skills and knowledge required in particular tyre contexts. It also recognises and accommodates the differing needs resulting from factors such as geographical situation, company type and size, and the tendency towards specialisation. This will enable qualifying learners to adapt to changes within their working environment, and will allow them a greater degree of flexibility in their employment and career path choices.

The outcomes of this qualification combine practical and theoretical learning in the technical, inter-personal and business spheres, which will enable the qualifying learner to perform the operational aspects of the work, function within an organisational context and contribute to value-adding processes in the workplace.

Typical learners would be persons who are currently employed in a tyre servicing environment who have not received formal recognition for their skills and knowledge, and new entrants to the industry.

This qualification recognises skills, knowledge and values relevant to a workplace and requires workplace experience. It is suitable for learners who:

- Attend courses and then apply the knowledge gained to activities in the workplace.
- Are already workers and have acquired the skills and knowledge without attending formal courses.
- Participate in skills programmes and have the appropriate work experience.
- Are part of a learnership programme which integrates structured learning and work experience.
- Acquire their learning through any combination of the above.

Although this is a single qualification which specifically addresses the needs of the tyre tube repair and fitting industry, it also provides a sound basis for further learning and career path development. The elective component offers the opportunity to develop competencies in such areas as management and stores. The skills and knowledge gained would also provide a foundation for small business development in the tyre servicing field.

This qualification will benefit society and the economy as the skills and understanding gained by qualifying learners will improve work standards and efficiency, and contribute to economic growth and the upliftment of employees within the tyre servicing environment. The emphasis in the qualification on quality of service and product will enhance the safety and well-being of all road users. Qualifying learners will also develop an awareness of their role in conserving resources, in behaving responsibly towards the environment in general, and in observing safety and legal requirements.

This qualification will help to achieve the objectives of the NQF as it will contribute to the full development of the learner and provide recognition for skills and knowledge achieved, thereby forming the basis for further advancement in the workplace. It will also allow access to additional learning and career paths within the broader tyre servicing field.

#### **RECOGNIZE PREVIOUS LEARNING?**

Y

#### **LEARNING ASSUMED IN PLACE**



The following competencies are assumed for a learner embarking on this qualification:

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

Recognition of Prior Learning:

This qualification may be obtained through a process of RPL. The learner should be thoroughly briefed prior to the assessment and support should be provided to assist the learner in the process of developing a portfolio. The guidelines for integrated assessment should be used to develop the RPL assessment process. As with integrated assessment, while this is primarily a workplace-based qualification, evidence from other areas of endeavour may be introduced if pertinent to any of the Exit Level Outcomes.

Access to the Qualification:

There is open access to this qualification. A workplace is, however, a prerequisite to obtaining the relevant work experience and evidence required for the assessment of the Exit Level Outcomes.

#### **QUALIFICATION RULES**

The total number of credits for this qualification is 120.

The learner is required to achieve the unit standards listed in the compulsory Fundamental component (39 Credits).

The learner is required to achieve the unit standards listed in the compulsory Core component (59 Credits).

The learner is required to achieve a minimum of 22 Elective credits. The elective unit standards should be chosen in accordance with the requirements of the selected context and the interests of the learner.

The tyre-related unit standards in the Core category reflect mainly the passenger vehicle tyre context. The tyre-related unit standards in the Elective category enable specialisation in the following contexts:

- Light or heavy commercial vehicle tyres.
- Industrial machine/equipment tyres.
- Agricultural machinery/equipment tyres.
- Off-the-road (OTR) machine/equipment tyres (including but not limited to military applications, cranes, earthmoving equipment, mining equipment).

For the agricultural tyre context, the unit standard 'Repair and replace light and heavy commercial vehicle tyres (NLRD ID 9864)' should be contextualised for assessment purposes.

#### **EXIT LEVEL OUTCOMES**

1. Perform routine tasks related to removing, repairing, fitting and maintaining tubes and tyres.
2. Recognise common faults in wheels, tyres and tubes and take appropriate corrective action.
3. Collect and process information and communicate issues.
4. Contribute to maintaining a safe and productive work environment.

Critical Cross-field Outcomes:

Level Outcome:

While performing tyre servicing activities, qualifying learners can:

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

- Identifying and taking appropriate action in response to routine problems related to tyre replacement, maintenance, repair and fitting activities.
- Evident in all Exit Level Outcomes.

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

- Participating in co-operative work practices to achieve group objectives.
- Evident in all Exit Level Outcomes.

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

- Carrying out activities in a systematic manner, in accordance with procedures and safe work practices.
- Evident in all Exit Level Outcomes.

Collect, analyse, organise and critically evaluate information by:

- Collecting and processing information related to tyre replacement, maintenance, repair and fitting activities and determining an appropriate response.
- Evident in all Exit Level Outcomes.

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

- Recording and reporting information related to tyre servicing activities.
- Interpreting instructions and communicating information.
- Evident in all Exit Level Outcomes.

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

- Applying knowledge of underpinning principles to tyre condition and the use of tools and materials.
- Working in accordance with health and safety regulations.
- Evident in all Exit Level Outcomes.

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

- Applying knowledge of tyre types and characteristics and of maintenance, repair and fitting activities to provide a quality service.
- Evident in all Exit Level Outcomes.

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

- Providing a structured environment within which the learner is able to develop a range of skills which will enhance the learner's contribution to society and the workplace.
- Evident in all Exit Level Outcomes.

**ASSOCIATED ASSESSMENT CRITERIA**

Associated Assessment Criteria for Exit Level Outcome 1:

- 1.1 Routine tasks are performed safely and effectively and in accordance with company standards.
- 1.2 Work is performed in accordance with company requirements, manufacturers' specifications and relevant standards.
- 1.3 Tools, equipment, accessories and materials are selected and used in accordance with requirements to remove, fit and maintain tyres and to repair damage to tyres and tubes.
- 1.4 Information related to the process is gathered, interpreted and responded to in accordance with requirements.
- 1.5 The implications of not performing routine tasks as required according to safety and company specifications are explained using practical examples.

Associated Assessment Criteria for Exit Level Outcome 2:

- 2.1 Common faults in wheels, tyres and tubes are identified.
- 2.2 A decision is taken as to whether faults are identified as being within own scope of action/responsibility, or require referral.
- 2.3 Required action is taken to rectify faults within own scope of action/responsibility.
- 2.4 Referred faults are accurately reported to relevant personnel in accordance with company requirements.
- 2.5 The implications of not taking appropriate action in response to common faults and routine problems is explained with examples.

Associated Assessment Criteria for Exit Level Outcome 3:

- 3.1 Relevant information is collected and interpreted.
- 3.2 Information gathered is reported according to company standards.
- 3.3 Requests for information are responded to accurately and courteously.
- 3.4 The importance of communication and documentation in the work environment is understood and explained.

