



Government Gazette Staatskoerant

REPUBLIC OF SOUTH AFRICA
REPUBLIEK VAN SUID-AFRIKA

Vol. 444

Pretoria, 28 June 2002

No. 23551



AIDS HELPLINE: 0800-0123-22 Prevention is the cure



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GOVERNMENT NOTICES

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

No. 870

28 June 2002

The South African Qualifications Authority in terms of the National Standards Bodies Regulations (Government Gazette No. 18787) published on 28 March 1998, hereby give notice of additional names of the following Standards Generating Bodies:

NSB 02 : CULTURE AND ARTS

Additional members for the SGB for Technical Production Services in the sub-field of Film, Television and Video

Name	Employer	Nominating Body	Experience
1. Campbell, Tony	Emerald Safari Resort and Casino	Indaba	Arts administration/ Managing Director/ B. A. Honours Sociology of Education/
2. D'alejandro, Robyn	Gearhouse SA	Technical Production Services Association (TPSA)	BA (English Literature/Art History)/ Stage Manager/ Administrative HOD Lighting/ Internal Systems Developer
3. Daubeny, Mark	Sho-sho-loza	Live Events Industry Skills Indaba	Senior Certificate/ Self employed/ Production
4. Greyling, Izan	CrewCore	Technical Production Services Association (TPSA)	B. Bdg. Arts (UPE)/CAD Certificate (CAD Training Centre) /Sound Engineering Certificate (Recording Associates)/ N. H. Dip. Theatre Craft/ Free-lance sound engineer
5. Mac, John	Gearhouse SA	Live Events Industry Skills Indaba	Senior Certificate/ Sound Technician/ Branch Manager
6. Pon, Bonnie	Starburst Pyro	Live Events Industry Skills Indaba	Senior Certificate/ Indoor stage pyrotechnics & outdoor fireworks display/ Owner of Starburst Pyrotechnics
7. Ransom, Mark	Quality Asso	Live Events Industry Skills Indaba	UK "O" Levels/ Stage Manager/ Technical Stage Manager/ Lighting Technician & Development/ Theatre Consultant/
8. Smith, Bryan	CrewCore	Technical Production Services Association (TPSA)	Senior Certificate/ Free-lance Lighting and Staging Technician/ Advanced Laser Technology
9. Southey, Lovell	Natal Tech	Technikon Natal	National Diploma in Performing Arts/Project Manager/Propmaking/Set Design/Set Design

Names withdrawing from the SGB

Name	Workplace	Nominating	Comment
Burger, Sonja	National School of Arts	NSA	Voluntarily withdrawal
Van der Merwe, Jan	Natal Technikon	Natal Technikon	Voluntarily withdrawal

NSB 04 : COMMUNICATION STUDIES AND LANGUAGES

Additional names for the SGB for Journalism

NOMINEE	WORKPLACE	NOMINATING BODY	EXPERIENCE/ QUALIFICATIONS
Adams, R.I	Peninsula Technikon	Peninsula Technikon	Currently doing MPhil in Journalism. Is lecturer in news reporting and media production.
Adendorff, L.R	Johnnic Publishing	Johnnic Publishing	Holds a certificate in multi-media management skills.
Eis, D	Media 24	Media 24	BA Honours in Communication. Is editorial trainer and manager of editorial development.
Eshak, A.K	Sunday Times	Sunday Times	Has 27 years experience in journalism and is member of the South African Union of Journalists.
Maree, K.J	South African Broadcasting Cooperation	South African Broadcasting Cooperation	Has extensive experience in Journalism field and is Manager for TV News Training at the SABC.

NSB 06 : MANUFACTURING, ENGINEERING & TECHNOLOGY

Additional Names for the SGB for Plastics Manufacturing

NOMINEE	WORKPLACE	NOMINATING BODY	EXPERIENCE/ QUALIFICATIONS
William Khamandisa	Duratract Plastics	NUMSA	25 yrs experience in production environment 9 yrs as shop steward
Gibson Khetto Lephallo	Nampk Liquid Packaging	NUMSA	15 yrs experience in production environment 10 yrs as shop steward Labour law trainer for employees Experienced negotiator

Additional Names for the SGB for Telecommunications

NOMINEE	WORKPLACE	NOMINATING BODY	EXPERIENCE/ QUALIFICATIONS
T.P. Rabinuthath	Department of Communications	Government	Ph.D Electrical Engineering & B.Sc Computer Science & Physics MSc.Eng Electrical Engineering
Mr Paul Abraham Willemse	Telkom South Africa	Provider of Education and Training	National N Diploma – Electronics Masters Certificate – Training & Development
Mr Wayne Anthony Hattingh	Sentech /SABC	Business	National Diploma Electrical Engineering Higher National Diploma in Electrical Engineering
Mr Dewald Burger	Communications Cabling of Southern Africa	Professional Body	Certified Trainer Category 6 Systems Nexans Certified Trainer 3M Volition MD Premises Cabling Institute Technical Director Technology Junction Group 2000 Marketing & Technical Director Interconnect Systems Sales Engineer Aberdare Optical Fibre Systems Senior Technician Dept Post & Telecoms T3Telecommunications IMM Marketing Diploma



JOE SAMUELS

DIRECTOR : STANDARDS SETTING AND DEVELOPMENT

No. 871

28 June 2002



Postnet Suite 248
Private Bag X 06
WATERKLOOF
0145

659 Pienaar Street
BROOKLYN
0181

Tel: +27 (0) 12 482-0800
Fax: +27 (0) 12

Dear Sir/Madam,

The South African Qualifications Authority in terms of the National Standard Body Regulations (Government Gazette No. 18787) published on 28 March 1998, hereby publishes the new names of persons nominated to serve as members of the following National Standard Bodies (NSB 09 & 10) and their national stakeholder bodies. SAQA invites comment with respect to the acceptability of the nominees and the representativeness of the national bodies with key interests in the field.

Kindly forward any comment not later than **8 July 2002** to:

The Executive Officer
South African Qualification Authority
Postnet Suite 248
Private Bag X06
WATERKLOOF
0145

Attention: Mr J Samuels
Director : Standards Setting and Development

Telephone: (012) 482 0807
Fax: (012) 482 0907

Yours sincerely,

SAMUEL B.A. ISAACS
EXECUTIVE OFFICER

SAQA'S MISSION

"To ensure the development and implementation of a National Qualifications Framework which contributes to the full development of each learner and to the social and economic development of the nation at large."

NSB 09 : HEALTH AND SOCIAL SERVICES

Category	Nomination	Mr Robert Wesigye (replace Ms Grace Magano)	National Federated Chamber of Commerce and Industry (NAFCOC)	Workplace	NAFCOC
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NSB 10 : PHYSICAL, MATHEMATICAL, COMPUTER AND LIFE SCIENCES

Category	Nomination	Mr F Gersbach	Nominated by	Workplace	TDF Computer People Development
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SACA'S MISSION

"To ensure the development and implementation of a National Qualifications Framework which contributes to the full development of each learner and to the social and economic development of the nation at large."

No. 872

28 June 2002

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

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

Chemical Industries

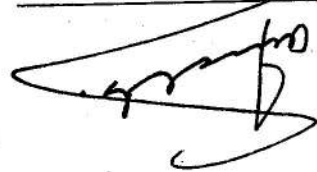
Registered by NSB 06, Manufacturing, Engineering and Technology, publishes the following qualifications and unit standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the qualification and unit standards upon which qualifications are based. The full qualification and unit standards can be accessed via the SAQA web-site at www.saqa.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Piensaar street, Brooklyn, Pretoria.

Comment on the unit standards should reach SAQA at the address below and no later than 28 July 2002. All correspondence should be marked Standards Setting – SGB, Chemical Industries and addressed to

The Director: Standards Setting and Development
SAQA
Attention: Mr. D Mphuthing
Postnet Suite 248
Private Bag X06
Waterkloof
0145
or faxed to 012 – 482 0907

SAMUEL B.A. ISAACS
EXECUTIVE OFFICER



National Certificate in Chemical Operations – Level 1

Level	1	Total credit value:	120
Field:	Manufacturing, Engineering and Technology		
Sub Field	Manufacturing and Assembly		
Issue date			
Review date			

This qualification is aimed at people who work or intend to work in the chemical industry. It will give them the opportunity to acquire the essential knowledge and skills that will lead into a technical career based on formal qualifications registered on the NQF. Recipients of this qualification have demonstrated the ability to undertake further learning and to execute work in a chemical environment. People credited with this qualification are able to:

- Comprehend and execute technical instructions
- Apply life skills
- Apply safety, health, environmental and quality principles and best practices
- Demonstrate a basic understanding of the purpose of the chemical industry and a specific chemical operation or business
- Demonstrate a basic understanding of technology used in the chemical industry
- Use tools and materials
- Plan a personal career using then National Qualifications Framework

Rationale

A successful technical career is based on a sound understanding of relevant principles and practice. This qualification will give learners the opportunity to gain the practical skills in combination with the essential knowledge needed to undertake more advance learning that is needed for chemical related careers. The learning is achieved through formal and informal courses and experience gained through working in a chemical environment.

Articulation

This qualification builds on unit standards and qualifications from a range of sectors to provide exit level outcomes also relevant to the following technical careers:

- Chemical Process Operations
- Chemical Analysis
- Engineering in the Chemical Industry
- Storing, handling and transporting chemicals and chemical products
- Similar careers in other industries such as mineral processing and metallurgy

It can also provide the basis of learning towards other related careers, particularly those involving process related activities.

Learning assumed to be in place

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

- Mathematical Literacy at ABET 3 or equivalent.
- Language, Literacy and Communications at ABET 3 or equivalent

Access to the qualification

This qualification is open to anyone with access to learning opportunities and working experience in the areas reflected in the exit level outcomes and unit standards. It is advisable that candidates should already have addressed the areas reflected under "learning assumptions" before embarking on learning towards this qualification, although the exact starting point depends on the available resources for learning.

Exit level outcomes:

Fundamental exit level outcomes:

- Communicate in a variety of ways
- Use mathematics in real life situations
- Identify technology used in the chemical industry
- Demonstrate an understanding of the principles of science

See Annexure A for the list of unit standards that relate to these exit level outcomes.

Core exit level outcomes

- Maintain health, hygiene and safety in a chemical environment
- Display critical understanding of social diversity
- Apply self management practices
- Plan own career
- Demonstrate an understanding of quality as practiced in the chemical industry

See Annexure B for the list of unit standards that relate to these exit level outcomes.

Elective exit level outcomes

- Identify basic technology in the workplace
- Use tools and materials in the chemical industry
- Packing and palletise products
- Use stormwater/sewage, effluent and storm water systems in industry
- Transfer bulk liquids
- Demonstrate knowledge of good manufacturing practice

See Annexure C for the list of unit standards that relate to these exit level outcomes. Candidates must select unit standards from the list in Annexure C.

Credits and rules of combination

- Fundamental** (See Annexure A for the detail):
- 20 Communications credits from the list specified
 - 19 Mathematics credits from the list
 - 22 Science and technology credits from the list

- Core** (See Annexure B for the detail):
- 34 credits from the list of standards provided in Annexure B

- Elective** (See Annexure C for the detail):
- A minimum of 25 credits from the specified list in Appendix C

Summary of credit composition

FUNDAMENTAL	CORE	ELECTIVE	TOTAL
LEVEL 1	22	21	101
LEVEL 2	12	13	25
LEVEL 3			
LEVEL 4			
TOTAL	61	34	120 minimum 127 possible

Integrated Assessment

For award of the qualification, a candidate must achieve each unit standard as listed. In addition, candidates must demonstrate the ability to integrate the knowledge and its application in the working environment. Evidence is required that the candidate is able to achieve the purpose of the qualification as a whole at the time of the award of the qualification.

Range statements

The unit standards provide the details of the ranges within which candidates are required to perform.

Critical cross-field outcomes

This qualification addresses the following critical cross-field outcomes. The way in which the critical cross-field outcomes are addressed is presented in detail in the unit standards outlined in the Annexures.

- a) identifying and solving problems in which responses display that responsible decisions using critical and creative thinking have been made
- b) working effectively with others as a member of a team, group, organisation, or community
- c) organizing and managing oneself and one's activities responsibly and effectively
- d) collecting, analysing, organizing and critically evaluating information
- e) communicating effectively using visual, mathematical and/or language skills in the modes of oral and/or written persuasion
- f) using science and technology effectively and critically, showing responsibility towards the environment and health of others
- g) demonstrating an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.

Recognition of prior learning

This qualification can be achieved wholly or in part through recognition of prior learning in terms of the criteria laid out.

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

All such evidence should be judged according to the general principles of assessment described in the note to assessors below.

International comparability

This qualification and the component unit standards have been compared with similar qualifications from the following countries:

United Kingdom - National Vocational Qualifications.

Accreditation assessment and moderation

Providers offering learning towards achievement of any of the unit standards that make up this qualification must be accredited by the Chemical Industries Sector Education and Training Authority (CHIETA).

The criteria for accreditation are stated in the SAQA ETQA Regulations.

Assessment must be carried out by an assessor who is:

- A subject matter expert.
- Registered as a assessor by the appropriate ETQA
- Administered, advised and coached by the appropriate moderator

Particular accreditation requirements related to this qualification are:

- Adequate exposure to an appropriate workplace to ensure that the assessment criteria of the unit standards are met.
- That integrative assessment of related standards is carried out. This is of particular importance when assessing the standards relating to the operation of equipment.

Verification of moderation

Verification of moderation must be conducted by the appropriate ETQA

Notes

Notes for assessors:

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

- Focus the initial assessment activities on gathering evidence in terms of the main outcomes expressed in the titles of the unit standards to ensure assessment is integrated rather than fragmented. The aim is to declare the person competent in terms of the qualification purpose. Where assessment across titles or at title level is unmanageable, then focus assessment around each specific outcome, or groups of specific outcomes. Take special note of the need for integrated assessment.
- Make sure evidence is gathered across the entire range, wherever it applies. Assessment activities should be as close to the real performance as possible, and where simulations or role-plays are used, there should be supporting evidence to show the candidate is able to perform in the real situation.
- All assessments should be conducted in line with the following well documented principles of assessment as defined below:

Principles of assessment:

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

Annexure A Fundamental

Communication

Candidates are required to achieve all the following standards:

Number	Title	Level	Credit
COM 001	Show a critical awareness of language usage	1	3
COM 002	Engage with aesthetic, affective, cultural and social values in texts	1	3
COM 003	Identify, access, analyse, use and present information	1	4
COM 004	Use appropriate communication skills, conventions and structures for specific purposes and situations	1	4
COM 005	Explore and use a variety of strategies to learn	1	3
COM 006	Engage with meaning, organization and structure of texts	1	3
TOTAL			
20			

Mathematics/Numeracy

Candidates are required to achieve all the following standards:

Number	Title	Level	Credit
Math 001	Work with numbers in various contexts	1	6
Math 002	Work with patterns in various contexts	1	4
Math 004	Work with measurement in a variety of contexts	1	2
Math 005	Collect, analyse, use and communicate numerical data	1	2
Math 007	Use algebraic notation, conventions and terminology to solve problems	1	3
Math 009	Describe and represent objects and the environment in terms of shape, space, time and motion	1	2
TOTAL			
19			

Science and Technology

Candidates are required to achieve all the following standards:

Number	Title	Level	Credit
Nat.Sci 001	Demonstrate an understanding of the concept of science	1	2
Nat. Sci 003	Demonstrate an understanding of fundamental concepts and principles in the natural sciences	1	5
CI GEN 1 001	Identify technology used in the chemical industry	1	15
TOTAL			
22			

Annexure B Core

Generic standards:

Candidates are required to achieve all the following standards:

Number	Title	Level	Credit
CI GEN 1 002	Maintain health, hygiene and safety in a chemical environment	1	10
LO/004	Display critical understanding of social diversity	1	4
CI GEN 1 004	Apply self management practices	2	8
CI GEN 2 00	Demonstrate an understanding of quality principles used in the chemical industry	1	8
CI GEN 006	Demonstrate knowledge of business practices	2	4
TOTAL			
			34

Annexure C Electives

Elective standards determined by the working opportunities and learners personal preference:
Candidates are required to select standards relevant to their working situation from the following. The selection must comprise of at least 24 credits.

Number	Title	Level	Credit
CI GEN 1 009	Pack and palletize products	1	2
CI GEN 011	Package products in a manual or semi-automated packaging operation	1	2
-	Demonstrate knowledge of issues relating to HIV and AIDS	1	2
CI GEN 1 010	Use wastewater/sewage, effluent and stormwater systems in industry	1	2
CI GEN 012	Apply financial life skills	1	4
CI GEN 1 007	Apply basic electronic technology in the workplace	1	5
CI GEN 2 007	Demonstrate knowledge of Good Manufacturing Practice in a chemical manufacturing environment	2	6
Services: Materials management	Operate moving equipment to stack, de-stack and position materials	2	4
Eng/04/US	Perform lubrication on production machinery	2	3
CI GEN 1 008	Select and use basic hand tools and materials	1	4
TOTAL			
			34

National Certificate in Chemical Operations - Level 2

Level:

2

Total credit value:

122

Field:

Manufacturing, Engineering and Technology

Sub Field

Manufacturing and Assembly

Issue date

Review date

Purpose of qualification

This qualification is aimed at people who work or intend to work within a large process operation in the chemical or similar industry, and seek recognition for skills essential for operating equipment used in such processes.

Recipients of this qualification know about and are able to operate equipment. The selection of the equipment ensures that the recipient can:

- Operate equipment in a large processing operation.
- Or will be able to operate such equipment after minimal training.

For the purposes of this qualification the following is understood as equipment:

- A machine or apparatus which delivers a result or achieves a function in a chemical process.
- A machine that is operated independently or in combination with other units in a chemical process.
- Equipment is generally operated in the field but remote control may be used.

People credited with this qualification are able to:

- Operate equipment in a chemical process complying with safety, health, environment, chemical hazards, quality, legal requirements and (site operating) instructions.
- Communicate and liaise with co-workers in the system within which the equipment is operated.
- Detect potential or actual problems and take the corrective action necessary to prevent the equipment operation interrupting the operation of the system.

Rationale

The majority of the candidates for this qualification are likely to be working in the chemical sector. The qualification will give them the opportunity to balance their practical skills with the essential knowledge needed to earn a formal qualification in chemical process operations.

There is also a critical need in the industry to identify people who are able to conduct the essential operations associated with efficient and safe operation of equipment in the chemical industry.

Articulation

This qualification builds upon the National Certificate in Chemical Operations – Level 1 in that the knowledge and skill acquired is applied in the operation of equipment in chemical processing. The additional knowledge and skill acquired through this certificate will enable the learner to progress to the operation of systems within the chemical or similar industries or to other careers such as process supervision, materials handling and quality assurance in the chemical and related industries.

Learning assumed to be in place

Candidates embarking on learning towards this qualification are expected to have the National Certificate in Chemical Operations – Level 1 or to have recognition of prior learning for the standards that make up this qualification.

Access to the qualification

This qualification is open to anyone with access to learning opportunities and work experience in the areas reflected in the exit level outcomes and unit standards. Should they not have the learning assumed to be in place, as stated above, before embarking on learning towards this qualification, appropriate adjustments to the learning process will be needed.

Exit level outcomes:

Fundamental exit level outcomes :

- Communicate in a variety of ways
- Use mathematics in real life situations
- Apply process chemistry and related technology

See Annexure A for the list of unit standards that relate to these exit level outcomes.

Core exit level outcomes:

- Apply technology in chemical process operations
- Apply sampling theory and practice in a chemical operation
- Establish equipment start up conditions
- Start up equipment
- Shut down equipment

- Contribute to maintenance of equipment

See Annexure B for the list of unit standards that relate to these exit level outcomes.

Elective exit level outcomes:

- Additional credits from the list specified may be appropriate for an individual's career.

See Annexure C for the list of unit standards that relate to these exit level outcomes.

Credits and rules of combination

Fundamental (See Annexure A for the detail):

- 20 Communications credits from the list specified.
- 19 Mathematics credits from the list specified.
- 10 Science and Technology from the list specified

Core (See Annexure B for the detail):

- 5 underpinning credits from the list specified
- 68 process operating credits from the list specified.

Elective (See Annexure C for the detail):

- No electives are prescribed for the qualification.

Summary of credit composition

	FUNDAMENTAL	CORE	ELECTIVE	TOTAL
LEVEL 1				
LEVEL 2	49	73	(52)	122
LEVEL 3				
LEVEL 4				
TOTAL	49	73	(52)	122

Elective credits are not included in minimum total value indicated.

Integrated Assessment

For award of the qualification, a candidate must achieve each unit standard as stated.

In addition, candidates must demonstrate the ability to engage in the operations selected in an integrative way, making use of the theoretical aspects of operations when dealing with practical demands related to operating equipment in a chemical process. Evidence is required that shows that the candidate is able to achieve the purpose of the qualification as a whole at the time of the award of the qualification.

Range statements

The unit standards provide the details of the ranges within which candidates are required to perform.

Critical cross-field outcomes

This qualification addresses the following critical cross-field outcomes. The way in which the critical cross-field outcomes are addressed is presented in detail in the unit standards listed in the Annexures.

- a) identifying and solving problems in which responses display that responsible decisions using critical and creative thinking have been made
- b) working effectively with others as a member of a team, group, organisation, or community
- c) organizing and managing oneself and one's activities responsibly and effectively
- d) collecting, analysing, organizing and critically evaluating information
- e) communicating effectively using visual, mathematical and/or language skills in the modes of oral and/or written persuasion
- f) using science and technology effectively and critically, showing responsibility towards the environment and health of others
- g) demonstrating an understanding of the world of work as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.

Recognition of prior learning

This qualification can be achieved wholly or in part through recognition of prior learning in terms of the criteria laid out above.

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

All such evidence should be judged according to the general principles of assessment described in the note to assessors below.

International comparability

This qualification and the component unit standards have been compared with similar qualifications from the following countries:

- United Kingdom
- New Zealand

In general this qualification and its component unit standards compare well with their international and local counterparts. The major differences are in formatting and scope of coverage or focus.

Accreditation assessment and moderation

Providers offering learning towards achievement of any of the unit standards that make up this qualification must be accredited by the Chemical Industries Sector Education and Training Authority (CHIETA).

The criteria for accreditation are stated in the SAQA ETQA Regulations.

Assessment must be carried out by an assessor who is:

- A subject matter expert.
- Registered as a assessor by the appropriate ETQA
- Administered, advised and coached by the appropriate moderator

Particular accreditation requirements related to this qualification are:

- Adequate exposure to an appropriate workplace to ensure that the assessment criteria of the unit standards are met.
- That integrative assessment of related standards is carried out. This is of particular importance when assessing the standards relating to the operation of equipment.

Verification of moderation

Verification of moderation must be conducted by the appropriate ETQA

Notes

Notes for assessors:

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

- Focus the initial assessment activities on gathering evidence in terms of the main outcomes expressed in the titles of the unit standards to ensure assessment is integrated rather than fragmented. The aim is to declare the person competent in terms of the qualification purpose. Where assessment at across titles or at title level is unmanageable, then focus assessment around each specific outcome, or groups of specific outcomes. Take special note of the need for integrated assessment.
- Make sure evidence is gathered across the entire range, wherever it applies. Assessment activities should be as close to the real performance as possible, and where simulations or role-plays are used, there should be supporting evidence to show the candidate is able to perform in the real situation.
- All assessments should be conducted in line with the following well documented principles of assessment as defined below:

Principles of assessment:

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

**Annexure A
Fundamental**

Communication

Candidates are required to achieve all the following standards:

Number	Title	Level	Credit
FET – C/01	Maintain and adapt oral communication	2	5
FET – C/02	Access and use information from texts	2	5
FET – C/03	Write for a defined context	2	5
FET – S/16	Use language and communication in occupational learning programmes	2	5
TOTAL			
20			

Mathematics/Numeracy

Candidates are required to achieve all the following standards:

Number	Title	Level	Credit
Math 2001	Demonstrate understanding of rational and irrational numbers and number systems	2	2
Math 2002	Work with a wide range of patterns and basic functions and solve related problems	2	8
Math 2003	Describe, represent and informally analyse shape and motion in 2 and 3 dimensional space	2	4
Math 2004	Collect and use data to establish basic statistical and probability models and solve related problems	2	5
TOTAL			
19			

Science and Technology

Candidates are required to achieve the following standard:

Number	Title	Level	Credit
CI GEN 2 001	Apply process chemistry and related technology in the chemical industry	2	10
TOTAL			
10			

Exit level outcome: Apply relevant technology in chemical process operations

Annexure B Core

Candidates are required to achieve all the following two standards:

Number	Title	Level	Credit
CI GEN 2 002	Apply sampling theory & practice in the chemical industry	2	5
CI GEN 2 003	Establish equipment start up conditions	2	17
CI GEN 2 004	Start up equipment	2	17
CI GEN 2 005	Shut down equipment	2	17
CI GEN 2 006	Contribute to the maintenance of equipment	2	17
TOTAL			
			73

Annexure C Electives

In addition to the fundamental and core requirements specified above, candidates may add additional standards that are applicable to their careers.