Associated Assessment Criteria for Exit Level Outcome 4:

- 4.1 All required documentation is completed in accordance with company requirements.
- 4.2 Instructions received are accurately interpreted and acted upon in accordance with company requirements.
- 4.3 The work station is maintained in a clean and organised manner in accordance with company standards.
- 4.4 Group objectives and how own role contributes to the process or achievement is understood.

Integrated Assessment:

The integrated assessment should be based on a summative assessment guide. The guide will specify how the assessor will assess different aspects of the performance and will include:

- Evaluating evidence in a portfolio of evidence, particularly projects which integrate various aspects of the qualification and which demonstrate the integration of all aspects of learning: fundamental and core; knowledge, skills and values; the development of the critical outcomes.

- Observing and listening to the learner at work, both in primary activities as well as in other interactions, or in relevant simulations.
- Asking questions and initiating short discussions to test understanding and to verify other evidence.
- Looking at records and reports.
- Formative and summative assessment of unit standards.

Assessment of competence for this qualification is based on experience acquired by the learner in the workplace, within the particular context. The assessment process should cover the explicit tasks required for the qualification as well as the learner's understanding of the relevant concepts and principles. The assessment process should also establish how the learning process has advanced the Critical Cross-field Outcomes.

The learner may choose in which language he/she 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 presented if pertinent to any of the Exit Level Outcomes. Assessors should also evaluate evidence that the learner is able to perform consistently over a period of time.

#### **INTERNATIONAL COMPARABILITY**

Internationally, the tyre industry is characterised by large multinational companies which extend their influence throughout the world. The quality and scope of training is determined by international standards for safety and quality in addition to specific product or process issues and localised statutory requirements.

Research was carried out to identify the scope, methods and trends in training for the tyre and tube repair and fitting industry. Most of this training is in-house, company-or franchise-based, or in the form of short courses offered by industry associations and product or equipment suppliers. A few countries, such as the United Kingdom, New Zealand and Australia, offer national qualifications.

#### **Australia:**

Australia has been selected for detailed comparison because it has national qualifications for tyre and tube repair and fitting, and because road and industry conditions are similar to those in South Africa.

The Certificate II in Automotive: Mechanical: Tyre Fitting & Repair forms part of a series of qualifications for the automotive industry. It is generic in nature and flexible in order to meet the needs of the various contexts within the tyre industry, which range from light passenger tyres to heavy commercial vehicle and off-the-road (OTR) machine/equipment tyres. This is achieved through a design based on units of competency which are clustered into 'competency groupings' covering three areas:

- Common Core: competencies that are essential to working in any type of industry (compulsory).
- Compulsory Stream: competencies that relate specifically to the equipment and processes of the particular industry.
- Elective: competencies that have a broader or supporting application.

This allows a selection to be made for the particular industry context, with sufficient flexibility to select combinations relevant to individual or enterprise training needs. Learning may comprise a variety of learning methods and programmes, provided that an integration of theoretical learning, practical application and workplace experience is achieved. The learning programme will

typically extend over a period of 12 months. Assessment is workplace based and includes the use of portfolios of evidence.

A selection of units of competency for repairing and fitting tubes and tyres would typically be as follows:

Compulsory Common Core:

- Follow workplace occupational health and safety procedures.
- Use and maintain workplace tools and equipment.
- Contribute to workplace communication.
- Establish relations with customers.

Compulsory Stream:

- Balance tyres/wheels.
- Remove, fit and adjust wheel(s).
- Select tyres and rims for specific applications.
- Remove, repair and fit tyres and tubes.
- Inspect vehicle systems/components and determine preferred repair action.

Electives (3 to be selected from the following typical list):

- Carry out stock control procedures.
- Receive and store stock.
- Apply legal requirements relating to product sales.
- Dispose of waste and maintain a tidy work area.
- Identify, clarify and resolve problems.
- Work with colleagues and customers.
- Maintain industrial machinery in a soil free condition.
- Repair rims.

This selection would be relevant for the heavy (AUR21499) or light (AUR21599) tyre contexts. There is also scope to meet the training requirements of the industrial, agricultural and off-the-road (OTR) tyre contexts.

United Kingdom:

National Vocational Qualifications in Vehicle Fitting Operations (Levels 1, 2 and 3) which cover tyre and tube repair and fitting and which provide evidence of competence in the workplace are available. Learning is provided through traineeships or apprenticeships. These typically consist of a few weeks' induction period followed by one to two years' on-the-job training, together with a theoretical component at a company or college training centre. Training combines theoretical, practical and workplace learning. Assessment is workplace-based. In some cases tyre and tube repair and fitting is combined in a single qualification with other competencies such as exhaust or windscreen fitting, or battery servicing and fitting. Even though national qualifications are available, in practice much of the training is company-based, particularly in more specialised contexts such as that of off-the-road (OTR) tyres.

Conclusion:

The South African qualification is very similar in content and scope to the Australian Certificate II in Automotive: Mechanical: Tyre Fitting & Repair, with the difference that the South African qualification accommodates the various tyre contexts in one qualification. Both qualifications require an integration of theoretical learning and workplace experience, and they share a common approach to assessment. The Australian qualifications do not specify fundamental

learning of the type that the South African qualification does. The scope and level of the 'underpinning skills' listed in the associated units of competency show a close correspondence with the Critical Crossfield Outcomes embedded in the South African qualification.

South African company-based training is similar in nature, content and scope to that provided internationally.

South Africa's expertise in tyre repair is recognised internationally, with South Africa being viewed as the market leader in some areas of technology. The quality of South African training is similarly well-regarded. This expertise, both in technology and in training, is reflected in this qualification.

### **ARTICULATION OPTIONS**

This qualification has been designed and structured so that qualifying learners can move from one context within the tyre servicing field to another. They would have to acquire the specific knowledge related to the new context and adjust their skills and values accordingly.

Further or additional learning and career path development would be possible in the following areas:

- Training.
- Stores.
- Sales.
- Supervisory/management.
- Small business/entrepreneurship.

Horizontal articulation:

This qualification articulates horizontally with the following qualifications:

- ID 49689: National Certificate: Automotive Repair and Maintenance, NQF Level 2.
- ID 60389: National Certificate: Tyre Retreading, NQF Level 2.
- ID 49280: National Certificate: Wholesale and Retail Distribution, NQF Level 2.
- ID 49648: National Certificate: New Venture Creation (SMME), NQF Level 2.

Vertical articulation:

- ID 48764: National Certificate: Wholesale and Retail Sales Practice, NQF Level 3.
- ID 23654: National Certificate: Management, NQF Level 3.

### **MODERATION OPTIONS**

- Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with the relevant 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.
- 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 ETQA, according to the ETQA's policies and guidelines for assessment and moderation.
- 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 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:

- An appropriate qualification with a minimum of 2 years' practical, relevant occupational experience in the field of tyre servicing and repair.
- Be active in the industry and be familiar with the particular aspect of tyre service and technology in which the learner has contextualised his/her skills and knowledge.
- To be declared competent in all the outcomes of the National Assessor Unit Standards as stipulated by South African Qualifications Authority.

### NOTES

N/A

### UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119463	Access and use information from texts	Level 2	5
Fundamental	9009	Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems	Level 2	3
Fundamental	12461	Communicate at work	Level 2	5
Fundamental	7480	Demonstrate understanding of rational and irrational numbers and number systems	Level 2	3
Fundamental	9008	Identify, describe, compare, classify, explore shape and motion in 2-and 3-dimensional shapes in different contexts	Level 2	3
Fundamental	119454	Maintain and adapt oral/signed communication	Level 2	5
Fundamental	12463	Understand and deal with HIV/AIDS	Level 2	3
Fundamental	7469	Use mathematics to investigate and monitor the financial aspects of personal and community life	Level 2	2
Fundamental	9007	Work with a range of patterns and functions and solve problems	Level 2	5
Fundamental	119456	Write/present for a defined context	Level 2	5
Core	13222	Deal with safety, health and environmental emergencies in the workplace	Level 2	4
Core	12465	Develop a learning plan and a portfolio for assessment	Level 2	6
Core	12466	Explain the individual's role within business	Level 2	4
Core	13220	Keep the work area safe and productive	Level 2	8
Core	13258	Participate in work group activities	Level 2	4
Core	110078	Plan, organise and manage oneself in the organisation	Level 2	2
Core	9867	Remove and replace wheels and tyres, and balance wheels	Level 2	2
Core	12213	Select and use automobile lifting equipment	Level 2	3
Core	9879	Use and care for tools and equipment	Level 2	10
Core	9868	Demonstrate knowledge of, and rectify faults in motor vehicle tyres and wheels	Level 3	7
Core	9869	Repair punctures and fit tyres to wheels	Level 3	9
Elective	13202	Apply study and learning techniques	Level 2	3
Elective	9874	Direct, receive and communicate with customers on the forecourt	Level 2	4
Elective	120313	Investigate work opportunities in order to make a personal employment or work decision	Level 2	2
Elective	9268	Manage basic personal finance	Level 2	6
Elective	117898	Move, pack and maintain stock in a distribution centre/warehouse	Level 2	12
Elective	114902	Operate a computer in a Wholesale/Retail outlet	Level 2	6
Elective	242981	Operate defined purpose lift trucks	Level 2	4
Elective	12484	Perform basic fire fighting	Level 2	4
Elective	12483	Perform basic first aid	Level 2	4
Elective	255456	Remove and replace off-road wheels and tyres	Level 2	8
Elective	12481	Sling loads	Level 2	4



	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Elective	15100	Check and adjust steering geometry	Level 3	4
Elective	242978	Operate truck-mounted cranes	Level 3	8
Elective	9865	Remove and replace wheels and tyres from industrial machines and equipment	Level 3	10
Elective	9864	Repair and replace light and heavy commercial vehicle tyres	Level 3	17
Elective	255457	Repair off-road tyres	Level 3	8

**LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION****None**



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Remove and replace off-road wheels and tyres***

<b>SAQA US ID</b>		<b>UNIT STANDARD TITLE</b>	
255456		Remove and replace off-road wheels and tyres	
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Manufacturing and Assembly Processes			
<b>FIELD</b>		<b>SUBFIELD</b>	
6 - Manufacturing, Engineering and Technology		Manufacturing and Assembly	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 2	8

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

**SPECIFIC OUTCOME 1**

Remove off-road tyre from wheel.

**SPECIFIC OUTCOME 2**

Refit off-road tyre to wheel.

**SPECIFIC OUTCOME 3**

Refit wheel to off-road machine/equipment.

**SPECIFIC OUTCOME 4**

Complete work process.

**SPECIFIC OUTCOME 5**

Remove wheel from off-road machine/equipment.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	<b>ID</b>	<b>QUALIFICATION TITLE</b>	<b>LEVEL</b>
Elective	60390	National Certificate: Tyre and Tube Repair and Fitting	Level 2



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

*Repair off-road tyres*

SAQA US ID	UNIT STANDARD TITLE		
255457	Repair off-road tyres		
ORIGINATOR	PROVIDER		
SGB Manufacturing and Assembly Processes			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	8

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

**SPECIFIC OUTCOME 1**

Inspect tyre and indicate internal and external injuries/damage.

**SPECIFIC OUTCOME 2**

Determine repair requirements.

**SPECIFIC OUTCOME 3**

Carry out repair.

**SPECIFIC OUTCOME 4**

Complete the work process.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	ID	QUALIFICATION TITLE	LEVEL
Elective	60390	National Certificate: Tyre and Tube Repair and Fitting	Level 2

No. 106

8 February 2008

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

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

**Gender Equality and Women's Empowerment**

registered by Organising Field 07 – Human and Social Studies, publishes the following Unit Standards for public comment.

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

Comment on the Unit Standards should reach SAQA at the address below and **no later than 7 March 2008**. All correspondence should be marked **Standards Setting – Gender Equality and Women's Empowerment** 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: [dmpthuthing@saqa.org.za](mailto:dmpthuthing@saqa.org.za)

DR. S. BHIKHA

DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Facilitate access to gender related services and structures***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
254404	Facilitate access to gender related services and structures		
<b>ORIGINATOR</b>	<b>PROVIDER</b>		
SGB Gender Equality and Women's Empowerment			
<b>FIELD</b>	<b>SUBFIELD</b>		
7 - Human and Social Studies	General Social Science		
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
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**

Explaining the role and function of gender services and structures.

**SPECIFIC OUTCOME 2**

Illustrate ways to promote awareness of how clients can access and use gender services and structures.

**SPECIFIC OUTCOME 3**

Apply mechanisms to improve access to gender services and structures.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

***Assess, monitor and evaluate organisational compliance with policies on gender equality and women's empowerment***

<b>SAQA US ID</b>		<b>UNIT STANDARD TITLE</b>	
254417		Assess, monitor and evaluate organisational compliance with policies on gender equality and women's empowerment	
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Gender Equality and Women`s Empowerment			
<b>FIELD</b>		<b>SUBFIELD</b>	
7 - Human and Social Studies		General Social Science	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 6	10

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

**SPECIFIC OUTCOME 1**

Analyse an organisation's systems and operations to determine compliance with the gender policy framework.

**SPECIFIC OUTCOME 2**

Develop a strategy to assess an organisation's compliance with the gender policy framework.

**SPECIFIC OUTCOME 3**

Plan and prepare processes and resources to monitor and evaluate an organisation in line with the gender policy framework.

**SPECIFIC OUTCOME 4**

Monitor and evaluate compliance and performance of an organisation regarding gender equality and women's empowerment.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

**None**



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Design and develop policy in respect of gender equality and women empowerment***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
254418	Design and develop policy in respect of gender equality and women empowerment		
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Gender Equality and Women's Empowerment			
<b>FIELD</b>		<b>SUBFIELD</b>	
7 - Human and Social Studies		General Social Science	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 6	10

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

**SPECIFIC OUTCOME 1**

Apply knowledge and understanding of the theories, principles and stages of policy formulation for gender equality and women's empowerment.