Number	Title	Level	Credit
	Maintain quality practices in a packing environment	3	4
	Perform in-process quality control checks in a manufacturing environment	2	4
	Handle and use hazardous chemicals	2	2
	Transfer bulk liquids	2	2
	Shift loads using lifting equipment (max 2.5 tons)	3	4
	Hand over responsibility for a shift	2	2
	Apply basic problem solving techniques	2	2
	Maintain raw material, intermediate and finished product to facilitate production	2	2
	Operate a personal computer	2	6
	Dismantle, replace and assemble engineering components	2	3
	Prepare materials, tools and components for mechanical assembly	?	4
	Carry out routine maintenance on a production machine	2	8
	Select, use and maintain basic measuring equipment	?	3
	Identify, interpret and lay out sketches and drawings	1	6
TOTAL			
			52

National Certificate in Chemical Operations - Level 3

Level:

3

Total credit value: 122

Field:

Manufacturing, Engineering and Technology

Sub Field

Fabrication and Extraction

Issue date

Review date

Purpose of qualification

This qualification is aimed at people who work within a large process operation in the chemical industry, and seek recognition for skills essential for operating such a process. Recipients of this qualification know about and are able to operate systems within the relevant process.

For the purposes of this qualification the following is understood as a system:
 ▪ Equipment operated in combination to achieve a desired result in a chemical or related process operation.
 ▪ Operating a system includes the integrated operation of the equipment that makes up the system.

Equipment is defined in the National Certificate - Chemical Process Operations, Equipment (level 2)

People credited with this qualification are able to:

- Monitor and control a system in a chemical process complying with safety, health, environmental, chemical hazards, quality, legal requirements and (site operating) instructions.
- Operate a system in a chemical process including establishing start up conditions, starting the plant, monitoring and maintaining plant conditions, collecting and interpreting information regarding plant conditions, shutting down the system, contributing to maintenance and responding to hazardous conditions. This is done in accordance with (site operating) instructions. Decision making from a significant choice of options within a familiar working context, for which comprehensive knowledge and skill regarding the system is required.

Rationale

The candidates for this qualification are likely to be working in a large process operation, which is made up of many systems. Operation of each system requires specific knowledge and skill. This knowledge and skill is based on common principles. By applying these principles in a minimum of 10 systems the recipient of the qualification has the specialized knowledge to operate a variety of different systems. The recipient also has the basis and expertise to become competent in operating additional systems with additional training.

There is also a critical need in the industry to identify people who are able to conduct the essential operations associated with efficient and safe operation of systems in the chemical industry.

Articulation

The qualification is based on the National Certificate in Chemical Operations – Level 2 in that the knowledge and skill pertaining to the operation of equipment is applied in learning how to operate systems.

The knowledge and skill acquired in this certificate will enable the learner to progress to the National certificate in Chemical Operations – Level 4 in which the process control is addressed.

The expertise gained in this certificate is also applicable to other careers including supervision and quality assurance in process operations.

Learning assumed to be in place

Candidates embarking on learning towards this qualification are expected to have the National Certificate in Chemical Operations – Level 2, or to have recognition of prior learning for the standards that make up this qualification.

Access to the qualification

This qualification is open to anyone with access to learning opportunities and work experience on an appropriate selection of systems. Should they not have the learning assumed to be in place, as stated above, before embarking on learning towards this qualification, appropriate adjustments to the learning process will be needed.

Exit level outcomes:

Fundamental exit level outcomes:

- Communicate in a variety of ways
- Use mathematics in real life situations
- Apply process chemistry and related technology

See Annexure A for the list of unit standards that relate to these exit level outcomes.

Core exit level outcomes

- Comply with legislation and instructions
- Operate systems

See Annexure B for the list of unit standards that relate to these exit level outcomes.

Elective exit level outcomes

No elective exit level outcomes are prescribed for this qualification.

The knowledge and skill described in the unit standards listed in Annexure C are relevant to this qualification and may be added to the qualification.

Credits and rules of combination

Fundamental (See Annexure A for the detail):

- 20 Communications credits from the list specified
- 18 Mathematics credits from the list specified
- 10 Science and Technology credits from the list specified

Core (See Annexure B for the detail):

- 14 underpinning credits
- 70 process operating credits.

Elective (See Annexure C for the detail):

- Additional credits from the list specified may be appropriate for an individual's career.

Summary of credit composition

FUNDAMENTAL	CORE	ELECTIVE	TOTAL
LEVEL 1			
LEVEL 2			
LEVEL 3	48	74	122
LEVEL 4			
TOTAL	38	74	122

Elective credits are not included in minimum total value indicated.

Integrated Assessment

For award of the qualification, a candidate must achieve each unit standard as listed above.

In addition, candidates must demonstrate the ability to engage in the operations selected in an integrative way, making use of the theoretical aspects of operations when dealing with practical demands related to operating equipment in a chemical process. Evidence is required that the candidate is able to achieve the purpose of the qualification as a whole at the time of the award of the qualification.

Range statements

The unit standards provide the details of the ranges within which candidates are required to perform.

Critical cross-field outcomes

This qualification addresses the following critical cross-field outcomes. The way in which the critical cross-field outcomes are addressed is presented in detail in the unit standards outlined in the Annexures.

- a) identifying and solving problems in which responses display that responsible decisions using critical and creative thinking have been made
- b) working effectively with others as a member of a team, group, organization, or community
- c) organizing and managing oneself and one's activities responsibly and effectively
- d) collecting, analyzing, organizing and critically evaluating information
- e) communicating effectively using visual, mathematical and/or language skills in the modes of oral and/or written persuasion
- f) using science and technology effectively and critically, showing responsibility towards the environment and health of others
- g) demonstrating an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.

Recognition of prior learning

This qualification can be achieved wholly or in part through recognition of prior learning in terms of the criteria laid out above.

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

All such evidence should be judged according to the general principles of assessment described in the note to assessors below.

International comparability

This qualification and the component unit standards have been compared with similar qualifications from the following countries:

- United Kingdom
- New Zealand
- Australia.

In addition, the abilities described in the unit standards have also been compared with similar qualifications prepared by the Mining and Minerals, Construction and Manufacturing SGBs.

In general this qualification and its component unit standards compare well with their international and local counterparts. The major differences are in formatting and scope of coverage or focus.

Accreditation and moderation

Providers offering learning towards achievement of any of the unit standards that make up this qualification must be accredited by the Chemical Industries Sector Education and Training Authority (CHIETA).

The criteria for accreditation are stated in the SAQA ETQA Regulations.

Assessment must be carried out by an assessor who is:

- A subject matter expert.
- Registered as an assessor by the appropriate ETQA
- Administered, advised and coached by the appropriate Moderator

Particular accreditation requirements related to this qualification are:

- Adequate exposure to an appropriate workplace to ensure that the assessment criteria of the unit standards are met.
- That integrative assessment of related standards is carried out. This is of particular importance when assessing the standards relating to the operation of equipment.

Verification of moderation

Verification of moderation must be conducted by the appropriate ETQA

Notes

Notes for assessors:

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

- Focus the initial assessment activities on gathering evidence in terms of the main outcomes expressed in the titles of the unit standards to ensure assessment is

Notes

Notes for assessors:

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

- Focus the initial assessment activities on gathering evidence in terms of the main outcomes expressed in the titles of the unit standards to ensure assessment is integrated rather than fragmented. The aim is to declare the person competent in terms of the qualification purpose. Where assessment at across titles or at title level is unmanageable, then focus assessment around each specific outcome, or groups of specific outcomes. Take special note of the need for integrated assessment.
- Make sure evidence is gathered across the entire range, wherever it applies. Assessment activities should be as close to the real performance as possible, and where simulations or role-plays are used, there should be supporting evidence to show the candidate is able to perform in the real situation.
- All assessments should be conducted in line with the following well documented principles of assessment as defined below:

Principles of assessment:

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

Annexure A

Fundamental

Communication

Candidates are required to achieve all the following standards:

Number	Title	Level	Credit
FET - C/04	Accommodate audience and context needs in oral communication	3	5
FET - C/05	Interpret and use information from texts	3	5
FET - C/06	Write texts for a range of communicative contexts	3	5
FET - S/17	Use language and communication in occupational learning programmes	3	5
TOTAL			
20			

Mathematics/Numeracy

Candidates are required to achieve all the following standards:

Number	Title	Level	Credit
Math 3001a	Identify and work with simple forms of complex numbers	3	1
Math 3002	Work with a wide range of patterns and transformations of functions and solve related problems	3	8
Math 3003	Use structured models to describe, represent and analyze shape and motion in 2- and 3-dimensional space	3	4
Math 3004	Collect and use data to establish statistical and probability models and solve related problems	3	5
TOTAL			
18			

Science and Technology

Candidates are required to achieve the following standard:

Number	Title	Level	Credit
CI GEN 3 001	Solve operating problems using process chemistry and related technology	3	10
TOTAL			
10			

Exit level outcome: Apply process chemistry and related technology

Annexure B Core

Candidates are required to achieve all the following standards:

Number	Title	Level	Credit
CI GEN 3 002	Conform to and apply legislation and operational instructions in Chemical Processing	3	4
CI GEN 3 003	Establish system start up conditions	3	10
CI GEN 3 004	Start up the system	3	10
CI GEN 3 005	Monitor and maintaining system conditions	3	10
CI GEN 3 006	Collect and interpreting non-routine information regarding system conditions	3	10
CI GEN 3 007	Shutting down the plant to a specified state	3	10
CI GEN 3 008	Contributing to the maintenance of a system	3	10
CI GEN 3 009	Respond to hazardous conditions or emergencies	3	10
TOTAL			74

Annexure C Electives

In addition to the fundamental and core requirements specified above, candidates may add additional standards that are applicable to their careers.

Number	Title	Level	Credit
	Use core quality management tools	3	6
	Perform changeovers in a chemical manufacturing environment	3	5
	Remove, inspect and/or repair, replace and test components and units		
EUC 9	Produce and use spreadsheets for business	3	5
EUC 7	Produce word processing documents for business	3	5
TOTAL			21

- Monitor and control a range of integrated systems in a chemical process complying with safety, health, environment, chemical hazards, quality, legal requirements and (site operating) instructions to produce products. This includes monitoring and controlling a chemical process during non-routine conditions such as commissioning. (This requires wide ranging technical skills.)
 - Co-ordinate the operation of a chemical process.
 - Communicate and liaise with the persons operating the systems, management, maintenance, support services (water, steam, compressed air, emergency ...) and controlling associated plants.
 - Detect potential or actual problems and take corrective action in terms of instructions to prevent the interruption of the chemical process and any other associate (up or down stream) processes. (Decision making usually takes place in a familiar context but does include unfamiliar situations including emergencies.)
- People credited with this qualification are able to:

For the purposes of this qualification a process is understood to be a range of systems operated in an integrated manner to produce a product or products.

Recipients of this qualification know about and are able to control the operation of a large chemical process operation.

This qualification is aimed at people who work or intend to work within a large process operation in the chemical or similar industry, and seek recognition for skills essential for controlling such a process.

Purpose of qualification

Review date

Issue date

Sub Field

Manufacturing and Assembly

Field:

Manufacturing, Engineering and Technology

Total Credit Value: 120

Level: 4

National Certificate in Chemical Operations - Level 4

No. 875

28 June 2002

Rationale

The candidates for this qualification will be working in a large process operation, which is made up of many systems. Process control of the operation requires the specific knowledge and skills described in the systems operation qualification (National Certificate in Chemical Process Operations – Level 3. This knowledge and skill is applied simultaneously in achieving the integrated control of the whole process. The recipient of this qualification will have acquired additional knowledge and developed the skills necessary to consider multi-variable process related problems where considerable choice exists within the limits of the instructions provided. In addition the recipient will be able to make decisions and take action in short periods of time.

There is also a critical need in the industry to identify people who are able to conduct these essential operations associated with efficient and safe operation of equipment in the chemical industry.

Articulation

This qualification is based upon the knowledge and skills described in the National Certificate in Chemical Process Operations – Level 3 that is applied in controlling a large process operation.

The knowledge and skill acquired in this qualification are applicable for similar careers such as process supervision/supervisory management and process development.

Learning assumed to be in place

Candidates embarking on learning towards this qualification are expected to have the National Certificate in Chemical Operations – Level 3. Alternatively they must have the recognition of prior learning for the standards address in this qualification.

Access to the qualification

This qualification is open to anyone with access to the necessary learning opportunities and work experience on the specific system. Should a learner not have the learning assumed to be in place, as stated above, before embarking on learning towards this qualification, appropriate adjustments to the learning process will be needed.

Exit level outcomes and rules of combination

Exit level outcomes:

Fundamental exit level outcomes:

- Communicate in a variety of ways
- Use mathematics in real life situations

See Annexure A for the list of unit standards that relate to these exit level outcomes.