**SPECIFIC OUTCOME 2**

Analyse the current legislation that impacts on gender equality and women's empowerment for the purpose of designing policy.

**SPECIFIC OUTCOME 3**

Design an instrument to guide organisational policy development on gender equality and women's empowerment.

**SPECIFIC OUTCOME 4**

Develop an organisational policy on gender equality and women's empowerment.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None





## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:****Analyse the way in which organisational systems perpetuate gender inequality**

SAQA US ID	UNIT STANDARD TITLE		
254435	Analyse the way in which organisational systems perpetuate gender inequality		
ORIGINATOR	PROVIDER		
SGB Gender Equality and Women's Empowerment			
FIELD	SUBFIELD		
7 - Human and Social Studies	General Social Science		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 6	10

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

**SPECIFIC OUTCOME 1**

Examine the role of patriarchy, unequal power relations, organisational culture and gender responsiveness in an organisation.

**SPECIFIC OUTCOME 2**

Conduct an organisation system analysis to determine areas of gender inequality.

**SPECIFIC OUTCOME 3**

Apply audit information to enable organisational systems to promote gender transformation.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

***Design and implement a communication strategy that supports gender equality and women's empowerment***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
254458	Design and implement a communication strategy that supports gender equality and women's empowerment		
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Gender Equality and Women's Empowerment			
<b>FIELD</b>		<b>SUBFIELD</b>	
7 - Human and Social Studies		General Social Science	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 6	8

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

**SPECIFIC OUTCOME 1**

Examine approaches for communicating in a gender sensitive manner.

**SPECIFIC OUTCOME 2**

Design strategies to communicate and promote gender equality and women's empowerment in an organisation.

**SPECIFIC OUTCOME 3**

Implement and manage a communication strategy that promotes gender equality and women's empowerment in an organisation.

**SPECIFIC OUTCOME 4**

Evaluate the impact of the communication strategy on internal and external clients in terms of improving gender awareness and sensitivity.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None

No. 107

8 February 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

**Water Sector**

registered by Organising Field 12, Physical Planning and Construction, publishes the following Qualification and Unit Standards for public comment.

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

Comment on the Qualification and Unit Standards should reach SAQA at the address below and **no later 7 March 2008**. All correspondence should be marked **Standards Setting – Water Sector** 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  
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**DR S BHIKHA**  
**DIRECTOR: STANDARDS SETTING AND DEVELOPMENT**



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**QUALIFICATION:**  
**National Certificate: Water and Wastewater Process Control**

SAQA QUAL ID	QUALIFICATION TITLE		
60190	National Certificate: Water and Wastewater Process Control		
ORIGINATOR		PROVIDER	
SGB Water Sector			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	12 - Physical Planning and Construction	Civil Engineering Construction	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	138	Level 3	Regular-Unit Stds Based

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

**PURPOSE AND RATIONALE OF THE QUALIFICATION**

**Purpose:**

This qualification will prepare learners to function independently on water or wastewater treatment works. A person acquiring this qualification will be able to operate and control specific processes at a water or wastewater treatment works within the context of legislation and work policies and procedures. This qualification is aimed at people who are expected to make decisions relating to the amount of chemicals dosed, volumes of water treated and pumped. The qualification will provide learners with knowledge and skills to be able to lead a small team or group on a plant as well as to conduct administrative tasks in order to meet organizational objectives.

This qualification forms the foundation for progression and to higher-level qualifications within the water sector as fundamental learning such as mathematical literacy, communication, computer skills and first line supervisory skills are included in the qualification. This qualification focuses on the full development of the learner and further mobility and transportability within the water sector. This qualification will provide learners with key competencies in interpersonal communications skills, measurement skills and quality management skills at a lower level including required at this level.

This qualification will expand the skills base of the qualifying learner and make the person more effective in his/her tasks and more employable and will open up job opportunities in related fields. This qualification will enhance productivity within the water sector and contribute towards the ecological sustainability and improvement of the water environment.

**Rationale:**

This qualification reflects the workplace-based needs of water and wastewater treatment process for the advancement of the operators in terms of skills and knowledge within the sector. Currently there is no registered qualification on the NQF that bridges the knowledge and skills gap required to fulfill supervisory role on a plant at a lower level between Levels 2 and 4 registered qualifications.

This qualification provides the learner with a career path and progression from water and wastewater process operations to water and wastewater process control within the water sector. The National Certificate in Water and Wastewater Process Operations (Level 2) equips the candidate to operate certain sections on water or wastewater treatment works, whereas the National Certificate in Water and Wastewater Process Control pegged at NQF Level 3 will prepare the candidate to operate more independently on the plant.

The qualification also provides the flexibility to pursue different careers in fields related to the water sector. The level of flexibility within the range of electives will allow the individual to follow a career in a range of water or wastewater operations including careers other related sectors such as pollution control, wet industries, electricity generation, environmental qualifications.

This qualification will enhance productivity within the water sector, improve the health of communities and contribute towards the ecological sustainability and improvement of the water environment.

### **RECOGNIZE PREVIOUS LEARNING?**

N

### **LEARNING ASSUMED IN PLACE**

It is assumed that learners are competent in:

- Communication at NQF Level 2.
- Mathematical literacy at NQF Level 2.
- Computer literacy at NQF Level 2.

It also assumed that learners are competent in the following unit standards

- ID 246450: Demonstrate knowledge of water treatment process at NQF Level 2.
- ID 246460: Demonstrate knowledge of wastewater treatment process at NQF Level 2.
- ID 246459: Apply personal safety practices in the workplace at NQF Level 2.

### **Access to Qualification**

Access to this qualification is open bearing in mind learning assumed to be in place.

### **QUALIFICATION RULES**

Fundamental:

- 36 credits should be achieved in fundamental.

Core:

- 87 credits should be achieved in core component of this qualification.

Elective:

Learners must choose electives unit standards with a minimum total value of 15 credits in the elective component.

It is further recommended and mandatory that learners who specialise in wastewater competencies should choose the Activated Sludge Unit Standard as an elective.

### **EXIT LEVEL OUTCOMES**

1. Compare water and wastewater works performance with legislative and workplace requirements at an operational level.

- Range: Works performance includes but is not limited to the quality and quantity of effluent, quality and quantity of sludge.
- 2. Interpret and apply legislation relevant to the operation of water and wastewater treatment works.
- 3. Apply communication and leadership skills at the working environment.
- 4. Demonstrate of administration required on a wastewater treatment works.
- 5. Use the System International (SI) and appropriate formulae to perform calculations needed to operate water or wastewater treatment plant.