Core exit level outcomes:

- Establish conditions for process start up
- Start the process
- Control the process
- Collect, interpret and communicate information concerning process conditions
- Shut down the process
- Respond to abnormal process conditions
- Respond to hazardous and emergency conditions

See Annexure B for the list of unit standards that relate to these exit level outcomes.

Elective exit level outcomes

No elective exit level outcomes are prescribed.

Knowledge and skill in the following is relevant to this qualification and may be added to the qualification.

See Annexure C for the list of unit standards that are relevant to this qualification.

Credits and rules of combination

Fundamental (See Annexure A for the detail):

- 20 Communications credits from the list specified
- 16 Mathematics credits from the list specified

Core (See Annexure B for the detail):

- A minimum of 84 process operating credits is required.

Elective (See Annexure C for the detail):

- No elective standards are specified for this qualification.

Summary of credit composition

	FUNDAMENTAL	CORE	ELECTIVE	TOTAL
LEVEL 1				
LEVEL 2				
LEVEL 3				
LEVEL 4	36	84		120
TOTAL	36	84		120

Integrated Assessment

For award of the qualification, a candidate must achieve each unit standard as listed.

In addition, candidates must demonstrate the ability to engage in the operations contained in the chemical process in an integrative way, dealing with practical demands related to operating equipment, systems and the process as a whole. Evidence is

required that the candidate is able to achieve the purpose of the qualification as a whole at the time of the award of the qualification.

Range statements

The unit standards provide the details of the ranges within which candidates are required to perform.

Critical cross-field outcomes

This qualification addresses the following critical cross-field outcomes. The way in which the critical cross-field outcomes are addressed is presented in detail in the unit standards outlined in the Annexures.

- a) identifying and solving problems in which responses display that responsible decisions using critical and creative thinking have been made
- b) working effectively with others as a member of a team, group, organization, or community
- c) organizing and managing oneself and one's activities responsibly and effectively
- d) collecting, analysing, organizing and critically evaluating information
- e) communicating effectively using visual, mathematical and/or language skills in the modes of oral and/or written persuasion
- f) using science and technology effectively and critically, showing responsibility towards the environment and health of others
- g) demonstrating an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.

Recognition of prior learning

This qualification can be achieved wholly or in part through recognition of prior learning in terms of the criteria described above.

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

All such evidence should be judged according to the general principles of assessment described in the note to assessors below.

International comparability

This qualification and the component unit standards have been compared with similar qualifications from the following countries:

- United Kingdom
- New Zealand
- Australia.

In addition, the abilities described in the unit standards have also been compared with similar qualifications prepared by the Mining and Minerals, Construction and Manufacturing SGBs.

In general this qualification and its component unit standards compare well with their international and local counterparts. The major differences are in formatting and scope of coverage or focus.

Accreditation and moderation

Providers offering learning towards achievement of any of the unit standards that make up this qualification must be accredited by the Chemical Industries Sector Education and Training Authority (CHIETA).

The criteria for accreditation are stated in the SAQA ETQA Regulations.

Assessment must be carried out by an assessor who is:

- A subject matter expert.
- Registered as an assessor by the appropriate ETQA
- Administered, advised and coached by the appropriate Moderator

Particular accreditation requirements related to this qualification are:

- Adequate exposure to an appropriate workplace to ensure that the assessment criteria of the unit standards are met.
- That integrative assessment of related standards is carried out. This is of particular importance when assessing the standards relating to the operation of equipment.

Verification of moderation

Verification of moderation must be conducted by the appropriate ETQA

Notes

Notes for assessors:

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- **Manageable:** The methods used make for easily arranged, cost-effective assessments that do not unduly interfere with learning.
- **Integrated into work or learning:** Evidence collection is integrated into the work or learning process where this is appropriate and feasible.
- **Valid:** The assessment focuses on the requirements laid down in the Standard; i.e. the assessment is fit for purpose.
- **Direct:** The activities in the assessment mirror the conditions of actual performance as closely as possible
- **Authentic:** The assessor is satisfied that the work being assessed is attributable to the person being assessed.
- **Sufficient:** The evidence collected establishes that all criteria have been met and that performance to the required Standard can be repeated consistently.
- **Systematic:** Planning and recording is sufficiently rigorous to ensure that assessment is fair.
- **Open:** Learners can contribute to the planning and accumulation of evidence. Assessment candidates understand the assessment process and the criteria that apply.
- **Consistent:** The same assessor would make the same judgement again in similar circumstances. The judgement made is similar to the judgement that would be made by other assessors.

Fundamental

Annexure A

Communication

Candidates are required to achieve all the following standards:

Number	Title	Level	Credit
FET - C/07	Engage in sustained oral communication and evaluate spoken texts	4	5
FET - C/08	Read, analyse and respond to a variety of texts	4	5
FET - C/09	Write for a wide range of texts	4	5
FET - S/18	Use language and communication in occupational learning programmes	4	5
TOTAL			20

Mathematics/Numeracy

Candidates are required to achieve all the following standards:

Number	Title	Level	Credit
Math 4001	Demonstrate understanding of real and complex number systems	4	3
Math 4001b	Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues	4	2
Math 4002	Work with a wide range of patterns and inverses of functions and solve related problems	4	6
Math 4004	Collect and use data to establish complex statistical and probability models and solve related problems	4	5
TOTAL			16

Core
Annexure B

Candidates are required to achieve all the following two standards:

Number	Title	Level	Credit
CI GEN 4 001	Establish conditions for process start-up	4	12
CI GEN 4 002	Start the process	4	12
CI GEN 4 003	Control the process within set parameters	4	12
CI GEN 4 004	Collect, interpret and communicate process conditions	4	12
CI GEN 4 005	Shut down the process to a specified state	4	12
CI GEN 4 006	Respond to abnormal process conditions	4	12
CI GEN 4 007	Respond to hazardous and emergency conditions	4	12
TOTAL			84

Annexure C Electives

In addition to the fundamental and core requirements specified above, candidates may add additional standards that are applicable to their careers.

Number	Title	
	Level	Credit
	4	10
	4	15
	4	10
	4	10
	3	4
		4
		39
		TOTAL

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

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

Mining and Minerals

Registered by NSB 06, Manufacturing, Engineering and Technology, publishes the following unit standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the unit standards upon which qualifications are based. The unit standards can be accessed via the SAQA web-site at www.saqa.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Pienaar street, Brooklyn, Pretoria.

Comment on the unit standards should reach SAQA at the address below and no later than 28 July 2002. All correspondence should be marked **Standards Setting – SGB Food 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 – 482 0907

SAMUEL B.A. ISAACS
EXECUTIVE OFFICER



Prepare borehole cuttings for logging and sampling purposes recovered from containers. (L2/Cr3)

- Specific outcome 1: Demonstrate the knowledge required to prepare (handle and lay out) borehole cuttings correctly for logging and sampling purposes
- Specific outcome 2: Prepare to lay out the borehole cuttings
- Specific outcome 3: Lay out the borehole cuttings
- Specific outcome 4: Conduct post laying out activities and compile a report

Prepare borehole core for logging and sampling purposes from core containers. (L3/Cr3)

- Specific outcome 1: Demonstrate the knowledge required to correctly prepare (handle and lay out) borehole core.
- Specific outcome 2: Prepare to lay out the borehole core
- Specific outcome 3: Lay out the borehole core
- Specific outcome 4: Conduct post-laying out activities and compile a report

Locate a surface geographical position by employing map-reading techniques. (L4/Cr5)

- Specific outcome 1: Demonstrate the knowledge required for locating a surface geographical position
- Specific outcome 2: Plan and prepare to locate a surface geographical position
- Specific outcome 3: Locate a surface geographical position
- Specific outcome 4: Clean up and compile a report

Electronic data capturing for geological interpretation and modelling purposes. (L4/Cr6)

- Specific outcome 1: Demonstrate the knowledge required for capturing geological related data for geological interpretation and modelling purposes
- Specific outcome 2: Prepare raw data for electronic data capturing
- Specific outcome 3: Enter and validate captured data
- Specific outcome 4: Archive the original raw data and compile completion report

Identify and verify the selected mining horizon. (L3/Cr3)

- Specific outcome 1: Demonstrate the knowledge required to identify the selected mining horizon
- Specific outcome 2: Plan and prepare to identify the selected mining horizon
- Specific outcome 3: Identify and verify the selected mining horizon
- Specific outcome 4: Compile and submit reports

Supervise the rehabilitation of a geological exploration site. (L4/Cr12)

- Specific outcome 1: Demonstrate the knowledge required to rehabilitate geological exploration sites
- Specific outcome 2: Plan and prepare to supervise the rehabilitation of a geological exploration site
- Specific outcome 3: Supervise the rehabilitation activity
- Specific outcome 4: Conduct post-rehabilitation activities, and compile and present completion reports

Cut borehole core with a mounted circular saw for logging and sampling purposes. (L3/Cr2)

Specific outcome 1: Demonstrate the knowledge required for cutting borehole core with a mounted circular saw
 Specific outcome 2: Prepare to cut borehole core
 Specific outcome 3: Prepare to cut borehole core
 Specific outcome 4: Clean up and compile and submit reports

Lay out an elementary grid on surface to conduct surface geological activities. (L3/Cr3)

Specific outcome 1: Demonstrate the knowledge required to lay out an elementary grid and to use basic measuring instruments
 Specific outcome 2: Prepare to lay out a grid on surface
 Specific outcome 3: Lay out a grid
 Specific outcome 4: Compile and present completion report

Sample stream sediment material for economic and environmental purposes. (L5/Cr3)

Specific outcome 1: Demonstrate the knowledge required to sample stream sediment material
 Specific outcome 2: Plan and prepare to sample stream sediment material
 Specific outcome 3: Sample the stream sediment material
 Specific outcome 4: Clean up and compile and submit reports

Sample soil material for economic and environmental purposes. (L4/Cr3)

Specific outcome 1: Demonstrate the knowledge required to sample soil material
 Specific outcome 2: Plan and prepare to sample soil material
 Specific outcome 3: Sample soil material
 Specific outcome 4: Clean up the sampling area and compile and submit reports

Manage a geological core yard facility. (L3/Cr5)

Specific outcome 1: Demonstrate the knowledge required to manage a geological core yard facility
 Specific outcome 2: Manage a geological core yard
 Specific outcome 3: Compile and present activity reports

Log borehole core to obtain geological information on the strata in a Witwatersrand type gold deposit. (L5/Cr7)

Specific outcome 1: Demonstrate the relevant knowledge that is required to log borehole core in a known Witwatersrand type gold deposit;
 Specific outcome 2: Prepare to log the borehole core;
 Specific outcome 3: Log the borehole core; and
 Specific outcome 4: Conduct post logging activities and compile and present reports.

Log borehole core to obtain geological information on the strata in a known coal deposit. (L5/Cr9)

Specific outcome 1: Demonstrate the knowledge required to log borehole core in a known coal deposit;
 Specific outcome 2: Prepare to log borehole core;
 Specific outcome 3: Log borehole core; and
 Specific outcome 4: conduct post-logging activities and compile and present reports

Log borehole core to obtain geological information on the depositional environment in a coal deposit. (L2/Cr12)

Specific outcome 1: Demonstrate the knowledge required to log borehole core in familiar and non-familiar coal deposits;
Specific outcome 2: Prepare to log borehole core;
Specific outcome 3: Log borehole core; and
Specific outcome 4: Conduct post-logging activities and compile and present reports.

Log and sample the coal seam in borehole core to obtain geological information on the coal seam qualities in a known coal deposit. (L5/Cr12)

Specific outcome 1: Demonstrate the knowledge required to log and sample the coal seam in borehole core in a known coal deposit;
Specific outcome 2: Prepare to log and sample the coal seam;
Specific outcome 3: Log the coal seam;
Specific outcome 4: Sample the coal seam; and
Specific outcome 5: Conduct post logging and sampling activities and compile and present reports.

Log and sample the coal seam in borehole core to obtain geological information on the coal characteristics in a Karoo-type Basin. (L6/Cr14)

Specific outcome 1: Demonstrate the knowledge required to log and sample the coal seam in borehole core in familiar and non-familiar coal deposits;
Specific outcome 2: Prepare to log and sample borehole coal seam core;
Specific outcome 3: Log the coal seam core;
Specific outcome 4: Sample the coal seam core; and
Specific outcome 5: Conduct post-logging and sampling activities and compile and present reports.

Log and sample faces to obtain geological information for coal quality control purposes in a colliery. (L5/Cr7)

Specific outcome 1: Demonstrate the knowledge required to log and sample faces for quality control purposes in a colliery;
Specific outcome 2: Prepare to log and sample the face;
Specific outcome 3: Log the face;
Specific outcome 4: Sample the face; and
Specific outcome 5: Conduct post-logging and sampling activities and compile and present reports.