**Critical Cross-Field Outcomes:**

- Identify and solve problems relating to water flow using measurements and calculations.
- Work effectively with others as a leader and member of a team on a daily basis to effectively produce potable and quality water by applying procedures and complying with organisational standards.
- Organise and manage oneself and one's activities responsibly by identifying resources required to operate and control the water and wastewater plant.
- Communicate effectively using appropriate verbal and nonverbal skills to promote good working relationships in the working environment.
- Demonstrate an understanding of the world, as a set of related systems by recognizing the inter-relationships between role-payers and customers in the water and wastewater treatment works.
- Use science and technology to produce quality water and wastewater treatment on a plant.

**ASSOCIATED ASSESSMENT CRITERIA**

**Associated Assessment Criteria for Exit Level 1:**

- 1.1 Results of plant tests are compared with regulated or organizational standards.
- 1.2 The production of water or the treatment of the effluent meets the requirements of the community in terms of quality and quantity.
- 1.3 The plant is operated in accordance with environmental requirements in order to meet national and organisational policies relating to nuisance conditions.
- Range: Nuisance conditions refer to but are not limited to odours, flies and noise.

**Associated Assessment Criteria for Exit Level 2:**

- 2.1 Personal safety practices are identified and applied in accordance with standard operating procedures and safety requirements in a water and wastewater environment.
- 2.2 Personal health, hygiene and presentation in a wastewater environment is maintained according to the Occupational Health and Safety Act.
- 2.3 Water and wastewater treatment is applied in terms of the National Water Act and the Water Services Act.

**Associated Assessment Criteria for Exit Level 3:**

- 3.1 Verbal and non-verbal skills are applied to promote interaction and teamwork on a water and wastewater works.
- 3.2 Technology applicable in the water and wastewater treatment works is used to achieve communicative objectives in the workplace.
- 3.3 Conflict management techniques are applied to handle conflict within own scope of responsibility on a wastewater treatment works.
- 3.4 Leadership skills are applied to lead and promote teamwork.

Associated Assessment Criteria for Exit Level 4:

- 4.1 The functions of administration are identified and explained in terms of water services provision.
- 4.2 Administration tasks and activities are identified and described in accordance with organizational policies and procedures to achieve administrative objectives in the water and wastewater treatment plant.
- 4.3 Own work and workload is organized in accordance with organisational works policies and procedures.

Associated Assessment Criteria for Exit Level 5:

- 5.1 Measurements are taken and used to adjust operating parameters on a water and wastewater treatment plant.
  - Range: Measurements include but are not limited to volumes, concentration, flow rates, density, retention time and chemical dosage.
- 5.2 Production quantities are compared with targets to determine the performance of the treatment plant.

Associated Unit Standard:

- ID 254123: Demonstrate knowledge of SI measurement units used in water and wastewater treatment.

Integrated Assessment:

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

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

While the generic component (literacy, communication and life skills) of this qualification at NQF Level 3 can be assessed through occupational contexts and activities relating to water and wastewater treatment, care must be taken in both the learning programme and the assessment to ensure that these foundational skills are truly portable. The primary aim of this qualification is to ensure that learners have a sound base of general education to prepare them for further learning, whatever career path they may choose. Learners must be able to transfer generic skills such as language, computation and learning skills etc across a number of different contexts, and apply them within a number of learning areas.

A broad range of task-orientated and theoretical assessment tools may be used, with the distinction between practical knowledge and disciplinary knowledge maintained so that each takes its rightful place. Unit standards in the qualification must be used to assess specific and critical cross-field outcomes. During integrated assessments the assessor should make use of formative and summative assessment methods and should assess combinations of practical, applied, foundational and reflexive competencies.



**INTERNATIONAL COMPARABILITY**

This qualification and component unit standards have been compared with similar qualifications including short courses and/or training programmes from various countries which include, Australia, New Zealand, France and United Kingdom. Other countries searched include Scotland, United States of America and Canada. The countries were chosen specifically on their bases of their approach in water and wastewater treatment processes or control processes to produce clean water that is essential for good health and safe to drink, treat wastewater both from domestic and industrial so that it is safe to return to the environment. Best practices have been considered in relation to education and training in water and wastewater related qualifications/courses in the study. Another reason for the choice of the countries was to find out as close as possible, countries whose water and wastewater process control systems including climate conditions are similar to the South African context. New Zealand was the mostly preferred country as their water and wastewater treatment processes are very similar to South Africa. Given the fact that the qualification is more focused on water and wastewater plant operators at NQF Level 3, qualifications and the relevant awarding bodies accredited to provide a wide range of academic and vocational qualifications including short courses in this field were searched.

New Zealand Qualifications Authority (NZQA):

National Certificate in Wastewater Treatment (Site Operator), Level 3:

This qualification is designed to recognise the core knowledge and skills associated with treatment process management systems, legislation relating to water and wastewater treatment and other competencies relating specifically to wastewater treatment which are similar to the our qualification in that such skills are packaged for wastewater plant operator in the wastewater cluster. The qualification has a water component that is treated as generic unit standards that form part of the qualification.

It must be mentioned however, that some of the competencies in both qualification may be expressed either in a form of unit standard or specific outcomes which shows a slight difference between the two qualification. In addition, it must be born in mind that the South African qualification recognises the commonalities of competencies to be addressed for both water and wastewater plant operations hence these competencies have been reflected in the core component of the qualification since it has been merged into one qualification. New Zealand Water and Environment Training Academy (NZWETA) which is a joint venture between the New Zealand Water and Wastes Association and Opus International Consultants, provides education and training for all sectors of the broader water and wastes industry also offer this qualification. The New Zealand Water and Environment Training Academy's courses have been specially developed to meet the needs of the broader water and wastes industry. The qualifications offered by NZWETA are approved by the New Zealand Qualifications Authority and are recognised by the industry both nationally and internationally. The following unit standards compare favourably with the NQF Level 3 South African qualification in terms of the elements of each unit standard:

- Carry out safe practices when working in water and wastewater treatment plants.
- Operate and monitor a wastewater treatment plant.
- Undertake sampling and testing procedures for wastewater treatment.
- Demonstrate knowledge of process control and monitoring in water and wastewater treatment plants.
- Demonstrate knowledge of oxidation pond and aerated lagoon processes in wastewater treatment.
- Demonstrate knowledge of activated sludge processes in wastewater treatment.
- Demonstrate knowledge of primary processes in wastewater treatment.
- Demonstrate knowledge o preliminary processes in wastewater treatment.

- Operate and monitor a wastewater treatment plant.
- Demonstrate knowledge of sludge digestion processes in wastewater treatment.
- Demonstrate knowledge of pumping systems in wastewater treatment.

The water component - Generic domain consist of the following unit standards that compare well with the South African qualification:

- Carry out safe practices when working in water and wastewater treatment plants.
- Demonstrate knowledge of process control and monitoring in water and wastewater treatment plants.
- Demonstrate knowledge of legislation and agencies relating to water and wastewater treatment.

Other unit standards that are compare with the qualification but are treated as electives are:

- Provide First Aid.
- Take measurements and use them in calculations to solve measurement problems.

NZWETA provides the following qualification that compares well with the South African qualifications:

- National Certificate in Water Treatment (Site Operator).

This qualification covers specialist water treatment skills that compare favourably with this qualification.

The topics covered include:

- Water sources and pre-treatment.
- Taste and odour control theory.
- Sampling theory and practice.
- Drinking water legislation and standards.

United Kingdom (QCA):

City and Guilds Level 3 VQR in Water Engineering:

The City and Guilds is offering this qualification at an Apprenticeship level. The qualification provides learners with skills that will make them qualify in a number of pathways, namely, water networks, in constructions operations, leakage, distribution control and water supply and waster operations. Although the qualification does not compare fully with the South African qualification, the competencies covered to fulfill the requirements of the latter learning pathways, some of competencies compare well with the South African qualification.

The competencies covered are as follows:

- Water treatment processes.
- Carry out testing process.
- Carry out sampling process.
- Carry out mains disinfection.
- Carry out and record meter readings.
- Monitor water system leakage.
- Wastewater activated sludge.
- Wastewater biological treatment.
- Wastewater preliminary and primary treatment.

- Wastewater operations foundation knowledge.
- Sludge treatment and disposal from water and wastewater.

**CABWI Awarding Body:**

CABWI is an accredited NVQ Awarding Body accredited by the QCA to award National Vocational Qualifications for people working in the water and utilities (electricity and gas) industries. The Scottish Qualifications Authority and CABWI offer the following qualification.

- Controlling Water Operations (Process) Level 3.

The Scottish qualification compares with the South African qualification in that the some of the elements that make up some of the units are comparable with the units standards contained in the qualification as follows:

- Monitoring Treatment Process.
- Monitoring the Operation of Treatment Processes.
- Support the efficient use of resources.
- Maintaining Processing Equipment.
- Contribute to the development of Teams and Individuals.
- Lead the Work of Teams and Individuals to achieve their objectives.

**Department for Employment and Learning:**

The Department for Employment and Learning offers qualifications on Level 3 Apprenticeship Framework that has been agreed between the Department and Energy and Utility Skills Limited.

The following qualification that compares with the South African qualification is as follows:

- Operate Process Plant Water Wastewater and Sludge, at NQF Level 3.

**Australia:**

**Australian Qualifications Framework (AQF):**

**Certificate III in Water Industry Operations:**

This qualification compares well with the South African qualification. It is pegged at Level 3 and the unit standards address some competencies contained in the South African qualification. Some of the unit standards covered in this certificate have been covered in our NQF Level 2 qualification. These are coagulation and flocculation, as well as sedimentation. However, the unit standards (both core and electives) that compares well and covered by the qualification at NQF Level 3 are:

- Dissolved Air Flotation.
- Activated sludge.
- Trickling filters.
- Introduction to chlorination.
- Monitor, operate and control water treatment processes.
- Monitor, operate and control wastewater treatment processes.
- Customers and Clients.
- Occupational Health and Safety.
- Team Building.
- Monitor and promote customer relations.
- Implement, monitor and coordinate environmental procedures.

- Perform by-law or Water Act enforcement activities.
- Test and commission wastewater collection systems.
- Monitor, identify and respond to water quality problems.
- Inspect and report water catchment operations.
- Monitor and schedule water deliveries.

Scottish Vocational Qualifications (SQA):

- SQA/CABWI Controlling Water Operations, Level 3.
- SVQ Level 3 in Water Industry Operations.

Canada:

The Ontario Environmental Training Consortium:

Ontario Clean Water Agency:

The Ontario Clean Water Agency (OCWA) is a leader provider of water and wastewater treatment services in Toronto and offers training to water and wastewater treatment personnel both professionals and operators at different levels. Regrettably, the site does not provide access to the full unit standards. The certificate programme offered that could compare with some of the unit standards contained in the South African qualification for operators of water and wastewater treatment is as follows:

- Advanced Water Treatment.

This is a three-day course that covers microbiology, problem-solving, dosage calculations, chemical feed rates and membrane filtration:

- Water Main Disinfection and Repair.

This is a three-day course that covers topics such as purpose of disinfection, types of chlorination and chlorine residuals, calculations involving volume, detention time and chemical dosages, sampling and record keeping, detection methods of broken water mains and repair.

- Basic Wastewater Collection.

This is a two-day course that covers monitoring the rate of wastewater flow to the treatment facilities to ensure overflow does not occur, various sewer collection methods and the required maintenance.

In examining the topics covered in these courses.

United States of America (USA):

In the USA, programmes focus primarily on higher levels than this level, for example, technicians and engineers hence there are no qualifications and standards developed at this level. Nonetheless, there were few short courses found that are offered for Water and Wastewater Operators at entry levels but rather for the different categories of classes.

Rocky Mountain Water and Wastewater Plant Operators Fundamentals School:

The school provides a course intended for those new plant operators to provide them with information needed to better understand water and wastewater treatment and to perform their duties effectively and efficiently. The course is designed to furnish concepts of how treatment processes work and the requirements of government regulations. The South African qualification

also provides learners with knowledge of legislative requirements and regulations in relation to standards to provide the safest drinking water quality.

The course topics include:

- Intermediate Water.
- Intermediate Wastewater.
- Activated sludge.

Penn Foster Workforce Development:

Penn Foster is a career school that provides programmes aimed at improving job performance. It provides the Water and Wastewater Treatment Plant Operator curriculum that provides learners with fundamental knowledge of sewage treatment, sludge processing, various sampling procedures and methods used to obtain the sample for the physical test of wastewater, various types of equipment to test, treat and process raw water, methods of wastewater generation, collection and transportation. This programme compares well with the unit standards contained in the South African qualification which are aimed at water and wastewater plant operators.

Capital Community College:

Certificate programme in Wastewater III:

The curriculum has been designed cooperatively with the Department of Environmental Protection so that the courses will best meet the needs of wastewater treatment plant operations in hiring new employees and in preparing current employees for Class I and II Wastewater Certification examinations.

The safe and effective operation and maintenance of wastewater treatment facilities will be further investigated with an emphasis on larger, conventional treatment plants.

Topics include:

- Activated sludge.
- Sludge digestion and handling.
- Effluent disposal.
- Plant maintenance safety and housekeeping.
- Laboratory procedures.

SADC Region:

In an attempt to do a comparison with the SADC region and emerging economies, searches have been conducted in the following international accrediting bodies.

Regrettably there were no specific qualifications that could be compared with this qualification in the sense that most of the countries searched had limited information on qualifications developed so far, and it has been discovered that some bodies providing accreditation do not use unit standards for accreditation.

Mauritius:

A search was conducted on the Mauritius Qualifications Authority to establish qualifications related to water at this level. It has been discovered that Mauritius so far has developed qualifications in the following fields; Information and Communication Technology; Printing; Tourism and Hospitality Management; Jewellery; Building Construction and Civil Works; Adult Literacy and Health and Social Care. Unfortunately none of these related to this qualification.