Process general geological data from first principles to obtain information on the strata and coal characteristics in a coal deposit. (L5/Cr10)

Specific outcome 1: Demonstrate the knowledge required to process coal geological data;
Specific outcome 2: Plan and prepare to process coal geological data;
Specific outcome 3: Verify and reduce coal geological data to information;
Specific outcome 4: Collate the processed coal geological data to information; and
Specific outcome 5: Compile and present reports.

Log borehole core to obtain geological information on the strata in a known layered igneous deposit. (L5/Cr7)

Specific outcome 1: Demonstrate the knowledge required to log borehole core in a layered igneous deposit within a known geological environment;
Specific outcome 2: Prepare to log borehole core;
Specific outcome 3: Log borehole core; and
Specific outcome 4: Conduct post-logging activities and compile and present reports.

Log borehole core to obtain geological information in a layered igneous deposit in problematic and unfamiliar environments. (L6/Cr10)

Specific outcome 1: Demonstrate the knowledge required to log borehole core in problematic and unfamiliar geological environments;
Specific outcome 2: Prepare to log borehole core;
Specific outcome 3: Log borehole core; and
Specific outcome 4: Conduct post-logging activities, and compile and present reports.

Unit Standards for Gazetting by NSB 06 from the M&M

SGB

Surface Mining (17)

Transport and distribute explosives using a Light Delivery Explosives Vehicle (L1/Cr4)

Specific outcome 1: Prepare to transport and distribute explosive components
Specific outcome 2: Transport and distribute explosive components; and
Specific outcome 3: Monitor transportation and distribution of explosive components.

De-water blast holes using Vehicle Mounted De-watering Pump (L1/Cr4)

Specific outcome 1: Prepare to de-water blast holes;
Specific outcome 2: De-water blast holes; and
Specific outcome 3: Monitor de-watering operation.

Operate a Skid Steer Loader (L1/Cr4)

Specific outcome 1: Prepare to operate a Skid Steer Loader;
Specific outcome 2: Operate a Skid Steer Loader; and
Specific outcome 3: Monitor the operation of a Skid Steer Loader.

Drill holes using a Small Diameter Rotary Drill not exceeding 170 mm (L2/Cr10)

Specific outcome 1: Prepare to drill holes;
Specific outcome 2: Drill holes; and
Specific outcome 3: Monitor drilling operation

Drill holes using Large Diameter Rotary Drill exceeding 170 mm (L2/Cr12)

Specific outcome 1: Prepare to drill holes;
Specific outcome 2: Drill holes; and
Specific outcome 3: Monitor drilling operation.

Drill holes using Down The Hole Drill (L2/Cr6)

Specific outcome 1: Prepare to drill holes;

Specific outcome 2: Drill holes; and
Specific outcome 3: Monitor drilling operation.

Drill holes using Track Type Percussion (L2/Cr6)

Specific outcome 1: Prepare to drill holes;

Specific outcome 2: Drill holes; and
Specific outcome 3: Monitor drilling operation.

Load, transport and place explosives components into blast holes using a Mixer-Placer Truck (L2/Cr6)

Specific outcome 1: Prepare to load, transport and place explosives components into blast holes;

Specific outcome 2: Load, transport and place explosives components; and

Specific outcome 3: Monitor loading, transporting and placing of explosives components operations.

Doze material using a Track Dozer with mass exceeding 30 000 kg (L2/Cr16)

Specific outcome 1: Prepare to doze material;

Specific outcome 2: Doze material; and

Specific outcome 3: Monitor dozing operation.

Transport and distribute fuel using Off Highway Fuel Bowser. (L1/Cr4)

Specific outcome 1: Prepare to transport and distribute fuel;

Specific outcome 2: Transport and distribute fuel; and

Specific outcome 3: Monitor transporting and distributing operation.

Illuminate an area using a Lighting Plant (L1/Cr1)

Specific outcome 1: Prepare to illuminate an area;

Specific outcome 2: Illuminate an area; and

Specific outcome 3: Monitor Lighting Plant operations.

Pump water using an Electrical De-watering Pump (L1/Cr1)

Specific outcome 1: Prepare to pump water;

Specific outcome 2: Pump water; and

Specific outcome 3: Monitor pumping operations.

Demonstrate knowledge regarding legal aspects, types and application of Explosives and Accessories. (L3/Cr15)

Specific outcome 1: Demonstrate legal knowledge of explosives and accessories;

Specific outcome 2: Demonstrate knowledge of types of explosives and accessories;

Specific outcome 3: Demonstrate knowledge of applications of explosives and accessories.

Prepare and mark off work area for drilling.(L2/Cr1)

Specific outcome 1: Prepare to mark off the workplace for drilling;

Specific outcome 2: Mark off the workplace to be drilled; and

Specific outcome 3: Monitor the marking off operations for drilling

Charge shot holes with explosives and initiate blast.(L2/Cr15)

Specific outcome 1: prepare to charge shot holes and initiate blast;
Specific outcome 2: Initiate the blast; and
Specific outcome 3 monitor charging and blasting operations.

Treat and blast misfires.(L2/Cr1)

Specific outcome 1: Prepare to treat and blast a misfire;
Specific outcome 2: Treat and Blast misfires; and
Specific outcome 3: Monitor the treating and blasting operation.

Destroy old explosives in the workplace.(L2/Cr1)

Specific outcome 1: Prepare to destroy old explosives in the workplace;
Specific outcome 2: Destroy old explosives; and
Specific outcome 3: Monitor destruction of old explosives.

Metallurgy (20)

Replace medium in a fluidised bed roaster. (L2/Cr3)

Specific outcome 1: Demonstrate knowledge relating to the replacement of medium;
Specific outcome 2: Prepare to replace medium;
Specific outcome 3: Replace medium; and
Specific outcome 4: Complete the duties pertaining to the replacement of medium

Regenerate organic solvent. (L2/Cr4)

Specific outcome 1: Demonstrate knowledge relating to organic solvent regeneration;
Specific outcome 2: Prepare to regenerate organic solvent;
Specific outcome 3: Regenerate organic solvent; and
Specific outcome 4: Complete the duties pertaining to the regeneration process.

Convert platinum group metal salts to a sponge form. (L3/Cr5)

Specific outcome 1: Demonstrate knowledge relating to the conversion of the platinum group metal salt;
Specific outcome 2: Prepare to convert the platinum group metal salt;
Specific outcome 3: Convert the platinum group metal salt; and
Specific outcome 4: Complete the duties pertaining to the converting process.

Neutralize plant tailings for final disposal. (L2/Cr3)

Specific outcome 1: Demonstrate knowledge relating to the neutralizing process;
Specific outcome 2: Prepare to neutralize tailings;
Specific outcome 3: Neutralize tailings; and
Specific outcome 4: Complete the duties pertaining to the neutralizing process.

Dispatch platinum group metals (L2/Cr4)

Specific outcome 1: Demonstrate knowledge relating to the dispatch process
Specific outcome 2: Prepare for the dispatch process
Specific outcome 3: Dispatch platinum group metals
Specific outcome 4: Complete the duties pertaining to the dispatch process

Control the water reticulation in a metallurgical process. (L2/Cr4)

Specific outcome 1: Demonstrate knowledge relating to control the water reticulation system;
Specific outcome 2: Prepare to control the water reticulation system;
Specific outcome 3: Control the water reticulation system; and
Specific outcome 4: Complete the duties pertaining to the controlling of the water reticulation system.

De-sliming material by means of a screen. (L2/Cr2)

Specific outcome 1: Demonstrate knowledge relating to the de-sliming of material;
Specific outcome 2: Prepare to de-slime material;
Specific outcome 3: De-slime material; and
Specific outcome 4: Complete the duties pertaining to the de-sliming process

Separate liquid from solids by means of a centrifuge. (L2/Cr2)

Specific outcome 1: Demonstrate knowledge relating to the separation of material;
Specific outcome 2: Prepare to separate material;
Specific outcome 3: Separate material; and
Specific outcome 4: Complete the duties pertaining to the separation process.

Remove airborne dust by means of a scrubber. (L2/Cr3)

Specific outcome 1: Demonstrate knowledge relating to the scrubbing process;
Specific outcome 2: Prepare to remove airborne dust;
Specific outcome 3: Remove airborne dust; and
Specific outcome 4: Complete the duties pertaining to the scrubbing process.

Determine relative density by means of a density scale. (L2/Cr3)

Specific outcome 1: Demonstrate knowledge relating to the determination of relative density
Specific outcome 2: Prepare to determine relative density
Specific outcome 3: Determine relative density
Specific outcome 4: Complete the duties pertaining to the determination of relative density

Determine relative density by means of a density scale. (L2/Cr3)

Specific outcome 1: Demonstrate knowledge relating to the determination of relative density
Specific outcome 2: Prepare to determine relative density
Specific outcome 3: Determine relative density
Specific outcome 4: Complete the duties pertaining to the determination of relative density

Generate compressed air. (L2/Cr3)

Specific outcome 1: Demonstrate knowledge relating to the generation of compressed air
Specific outcome 2: Prepare to generate compressed air
Specific outcome 3: Generate compressed air
Specific outcome 4: Complete the duties pertaining to the generation of compressed air

Upgrade residue by means of a fusion process. (L2/Cr4)

Specific outcome 1: Demonstrate knowledge relating to the upgrading of residue by means of a fusion process
Specific outcome 2: Prepare to upgrade residue
Specific outcome 3: Upgrade residue
Specific outcome 4: Complete duties pertaining to the upgrading process

Handle molten material by means of an overhead crane. (L2/Cr4)

Specific outcome 1: Demonstrate knowledge relating to the handling of molten material
Specific outcome 2: Handle molten material
process

Maintain converter air flow by means of a tuyere punching process. (L2/Cr3)

- Specific outcome 1: Demonstrate knowledge relating to punching process
Specific outcome 2: Prepare to punch tuyeres
Specific outcome 3: Punch tuyeres
Specific outcome 4: Complete the duties pertaining to the punching process

Separate material by means of column froth flotation. (L3/Cr10)

- Specific outcome 1: Demonstrate knowledge relating to the separation of material by means of column froth flotation
Specific outcome 2: Prepare to separate material
Specific outcome 3: Separate material
Specific outcome 4: Complete the duties pertaining to the separation process

Transfer fluid by means of a positive displacement pump. (L2/Cr2)

- Specific outcome 1: Demonstrate knowledge relating to the transfer of fluid by means of a positive displacement pump
Specific outcome 2: Prepare to transfer fluid
Specific outcome 3: Transfer fluid
Specific outcome 4: Complete the duties pertaining to the transferring process

Separate material by means of a wet high intensity magnetic separator (WHIMS). (L3/Cr5)

- Specific outcome 1: Demonstrate knowledge relating to the separation process
Specific outcome 2: Prepare to separate material
Specific outcome 3: Separate material
Specific outcome 4: Complete the duties pertaining to the separation process

Remove airborne dust by means of a bag filter. (L2/Cr3)

- Specific outcome 1: Demonstrate knowledge relating to the filtering process
Specific outcome 2: Prepare to remove airborne dust
Specific outcome 3: Remove airborne dust
Specific outcome 4: Complete the duties pertaining to the filtering process

Control feed rate by means of a feeder. (L2/Cr2)

- Specific outcome 1: Demonstrate knowledge relating to the control of the feed rate of material
Specific outcome 2: Prepare to control the feed rate
Specific outcome 3: Control the feed rate
Specific outcome 4: Complete the duties pertaining to the controlling of the feed rate

No. 877

28 June 2002

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

Procurement, Supply Chain and Management

Registered by NSB 03, Business, Commerce and Management Studies publishes the following qualifications 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 upon which qualifications are based. The full qualification and unit standards can be accessed via the SAQA web-site at www.saqa.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Pienaar street, Brooklyn, Pretoria.

Comment on the unit standards should reach SAQA at the address below and no later than 28 July 2002. All correspondence should be marked **Standards Setting - SGB Procurement, Supply Chain and Management** 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 – 482 0907

SAMUEL B.A. ISAACS
EXECUTIVE OFFICER

NATIONAL CERTIFICATE IN INTERNATIONAL TRADE: NQF LEVEL 2

1.	Field:	Business, Commerce and Management Studies
2.	Sub-Field:	Purchasing
3.	Level:	2
4.	Credits:	126
5.	Rationale for the qualification	

New entrants to the Freight Industry in South Africa do not have the opportunity to gain a comprehensive foundation in the processes, terms and practices in the industry. This has resulted in frustrated and confused individuals with unrealised potential leaving the industry for other industries that welcome them and facilitate their entry. This qualification has been developed to provide new entrants with a solid foundation applicable in the workplace, for which they will gain recognition in the form of a national qualification.

This qualification is the start of a career path in the industry. The skills, values, attitudes and knowledge reflected in this qualification are building blocks that will prepare learners for progression along the industry's learning ladder of registered qualifications.

Such a qualification will also provide opportunities for current employees in the industry to seek recognition for prior learning, gained in the workplace or through other studies, against the outcomes of the Unit Standards in this qualification.

6. Purpose

The purpose of this qualification is to provide learners (new entrants to and existing, unqualified employees in the industry) who have had schooling at NQF Level 1 or below with the conceptual framework and skills required to perform basic functions within the International Freight Forwarding environment. It can also be seen as serving as a bridging qualification for learners who move from formal schooling to the Forwarding and Clearing industry.

This qualification is intended to orientate a person to the world of work in the field of global trade. It will give learners the opportunity to apply knowledge gained about the industry to real situations in the workplace.

The Unit Standards in the qualification are intended as building blocks that will make the learner a more skilled, knowledgeable, informed, and efficient worker in the industry.

The completion of this qualification should add to the status of the worker and serve as an encouragement to embark on further study within the industry as a part of a process of life long learning. The qualification will also provide the basis for further development of the learner into specialist areas within the Forwarding and Clearing industry.

7. Access to the qualification

There is open access to this qualification.

8. Credit composition

Component	Level 2	Level 3	TOTAL
Fundamental	50		50
Core	56	3	59
Elective	26		Minimum 17
TOTAL	132	3	126

Fundamental: All Unit Standards in the Fundamental section are compulsory. Communication Skills are allocated 22 credits and Mathematical Literacy 16 credits. In addition a further 12 credits are allocated to Computer Literacy skills. This gives a total of 50 credits.

Core All Unit Standards in the Core section totalling 59 credits are compulsory.

Elective: Unit Standards totalling 26 credits have been included in this component. The learner is required to select Unit Standards totalling a minimum of 17 credits from this list. Other electives may be added to this list in the future.

9. Learning assumed to be in place:

Competence in Communications and Mathematical Literacy at NQF Level 1 is assumed. As the qualification contains Fundamental Unit Standards in Computer Literacy it is assumed that the learner has a basic knowledge of computer software packages so as to be able to do these Unit Standards. If this is not the case, the learner will have to become competent in that field prior to tackling these standards.

10. Exit Level Outcomes

The outcomes are specified in terms of a combination of Specific Outcomes and Critical Cross-Field Outcomes.

- On completion of this qualification, the learner will be able to:
- Operate in the International Trade environment
 - Display an understanding and comprehension of the concepts underpinning and supporting the operations within an international Trade environment and be able to apply them in work related situations
 - Operate a Personal Computer
 - Use the World Wide Web
 - Send and receive information relating to the work environment using electronic mail software
 - Apply an integrated understanding of the following learning areas in the workplace:
 - Basic Geography
 - International Trade Operations
 - Imports and Exports
 - International Trade Documentation
 - Cargo Care
 - Specialised Freight
 - Basic Transport Principles
 - Basic written and oral communication skills in the work environment.

11. Associated Assessment Criteria

The assessment criteria of the qualification are embodied in the Unit Standards. The depth of technical expertise that will be assessed across the various contexts is clearly articulated in the relevant specific outcomes, assessment criteria and range statements within these unit standards.

12. International Comparability

The South African Association of Freight Forwarders is a founder member of FIATA (The International Federation of Freight Forwarders Associations) which in turn represents the industry in over 150 countries. The National Diploma in Freight Forwarding: NQF Level 5 has been granted registration with FIATA and is regarded as equivalent to the International FIATA Diploma in Freight Forwarding. The International Diploma has subsequently been amended by FIATA to include some of the Unit Standards that go to make up the South African National Diploma in Freight Forwarding NQ Level 5.

This qualification and the National Certificates in Freight Forwarding NQF Levels 3 and 4 are regarded as the building blocks towards the Level 5 qualification.

The German Apprenticeship System for Freight Forwarders operates similarly to the South African learnership system and representatives of CATS (Commercial Advancement Training Scheme) which is a joint creation of the Southern African - German Chamber of Commerce and Industry have agreed that the scope, content (Unit Standards), assessment criteria and degree of difficulty of the Level 2, 3 and 4 qualifications can be benchmarked against training programmes used in the industry in Germany, although direct equivalence with specific German qualifications is not possible.

13. Integrated Assessment:

Integrated assessment should provide 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 must judge the quality of the observable performance and the quality of thinking and understanding that underpins it. This integrated approach applies to both formative and summative assessment. In formative assessment activities, a greater weighting should be given to the application of knowledge and skills to real situations, with a smaller weighting going to the assessment of a knowledge of the concepts involved.

Assessment tools must encourage learners to give an account of the thinking and decision-making that form the basis for their demonstrated performance. In other words, learners must provide an interpretation of their actions. This is especially important considering that part of the purpose of the qualification is to provide a foundation for the learner who is entering or has just entered the industry. In the case of current employees seeking recognition of prior learning or employees who have been a short while in the industry, assessors must be particularly vigilant to ensure that justification and explanation for actions are provided. This is to prevent routine or repetitive types of behaviour being mistaken for demonstration of competence and understanding.

An integrated mix of task-orientated and theoretical assessment tools may be used with the ultimate focus being on the assessment of applied competence. In particular when assessing the applied competence (practical, foundational and reflective competencies) of this qualification, assessors must assess the ability of the learner to:

1. Identify and solve problems in which responses display that responsible decisions, using critical thinking, have been made
2. Work effectively with others as a member of a team, group, organisation or community
3. Organise and manage his/herself and his/her activities responsibly and effectively
4. Collect, analyse, organise and critically evaluate information
5. Communicate effectively using visual, mathematical, and/or language skills in the modes of written and/or oral presentation
6. Use science and technology effectively and critically, showing responsibility towards the environment and health of others
7. Consider environmental factors such as climate in the planning of national and international transportation
8. Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation.

Specific examples demonstrating how the above Critical Cross-Field Outcomes are relevant to the Specific Outcomes are given in each Unit Standard.

Integrated Assessment should provide learners with the opportunity to display an ability to integrate practical performance, actions, concepts and theory across unit standards to achieve competence in relation to the purpose of this qualification.

14. Recognition of Prior Learning

This qualification may be achieved in part or completely through the recognition of prior learning. The learner can provide evidence of prior learning through assessment of tasks carried out at work, through the presentation of a portfolio of work previously done, through a statement by a supervisor of work carried out, through a testimonial and by the completion of another qualification which contains Unit Standards or aspects of the content of the contents of this qualification. The prior learning can consist of formal, informal and non-formal learning and work experience.

15. Criteria for the registration of assessors:

Assessors of this qualification will hold a qualification in the field that is at least one level above that of this qualification, or possess the technical expertise to achieve such a qualification. The assessor will be registered with the relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

16. Exit Points for Learners who do not complete the qualification

Learners exiting the qualification before completion will be credited with the Unit Standards in which they have been assessed and demonstrated competence. These credits may be used as evidence of Prior Learning for other qualifications in the industry.

17. Articulation possibilities

Learners completing this qualification will gain access to the following qualifications in the industry:

- National Certificate in Freight Forwarding: NQF Level 3
- National Certificate in Customs Clearing: NQF level 3.

The Unit Standards contained in this qualification in which the learner has demonstrated competence will not have to be repeated if they make up part of another qualification in the industry.

18. The following depicts the rules of combination for this qualification

Fundamental Unit Standards. The learner must achieve all of the following:

NUMBER	TITLE	NQF LEVEL	CREDITS
8417	Use Numeracy for Self Organisation	2	2
7812	Perform Basic Calculations	2	3
8982	Demonstrate understanding of rational and irrational numbers and number systems, within the context of relevant calculations	2	3
9007	Work with a range of patterns and functions to solve problems	2	5
9009	Apply Basic Knowledge of Statistics and Probability in order to investigate life related problems	2	3
Total			
16			
Computer Literacy			
7571	Demonstrate ability to use electronic software to send and receive messages	2	3
7573	Demonstrate ability to use the World Wide Web	2	3
7547	Operate a Personal Computer System	2	6
Total			
12			
Communication			
XX103	Apply Basic Written and Oral Communication Skills	2	10
XX101	Communicate with people from other cultures	2	2
XX103	Maintain and adapt oral communication	2	5
XX105	Write for a defined context	2	5
Total			
22			
TOTAL			
50			

Core Unit Standards. The learner must achieve all of the following:

NUMBER	TITLE	NQF LEVEL	CREDITS
11406	Apply a knowledge of Basic Geographic Principles	2	7
11407	Display an understanding of the International Trading Environment	2	7
11408	Understand the basic concepts of Importing and Exporting	2	7
11409	Apply a knowledge and understanding of International Trade Documentation	2	7
11410	Apply basic concepts of Cargo Care	2	7
11411	Demonstrate a knowledge and understanding of elementary Freight Forwarding Procedures, Processes and Systems	2	7

Elective Unit Standards

The learner must select a minimum of 17 credits from the following Unit Standards:

NUMBER	TITLE	NQF LEVEL	CREDITS
11412	Demonstrate a knowledge and understanding of advanced Freight Forwarding Procedures, Processes and Systems	2	7
11413	Apply an understanding of basic Transport Principles to International Trade	2	7
1414	Perform Basic Customs and Carrier Release Procedures	3	3
TOTAL			59

NUMBER	TITLE	NQF LEVEL	CREDITS
8618	Organise oneself in the workplace	2	7
8420	Operate in a Team	2	4
EUC1	Describe the application and impact as well as social implications of Information Technology	2	5
7799	Maintain a safe working environment	2	2
8494	Demonstrate an understanding of HIV/AIDS and its implications	2	4
8418	Do Basic Research	2	4
TOTAL			26

Unit Standards at NQF Level 2

1. Title: Use Numeracy for self organisation
2. Title: Perform Basic Calculations
3. Title: Demonstrate understanding of rational and irrational numbers and number systems, within the context of relevant calculations
4. Title: Work with a range of patterns and functions to solve problems
5. Title: Apply basic knowledge of Statistics and Probability in order to investigate life related problems
6. Title: Demonstrate ability to use electronic software to send and receive messages
7. Title: Demonstrate ability to use World Wide Web
8. Title: Operate a Personal Computer
9. Title: Apply Basic Written and Oral Communication Skills
10. Title: Communicate with people from other cultures
11. Title: Maintain and adapt oral communication
12. Title: Write for a defined context
13. Title: Apply a knowledge of Basic Geographic Principles
14. Title: Display an understanding of the International Trading Environment
15. Title: Understand the basic concepts of Importing and Exporting
16. Title: Apply a knowledge and understanding of International Trade

- Documentation
17. Title: Apply basic concepts of Cargo Care
18. Title: Demonstrate a knowledge and understanding of elementary Freight Forwarding Procedures, Processes and Systems
19. Title: Demonstrate a knowledge and understanding of advanced Freight Forwarding Procedures, Processes and Systems
20. Title: Apply an understanding of basic Transport Principles to International Trade
21. Title: Organise oneself in the workplace
22. Title: Operate in a Team
23. Title: Describe the Application and Impact as well as Social Implications of Information Technology
24. Title: Maintain a safe working environment
25. Title: Demonstrate an understanding of HIV/AIDS and its implications
26. Title: Do Basic Research

Unit Standards at NQF Level 3

1. Title: Perform Basic Customs and Carrier Release Procedures

Unit Standards and Specific Outcomes at NQF Level 2

1. Title: Apply a knowledge of Basic Geographic Principles

Specific Outcomes

- 1.1 Interpret a national and world map for the purpose of planning cargo transport methods and routes

- 1.2 Determine the route an item of cargo will follow between point of departure and final destination

- 1.3 Demonstrate an understanding of the intricacies of the relationship between South Africa and her various trading partners with regard to forwarding and clearing activities

2. Title: Display an understanding of the International Trading Environment

Specific Outcomes

- 2.1 Demonstrate knowledge and understanding of the South African trading environment in the context of international trade.

- 2.2 Recognise the different phases and elements of the trade cycle as they impact on each part of the international trading operation.

2.3 Display an understanding of the concepts of importing and exporting as part of the international trade cycle.

3. Title: Understand the basic concepts of Importing and Exporting

Specific Outcomes

3.1 Contextualise the relationship between the importer and exporter within the international trade cycle.

3.2 Assess various means of international transport in terms of cost, duration, labour intensity and availability.

3.3 Demonstrate an understanding of basic Customs procedures and the relationship between Customs and the trade industry.