However, there is only one unit standard that are contained in this qualification in the Elective component that compare with this qualification:

- Provide First Aid, ID: hs/01/0006/02.

Further searches have been conducted in countries such as Namibia, Kenya, Zimbabwe, Nigeria and Botswana, regrettably there were no qualifications found that could be compared with the South African qualification at this level.

Conclusion concerning comparability:

The search has indicated that the South African qualification compares well in that a substantial degree of similarity was found in the most of the qualifications examined in terms of the occupational profiles and training standards. Generally, the Australian and New Zealand qualifications have been found to be more comparable in terms of the elements of the unit standards when cross-referencing was done against the South African unit standards.

### **ARTICULATION OPTIONS**

Vertical articulation is possible with:

- ID 22672: National Certificate in Water and Wastewater Process Control Supervision at NQF Level 4.

Horizontally articulation is possible with:

- ID60155: National Certificate in Water Reticulation Level 3.

### **MODERATION OPTIONS**

- Anyone assessing a learner or moderating the assessment of a learner against this unit standard must be registered as an Assessor with the relevant ETQA.
- Any institution offering learning that will enable the achievement of this unit standard 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.
- 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 as well as the integrated competence described in the qualification.

### **CRITERIA FOR THE REGISTRATION OF ASSESSORS**

- The assessor must have a qualification at or above the level of this qualification plus a minimum of two years practical, relevant occupational experience.
- Competency in all the outcomes of the generic assessor standard.
- Detailed documentary proof of educational qualification, practical training undergone, and experience gained by the applicant must be provided (Portfolio of evidence).
- To demonstrate competence in relation to these specified standards and qualifications, at or above, the level of the qualifications in question.
- To meet any other additional requirements laid down by their constituent ETQA.
- The subject matter experience of the assessor can be established by recognition of prior learning.
- The status of registered assessors can be checked on the appropriate ETQA database or website.



**NOTES**

N/A

**UNIT STANDARDS**

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	5
Fundamental	9010	Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations	Level 3	2
Fundamental	9013	Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 3	4
Fundamental	119457	Interpret and use information from texts	Level 3	5
Fundamental	9012	Investigate life and work related problems using data and probabilities	Level 3	5
Fundamental	119467	Use language and communication in occupational learning programmes	Level 3	5
Fundamental	7456	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	Level 3	5
Fundamental	119465	Write/present/sign texts for a range of communicative contexts	Level 3	5
Core	7812	Perform basic calculations	Level 2	3
Core	9882	Read and interpret basic engineering drawings	Level 2	8
Core	113877	Understand fundamentals of electricity	Level 2	8
Core	242870	Apply public sector policies and procedures to achieve administration objectives	Level 3	12
Core	9532	Demonstrate basic knowledge of computers	Level 3	6
Core	254123	Demonstrate knowledge of SI measurement units used in water and wastewater treatment	Level 3	7
Core	254103	Demonstrate knowledge of different methods of achieving disinfection in a water and wastewater effluent environment	Level 3	2
Core	254114	Demonstrate knowledge of quality and its management in water and wastewater context	Level 3	4
Core	254125	Demonstrate knowledge of sampling procedures for water and wastewater treatment tests	Level 3	6
Core	254097	Measure chlorine dosage	Level 3	6
Core	254117	Operate a membrane process	Level 3	8
Core	246446	Operate a rapid gravity filtration process	Level 3	5
Core	255474	Operate mechanical and electrical plant and equipment in a water and wastewater environment	Level 3	6
Core	12058	Demonstrate knowledge and operation of mechanical and electrical systems	Level 4	6
Elective	246445	Operate a biological trickling filter	Level 2	4
Elective	12048	Operate rotating biodisc contactor	Level 2	4
Elective	116534	Carry out basic first aid treatment in the workplace	Level 3	2
Elective	254116	Demonstrate knowledge of activated sludge processes in wastewater treatment	Level 3	6
Elective	254101	Demonstrate knowledge of oxidation pond and maturation ponds processes in wastewater treatment.	Level 3	7
Elective	116942	Use a GUI-based word processor to create merged documents	Level 3	3
Elective	119078	Use a GUI-based word processor to enhance a document through the use of tables and columns	Level 3	5
Elective	119676	Apply the skills of customer care in a specific work environment	Level 4	4
Elective	254134	Control composting process	Level 4	4

**LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION**

None





## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

*Measure chlorine dosage*

SAQA US ID	UNIT STANDARD TITLE		
254097	Measure chlorine dosage		
ORIGINATOR	PROVIDER		
SGB Water Sector			
FIELD	SUBFIELD		
12 - Physical Planning and Construction	Civil Engineering Construction		
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 process of chlorination to disinfect water.

**SPECIFIC OUTCOME 2**

Explain the factors affecting chlorine effectiveness.

**SPECIFIC OUTCOME 3**

Operate on-site chlorine process.

**SPECIFIC OUTCOME 4**

Connect and disconnect chlorine cylinders.

**SPECIFIC OUTCOME 5**

Calculate the average chlorine dosages.

**SPECIFIC OUTCOME 6**

Record chlorine dosage.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

ID	QUALIFICATION TITLE	LEVEL
Core 60190	National Certificate: Water and Wastewater Process Control	Level 3



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

***Demonstrate knowledge of oxidation pond and maturation ponds processes in wastewater treatment.***

SAQA US ID	UNIT STANDARD TITLE		
254101	Demonstrate knowledge of oxidation pond and maturation ponds processes in wastewater treatment.		
ORIGINATOR	PROVIDER		
SGB Water Sector			
FIELD	SUBFIELD		
12 - Physical Planning and Construction	Civil Engineering Construction		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	7

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

**SPECIFIC OUTCOME 1**

Explain the purpose of oxidation ponds in wastewater treatment processes.

**SPECIFIC OUTCOME 2**

Explain the purpose of maturation ponds in wastewater treatment processes.

**SPECIFIC OUTCOME 3**

Identify the process options for maturation pond wastewater treatment.

**SPECIFIC OUTCOME 4**

Identify tests and performance measures of oxidation and maturation pond treatment operations.

**SPECIFIC OUTCOME 5**

Monitor the maintenance of the maturation and oxidation ponds.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	ID	QUALIFICATION TITLE	LEVEL
Elective	60190	National Certificate: Water and Wastewater Process Control	Level 3



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

***Demonstrate knowledge of different methods of achieving disinfection in a water and wastewater effluent environment***

SAQA US ID	UNIT STANDARD TITLE		
254103	Demonstrate knowledge of different methods of achieving disinfection in a water and wastewater effluent environment		
ORIGINATOR		PROVIDER	
SGB Water Sector			
FIELD		SUBFIELD	
12 - Physical Planning and Construction		Civil Engineering Construction	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	2

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

**SPECIFIC OUTCOME 1**

Discuss the presence and role of pathogenic micro-organisms in the water and wastewater effluent environment.