4. Title: Apply a knowledge and understanding of International Trade Documentation

Specific Outcomes

4.1 Determine the route an item of cargo will follow between point of departure and final destination, indicating the various countries, climatic conditions, time zones, longitude and latitude of positions en route, as well as the foreign currencies that will be encountered en route.

4.2 Select the most appropriate mode of transport for cargo between two destinations considering the nature of the cargo, the applicable time constraints and the cost effectiveness of the selection.

4.3 Select the form of packaging, markings to be applied and cargo handling procedure to ensure safe and effective transportation of the cargo.

4.4 Identify the types of documentation required to enable the transportation of cargo between two destinations, where this cargo will move across international destinations and will be transported utilising varying modes of transport, involving multiple parties in the trade process.

5. Title: Apply basic concepts of Cargo Care**Specific Outcomes**

5.1 Select the appropriate packing unit for the type of transport mode

5.2 Identify commonly used Marks and Numbers as they appear on general cargo

5.3 Know and understand the concept of Cargo Care as it applies to the transportation of all types of cargo

6. Title: Demonstrate a knowledge and understanding of elementary Freight Forwarding Procedures, Processes and Systems**Specific Outcomes**

6.1 Display a comprehension of how airline procedures apply to imports and exports

6.2 Demonstrate an understanding of clearing procedures for goods imported by airfreight and seafreight

6.3 Explain the procedures used in a container depot

6.4 Display an understanding of the principles surrounding Customs House procedures

6.5 Distinguish between the roles of Transnet, Portnet and Spoornet within the international trade environment

6.6 Assess the various modes of transport and identify their role in specialised freight

6.7 Demonstrate an understanding of the role of technology transfers in the international trade environment

7. Title: Demonstrate a knowledge and understanding of advanced Freight Forwarding Procedures, Processes and Systems**Specific Outcomes**

7.1 Perform estimations within the context of a freight forwarding operation

7.2 Demonstrate an understanding of the processes and procedures employed in marine insurance and cargo claims

7.3 Distinguish between various payment systems within the freight forwarding environment

7.4 Demonstrate an elementary knowledge and comprehension of the Customs Act as it applies within the freight forwarding environment

8. Title: Apply an understanding of basic Transport Principles to International Trade

Specific Outcomes

8.1 Apply an understanding and comprehension of transport legislation in South Africa, to the transportation of goods within and across the borders of South Africa.

8.2 Display a comprehension and understanding of the contractual conditions of transport carriers.

8.3 Distinguish between the provisions of the various transport services available in South Africa.

Unit Standard Titles And Specific Outcomes At NQF Level 3

1. Title: Perform Basic Customs and Carrier Release Procedures

Specific Outcomes

1.1 Batch documents for submission to Customs, sequencing as per Customs requirements

1.2 Submit documents to Customs in correct format i.e. on computer disk with hard copy supporting documentation as required

1.3 Report on problems encountered in Customs releases, with a view to instituting corrective action as soon as possible

- 1.4 Collate and submit Customs released documents for port authority/ carrier release, taking cognisance of the urgent nature of the business

NATIONAL CERTIFICATE IN CUSTOMS CLEARING NQF LEVEL 3

1.	Field:	Business, Commerce and Management Studies
2.	Sub-Field:	Purchasing
3.	Level:	3
4.	Credits:	127
5.	Rationale for the qualification:	

This qualification is at the level where traditionally individuals in the Forwarding and Clearing industry have not had an opportunity to gain nationally recognised qualifications or part thereof, making inter-industry movement difficult.

This qualification has been developed to provide new entrants with a solid foundation applicable in the workplace, for which they will gain recognition in the form of a national qualification. This qualification can serve as the start of a career path in the industry for them. The skills, values, attitudes and knowledge reflected in this qualification are building blocks that will prepare learners for progression along the industry's learning ladder of registered qualifications. It can be regarded as the second step on the learning pathway in the Forwarding and Clearing industry.

Learners who achieve competence in the Unit Standards and/or the whole qualification will be able to move nationally within the industry with a recognised qualification.

6. Purpose

To provide learners with the conceptual framework and the skills necessary to perform routine functions within the Customs Clearing environment with minimum supervision.

This qualification is intended to equip learners to operate cross-functionally within the Customs Clearing environment of the Forwarding and Clearing industry. The qualification will also provide learners with a solid understanding of the relevant legislation governing the environment within which the learner operates.

Qualifying learners will be able to pursue further development and qualifications in the specialist area of Customs Clearing within the broader Forwarding and Clearing industry.

7. Access to the qualification

There is unrestricted access to this qualification for learners who are competent in:

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

Credit composition

Component	Level 3	Level 4	Total
Fundamental	49		49
Core	54	5	59
Elective	11	18	Min19
TOTAL	114	23	Min 127

Fundamental: All Unit Standards in the Fundamental section are compulsory. A total of 44 credits.

Core All Unit standards in the Core section are compulsory. A total of 59 credits.

Elective: Unit Standards with a total weighting of 29 credits have been developed for this component. The learner is required to select Unit Standards totalling a minimum of 19 credits from this list that are at or above NQF level 3, complying with any rules of combination. Other electives may be added to this list in the future.

8. Learning assumed to be in place:

The learning assumed to be in place is stated for each of the Unit Standards in this qualification and any learner who does not meet those requirements will need to do so through prior learning before commencing with the relevant Unit Standard.

9. Exit Level Outcomes

The outcomes are specified in terms of a combination of Specific Outcomes and Critical Cross-Field Outcomes.

On completion of this qualification, the learner will be able to display knowledge and understanding of and apply:

- Elementary Tariff Classifications
- Customs Valuations
- Duties & Tax Calculations
- Prohibited and Restricted Goods Administration (Imports)
- Prohibited and Restricted Goods Administration (Exports)
- Airfreight Procedures and Practice
- Surface Procedures and Practice.

The assessment criteria of the qualification are embodied in the Unit Standards. The depth of technical expertise that will be assessed across the various contexts are clearly articulated in the relevant specific outcomes, assessment criteria and range statements within these Unit Standards.

10. Associated Assessment Criteria

- The learner will be able to:
- Communicate Verbally and Non-Verbally
- Function in a Business Environment
- Address problems in the workplace
- Produce word processing documents for business
- Maintain effective working relationships with other members of staff
- Operate a Computer
- Organise him/herself in the workplace
- Perform International Trade Calculations
- Perform Basic Business Calculations.

11. International comparability

The qualification was compared with qualifications from various institutions accredited in other countries in terms of specific outcomes, assessment criteria and degree of difficulty.

The German Apprenticeship System for Freight Forwarders operates similarly to the South African learnership system and representatives of CATS (Commercial Advancement Training Scheme) which is a joint creation of the Southern African - German Chamber of Commerce and Industry have agreed that the scope, content (Unit Standards), assessment criteria and degree of difficulty of this qualification and those of the others at Levels 2, 3 and 4 can be benchmarked against training programmes used in the industry in Germany, although direct equivalence with specific German qualifications is not possible.

12. Integrated Assessment:

Integrated assessment at the level of qualification provides an opportunity for learners to show that they are able to integrate concepts, ideas, skills and actions across Unit Standards to achieve competence that is grounded in and coherent in relation to the purpose of the qualification

Integrated assessment must judge not only the quality of the observable performance but also the thinking and understanding that underpins it. This applies to both formative and summative assessment. In formative assessment a greater weighting should be given to the application of knowledge in real work situations as well as to the actual demonstration of skills. A greater weighting may be given to the understanding of theory in summative assessment.

Assessment tools must encourage learners to give an account of the thinking and decision-making that forms the basis for their demonstrated performance. In other words, learners must provide an interpretation of their actions. This is especially important with regard to this qualification considering that part of its purpose is to provide a foundation for the learner who is entering or has

just entered the industry. In the case of current employees seeking recognition of prior learning or employees who have been a short while in the industry, assessors must be particularly vigilant to ensure that justification for and explanation of actions are provided. This is to prevent routine or repetitive types of behaviour being mistaken for demonstration of competence. An integrated mix of task-orientated and theoretical assessment tools should be used with the ultimate focus being on the assessment of applied competence.

In particular when assessing the applied competence (practical, foundational and reflective competences) of this qualification, assessors must assess the ability of the learner to:

1. Identify and solve problems in which responses display that responsible decisions, using critical thinking, have been made
2. Work effectively with others as a member of a team, group, organisation or community
3. Organise and manage his/herself and his/her activities responsibly and effectively
4. Collect, analyse, organise and critically evaluate information
5. Communicate effectively using visual, mathematical, and/or language skills in the modes of written and/or oral presentation.

Specific examples of demonstration of the above Critical Cross-Field Outcomes are described in each Unit Standard.

Integrated assessment should provide learners with the opportunity to display an ability to integrate practical performance, actions, concepts and theory across Unit Standards to achieve competence in relation to the purpose of this qualification

13.

Recognition of Prior Learning

This qualification may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience. The learner can provide evidence of prior learning through assessment of tasks carried out at work, through the presentation of a portfolio of work previously done, through a statement by a supervisor of work carried out, through a testimonial, through assessment against specific outcomes contained in the Unit Standards and by the completion of another qualification which contains Unit Standards or aspects of the content of this qualification.

14.

Criteria for the registration of assessors:

Assessors of this qualification will hold a qualification in the field that is at least one level above that of this qualification, or possess the technical expertise to achieve such a qualification. The assessor will be registered with the relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

15. Moderation Options

This qualification can be internally assessed by the provider and moderated by a moderator registered by the relevant ETQA or by an ETQA that has a Memorandum of Understanding with the relevant ETQA. Moderation shall comply with SAQA requirements.

16. Articulation possibilities

Learners who complete this qualification will have access to the following qualifications:

- National Certificate in Customs Clearing: NQF Level 4
- National Certificate in Freight Forwarding: NQF Level 4.

Competence in individual Unit Standards will be retained by the learner who exits the qualification before completion and can be used for RPL purposes for other qualifications in the field.

The following depicts the rules of combination for this qualification

Fundamental Unit Standards. The learner must achieve all of the following:

NUMBER	TITLE	NQF LEVEL	CREDITS
7500	Adapt speech to the needs of audience and context	3	5
8969	Interpret and use information from texts	3	5
7517	Write to meet the requirements of audience, context and purpose	3	5
9961	Communicate verbally and non-verbally in the workplace	3	5
Total			
Computer Literacy			
EUC7	Produce word processing documents for business	3	5
7786	Operate a Computer	3	8
Total			
Mathematics			
9013	Measure, estimate and calculate physical quantities and explore, describe and represent, interpret and justify geometrical relationships in 2- and 3- dimensional space to the life and workplace of the community.	3	4
11241	Perform Basic Business Calculations	3	6
11240	Perform International Trade Calculations	3	6
Total			
TOTAL			
			49

Core Unit Standards. The learner must achieve all of these Unit Standards:

NUMBER	TITLE	NQF LEVEL	CREDITS
11231	Classify Commodities according to the Customs Tariff	3	5
11415	Calculate Customs Values	3	6
11229	Calculate Duties and Tax payable on Internationally Traded Goods	3	4
11227	Apply Prohibited and Restricted Goods Regulations (Imports)	3	2
11228	Apply Prohibited and Restricted Goods Regulations (Exports)	3	3
11221	Frame in Bond and ex Warehouse Bills of Entry and Vouchers of Correction	4	5
11233	Apply Airfreight Procedures to Imports and Exports	3	15
11230	Apply Surface Carrier Procedures to Imports and Exports	3	15
11394	Interpret and Apply Information contained in INCOTERMS	3	4
TOTAL			59

Elective Unit standards

The learner must select Unit Standards totalling a minimum of 19 credits at or above NQF level 3.

A selection may be made from the list below, that are included in this qualification, or from the Elective Unit Standards included in the National Certificate in Customs Clearing: NQF Level 4, which are included below the list for this qualification, or a combination of Unit standards from both lists.

NUMBER	TITLE	NQF LEVEL	CREDITS
10170	Demonstrate understanding of employment relations in an organisation	4	3
11243	Analyse a business and determine the way it functions	4	3
11246	Apply a knowledge and understanding of the Mechanisms of International Trade in a Freight Forwarding Environment	3	6

NUMBER	TITLE	NQF LEVEL	CREDITS
11244	Perform the processes and procedures required for the Administration of Import Transactions	4	6
11416	Perform the processes and procedures required for the Administration of Export Transactions	4	6
EUC9	Produce and Use Spreadsheets for Business	3	5
TOTAL			29

Elective Unit Standards from the Level 4: National Certificate in Customs Clearing: NQF Level 4.