**SPECIFIC OUTCOME 2**

Identify the different methods of disinfection.

**SPECIFIC OUTCOME 3**

Determine dosages of disinfection.

**SPECIFIC OUTCOME 4**

Identify the bacteriological tests used to measure the effectiveness of the disinfection process.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	ID	QUALIFICATION TITLE	LEVEL
Core	60190	National Certificate: Water and Wastewater Process Control	Level 3



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

***Demonstrate knowledge of quality and its management in water and wastewater context***

<b>SAQA US ID</b>		<b>UNIT STANDARD TITLE</b>	
254114		Demonstrate knowledge of quality and its management in water and wastewater context	
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Water Sector			
<b>FIELD</b>		<b>SUBFIELD</b>	
12 - Physical Planning and Construction		Civil Engineering Construction	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
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 fundamentals of quality and its management.

**SPECIFIC OUTCOME 2**

Explain the role of supply chain relationships in quality and its management.

**SPECIFIC OUTCOME 3**

Explain roles and responsibilities of roleplayers for ensuring quality water supply.

**SPECIFIC OUTCOME 4**

Describe quality management systems in water and wastewater context.

**SPECIFIC OUTCOME 5**

Identify approaches to quality improvement.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	<b>ID</b>	<b>QUALIFICATION TITLE</b>	<b>LEVEL</b>
Core	60190	National Certificate: Water and Wastewater Process Control	Level 3



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

*Demonstrate knowledge of activated sludge processes in wastewater treatment*

<b>SAQA US ID</b>		<b>UNIT STANDARD TITLE</b>	
254116		Demonstrate knowledge of activated sludge processes in wastewater treatment	
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Water Sector			
<b>FIELD</b>		<b>SUBFIELD</b>	
12 - Physical Planning and Construction		Civil Engineering Construction	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 3	6

*This unit standard replaces:*

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
246437	Demonstrate knowledge of activated sludge processes in wastewater treatment	Level 3	6	Will occur as soon as 254116 is registered

**SPECIFIC OUTCOME 1**

Explain the theory of activated sludge.

**SPECIFIC OUTCOME 2**

Illustrate the layout of the plant.

**SPECIFIC OUTCOME 3**

Make adjustments on the plant.

**SPECIFIC OUTCOME 4**

Monitor performance of the plant.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	ID	QUALIFICATION TITLE	LEVEL
Elective	60190	National Certificate: Water and Wastewater Process Control	Level 3



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Operate a membrane process***

SAQA US ID	UNIT STANDARD TITLE		
254117	Operate a membrane process		
ORIGINATOR		PROVIDER	
SGB Water Sector			
FIELD		SUBFIELD	
12 - Physical Planning and Construction		Civil Engineering Construction	
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**

Demonstrate knowledge of the principles of membrane processes.

**SPECIFIC OUTCOME 2**

Prepare membrane plant for service.

**SPECIFIC OUTCOME 3**

Start-up and monitor the membrane plant.

**SPECIFIC OUTCOME 4**

Stabilise out of normal conditions.

**SPECIFIC OUTCOME 5**

Shutdown and isolate out of service plant.

**SPECIFIC OUTCOME 6**

Clean the membrane plant according to organizations standard procedures.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	ID	QUALIFICATION TITLE	LEVEL
Core	60190	National Certificate: Water and Wastewater Process Control	Level 3



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

***Demonstrate knowledge of SI measurement units used in water and wastewater treatment***

SAQA US ID	UNIT STANDARD TITLE		
254123	Demonstrate knowledge of SI measurement units used in water and wastewater treatment		
ORIGINATOR		PROVIDER	
SGB Water Sector			
FIELD		SUBFIELD	
12 - Physical Planning and Construction		Civil Engineering Construction	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	7

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

**SPECIFIC OUTCOME 1**

Describe the units used in the standard international (SI) metric system.

**SPECIFIC OUTCOME 2**

Use formulae to solve for unknown variables.

**SPECIFIC OUTCOME 3**

Perform calculations in the SI system of measurement.

**SPECIFIC OUTCOME 4**

Take measurements and use them in calculations to solve problems.

**SPECIFIC OUTCOME 5**

Describe dilute solution strengths.

**SPECIFIC OUTCOME 6**

Solve problems involving calculation of time.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	ID	QUALIFICATION TITLE	LEVEL
Core	60190	National Certificate: Water and Wastewater Process Control	Level 3





## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

***Demonstrate knowledge of sampling procedures for water and wastewater treatment tests***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
254125	Demonstrate knowledge of sampling procedures for water and wastewater treatment tests		
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Water Sector			
<b>FIELD</b>		<b>SUBFIELD</b>	
12 - Physical Planning and Construction		Civil Engineering Construction	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
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 methods of taking samples of water and wastewater for field testing or transport to laboratories.

**SPECIFIC OUTCOME 2**

Describe the requirements of a sampling plan and of sample handling.

**SPECIFIC OUTCOME 3**

Record and present measurement data collected during sample collection.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	<b>ID</b>	<b>QUALIFICATION TITLE</b>	<b>LEVEL</b>
Core	60190	National Certificate: Water and Wastewater Process Control	Level 3



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

*Control composting process*

SAQA US ID	UNIT STANDARD TITLE		
254134	Control composting process		
ORIGINATOR	PROVIDER		
SGB Water Sector			
FIELD	SUBFIELD		
12 - Physical Planning and Construction	Civil Engineering Construction		
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
12051	Control composting process	Level 2	4	Will occur as soon as 254134 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge of the production of compost.

**SPECIFIC OUTCOME 2**

Sample and monitor compost in accordance with work policies and procedures.

**SPECIFIC OUTCOME 3**

Screen and cure compost.

**SPECIFIC OUTCOME 4**

Maintain and operate equipment at compost plant.

**SPECIFIC OUTCOME 5**

Comply with safety procedures at composting plant.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	ID	QUALIFICATION TITLE	LEVEL
Elective	60190	National Certificate: Water and Wastewater Process Control	Level 3



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

***Operate mechanical and electrical plant and equipment in a water and wastewater environment***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
255474	Operate mechanical and electrical plant and equipment in a water and wastewater environment		
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Water Sector			
<b>FIELD</b>		<b>SUBFIELD</b>	
12 - Physical Planning and Construction		Civil Engineering Construction	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
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**

Operate the plant and equipment in a water and wastewater environment.

**SPECIFIC OUTCOME 2**

Apply safety procedures during the operation of plant and equipment.

**SPECIFIC OUTCOME 3**

Demonstrate knowledge of the operations of plant instrumentation.

**SPECIFIC OUTCOME 4**

Perform routine maintenance of plant instrumentation.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

	<b>ID</b>	<b>QUALIFICATION TITLE</b>	<b>LEVEL</b>
Core	60190	National Certificate: Water and Wastewater Process Control	Level 3