NUMBER	TITLE	NQF LEVEL	CREDITS
11223	Prepare and submit documents for the movement of goods into, within and through the Southern African Common Customs Union	4	3
11225	Frame and submit applications for Motor Industry Development Programme claims	5	10
11226	Frame & Submit Airfreight Import Documents	4	7
11224	Frame & Submit Surface Export Documents	4	7
11418	Manage Individual and Team Performance	4	8
TOTAL			53

Unit Standards at NQF Level 3

1. Title: Adapt speech to the needs of audience and context
2. Title: Interpret and use information from texts
3. Title: Write to meet the requirements of audience, context and purpose
4. Title: Communicate verbally and non-verbally in the workplace
5. Title: Produce word processing documents for business
6. Title: Operate a computer
7. Title: Measure, estimate and calculate physical quantities and explore, describe and represent, interpret and justify geometrical relationships in 2- and 3-dimensional space to the life and workplace of the community

8. Title: Perform Basic Business Calculations
9. Title: Perform International Trade Calculations
10. Title: Classify Commodities according to the Customs Tariff
11. Title: Calculate Customs Values
12. Title: Calculate Duties and Tax payable on internationally traded goods
13. Title: Apply Prohibited and Restricted Goods regulations (Imports)
14. Title: Apply Prohibited and Restricted Goods regulations (Exports)
15. Title: Apply Airfreight procedures to imports and exports
16. Title: Apply Surface Carrier Procedures to imports and exports
17. Title: Interpret and apply information contained in INCOTERMS
18. Title: Apply a knowledge and understanding of the mechanisms of International Trade in a Freight Forwarding Environment
19. Title: Produce and use spreadsheets for business

Unit Standards at NQF Level 4

1. Title: Frame in Bond and ex Warehouse Bills of Entry and Vouchers of Correction
2. Title: Demonstrate understanding of employment relations in an organisation
3. Title: Analyse a business and determine the way it functions
4. Title: Perform the processes and procedures required for the Administration of Import Transactions
5. Title: Perform the processes and procedures required for the Administration of Export Transactions
6. Title: Prepare and submit documents for the movement of goods into, within and through the Southern African Common Customs Union
7. Title: Frame & Submit Airfreight Export Documents
8. Title: Frame & Submit Surface Export Documents
9. Title: Manage Individual and Team Performance

Unit Standards at NQF Level 5

1. Title: Frame and Submit applications for Motor Industry Development Programme Claims

Unit Standards and Specific Outcomes at NQF Level 3

1. Title: Perform Basic Business Calculations

Specific Outcomes

- 1.1 Distinguish between items of expenditure and revenue
- 1.2 Differentiate between fixed and variable costs

1.3 Perform invoicing operations and post amounts to the appropriate accounts

1.4 Reconcile individual transactions with statements of accounts

1.5 Identify the items disbursed on behalf of the organisation to be recovered in the invoicing process

2. Title: Perform International Trade Calculations

Specific Outcomes

2.1 Calculate proportions for the purpose of allocating costs in international trade transactions involving a number of commodities

2.2 Apply percentage calculations in pricing negotiations, in order to determine their viability

2.3 Convert foreign currencies as part of the landed and export costings calculations

2.4 Calculate interest on amounts owing and owed to the business for the purposes of cash flow management

Range: this includes calculating compound interest

2.5 Calculate landed and export costings using given variables

2.6 Perform break-even analysis

2.7 Perform a critical path analysis as part of international project management

3. Title: Classify Commodities according to the Customs Tariff

Specific Outcomes

3.1 Apply the legal principles governing tariff classifications in a work situation.

3.2 Classify commodities within the Harmonised System in accordance with the section and chapter titles contained in Schedule 1, Part 1 to the Customs Act.

3.3 Determine tariff classifications using mass, area and volume characteristics.

- 3.4 Classify commodities from information contained in source documentation

4. Title: Calculate Customs Values

Specific Outcomes

- 4.1 Identify the currency(ies) and apply the correct rate(s) of exchange for the transaction for which a Value for Customs is required.

- 4.2 Calculate an accurate Value for Customs Purposes as defined in the Customs Act.

- 4.3 Calculate and convert singular and factorised multi-lined customs values to S.A. Rand.

5. Title: Calculate Duties and Tax payable on internationally traded goods

Specific Outcomes

- 5.1 Identify type of duties to be applied based on the characteristics of mass, area and volume.

- 5.2 Apply types of duties to different commodity classifications.

- 5.3 Calculate different types of duties and other statutory charges i.e. V.A.T., Levies etc.

6. Title: Apply Prohibited and Restricted Goods regulations (Imports)

Specific Outcomes

- 6.1 Determine the applicability of the Prohibited and Restricted Goods Index, the Import and Export Control Act and the Customs Act.

- 6.2 Facilitate the importation of goods by applying the provisions of the Prohibited and Restricted Goods Index, the Import and Export Control Act and the Customs Act

- 6.3 Satisfy the statutory requirements as they pertain to each class of restricted or controlled goods

7. Title: Apply Prohibited and Restricted Goods regulations (Exports)

Specific Outcomes

- 7.1 Facilitate the exportation of goods.
- 7.2 Satisfy the statutory requirements as they pertain to each class of restricted or controlled goods.
- 7.3 Comply with the documentary and other control requirements of the countries through which and to which export goods are consigned.

8. Title: Apply Airfreight procedures to imports and exports

Specific Outcomes

- 8.1 Complete documentation for the transportation of goods by air including valuable goods, live animals, perishable goods, human remains and other goods listed by IATA under Class Rates.
- 8.2 Document Dangerous Goods for transport by air, by following the procedures in terms of airline regulations.
- 8.3 Provide an air forwarding service which satisfies client requirements, using the characteristics of airline services
- 8.4 Scrutinise documentation and labelling for all goods prior to handing over to carriers for transportation by air.

9. Title: Apply Surface Carrier Procedures to imports and exports

Specific Outcomes

- 9.1 Process documentation for the transportation by surface of bulk cargoes, live animals and perishable cargoes, by following the procedures in terms of legislative guidelines and applicable regulations
- 9.2 Document Dangerous Goods for transport by surface, by following the procedures in terms of legislative guidelines and carrier conditions.
- 9.3 Provide a surface forwarding service which satisfies client requirements, using the characteristics of surface carrier services

Range: Characteristics include frequency, routes, vehicle/vessel type, transit times, rates.

9.4 Provide a surface forwarding service that satisfies client requirements.

10. Title: Interpret and apply information contained in INCOTERMS

Specific Outcomes

10.1 Identify buyers' and sellers' respective responsibilities for carriage, costs and risks, as defined in the INCOTERMS

10.2 Interpret buyers' and sellers' respective responsibilities for carriage, costs and risks, as defined in the INCOTERMS

10.3 Recommend to international traders the INCOTERM most appropriate to any transaction.

10.4 Ensure that buyers' and sellers' respective responsibilities for costs and risks, as defined in the INCOTERMS have been correctly identified and interpreted.

11. Title: Apply a knowledge and understanding of the mechanisms of international trade in a Freight Forwarding Environment

Specific Outcomes

11.1 Identify the differences between local and international trade and in doing so explain the concept of protecting the integrity of international borders

11.2 Explain the international trade cycle and identify the roles of the various parties involved

11.3 Explain international logistics mechanisms including modes of transport, protection and packing considerations, containerisation, transport documents, Incoterms and freight cost elements.

11.4 Explain the different methods of international payment for goods, the use of foreign currencies, and identify the advantages and disadvantages of each to the buyer and seller.

11.5 Explain the processes and procedures involved in complying with the statutory requirements which govern international trade.

- 11.6 Identify the various trade documents involved in an international trade transaction and explain their respective purposes, identify the parties responsible for issuing each document.

Unit Standards and Specific Outcomes at NQF Level 4

1. Title: Frame in Bond and ex Warehouse Bills of Entry and Vouchers of Correction

Specific Outcomes

- 1.1 Prepare Customs Worksheets, using the information contained in source documents, and applying the principles, processes and procedures of tariff classification, customs valuation, duty and tax calculation.

- 1.2 Prepare and declare Bills of Entry and Vouchers of Correction for the purposes of Customs and Excise Storage Warehouse operations and/or the removal of goods in bond and/or in transit.

- 1.3 Frame in Bond and ex Warehouse Bills of Entry and Vouchers of Correction, in compliance with the relevant sections of the Customs Act

2. Title: Perform the processes and procedures required for the Administration of Import Transactions

Specific Outcomes

- 2.1 Plan an import transaction.
- 2.2 Select the most appropriate providers of international logistics services and modes of transport.

- 2.3 Negotiate payment terms with suppliers and arrange trade finance.

- 2.4 Ensure compliance with statutory requirements i.e. customs, port, health, import control.

- 2.5 Issue instructions to relevant parties such as banks, freight forwarder, clearing agents, marine insurers and other bodies, for the purposes of facilitating the international trade cycle.

3. Title: Perform the processes and procedures required for the Administration of Export Transactions

Specific Outcomes

- 3.1 Plan an export transaction.
- 3.2 Select the most appropriate providers of international logistics services and modes of transport.
- 3.3 Negotiate payment terms with foreign buyers and arrange trade finance.

- 3.4 Ensure compliance with statutory requirements i.e. customs, port, health, import control.

- 3.5 Complete export documentation in compliance with the parameters of the particular transaction.

- 3.6 Apply for and manage available export incentives

4. Title: Prepare and submit documents for the movement of goods into, within and through the Southern African Common Customs Union

Specific Outcomes

- 4.1 Administer the movement of imported and locally manufactured goods into, within and through the Customs Union, in the environments of SARS and the Freight Forwarding industry to the industry standards.

- 4.2 Display a comprehension of the concept of a Customs Union and the associated processes and procedures related to movement of goods through countries in a Customs Union.

- 4.3 Apply the concept of the Southern African Common Customs Union to the collection and distribution of duties amongst its members, and the administrative role played by South Africa.

5. Title: Frame & Submit Airfreight Import Documents

Specific Outcomes

- 5.1 Identify the requirements of specific shipments ensuring that sufficient information is collected to arrive at an accurate assessment

- 5.2 Prepare and check import airfreight Bills of Entry and associated documentation complying with relevant legislation regulations and industry norms

- 5.3 Submit airfreight documentation for the purpose of import manually and using computer technology

6. Title: Frame & Submit Surface Export Documents

Specific Outcomes

- 6.1 Identify requirements of specific shipments ensuring that sufficient information is collected to arrive at an accurate assessment

- 6.2 Prepare, check and submit documentation for the purpose of surface export, manually and using computer technology

Unit Standards and Specific Outcomes at NQF Level 5

1. Title: Frame and submit applications for Motor Industry Development Programme claims

Specific Outcomes

- 1.1 Identify and classify components and products which qualify for consideration under the Motor Industry Development Programme

- 1.2 Provide assistance to the automotive industry on the Department of Trade and Industry Guidelines relating to the Motor Industry Development Programme

- 1.3 Prepare and submit Customs documentation for goods dealt with in terms of this Programme in compliance with the relevant Schedule and sections of the Customs Act

- 1.4 Assess applications submitted in terms of this Programme for refunds of duty, payments of Excise accounts and the bringing of non rebated Customs Duty to account

NATIONAL CERTIFICATE IN CUSTOMS CLEARING: NQF LEVEL 4**Field:** Business, Commerce and Management Studies**Sub-Field:** Purchasing**Level:** 4**Credits:** 145**5. Rationale for the qualification:**

There is a need in the Customs Clearing and Freight Forwarding Industry to have a qualification for those employees, who are working in the industry and who have not obtained an FET or equivalent Certificate, to be given the opportunity to obtain such a qualification that would recognize the competence and knowledge that they have built up through their time in the industry. This qualification can also be seen as providing an opportunity for previously disadvantaged learners to obtain a vocationally orientated qualification equivalent to an FETC that would enable them to move up the ladder with higher qualifications within and outside the industry.

While The Customs Clearing and Freight Handling Industry has been a member of the International Federation of Freight Handlers Associations (FIATA) since 1926 and has done industry orientated training that is internationally respected there has been no official qualification at this level for employees in the industry. This qualification and the others at NQF Levels 2, 3, 4, and 5 will fill this gap and provide a formal framework of industry related qualifications that offer the employee a clear learning path and an opportunity to develop industry needed skills and knowledge and critical cross field skills. This knowledge and the associated skills and outcomes will also offer articulation into the qualifications in other industries.

6. Purpose:

This qualification is intended to equip learners to operate cross-functionally within the Customs Clearing environment of the Forwarding and Clearing industry.

The qualification will provide learners with a solid understanding of the relevant legislation governing the environment within which they operate and also provide them with the ability to appropriately select and apply the relevant section of the legislation governing the operations with which they are involved.

Qualifying learners will be able to pursue further personal development opportunities in the specialist area of Customs Clearing within the broader Forwarding and Clearing industry.

Learners will be provided with the conceptual framework to perform routine and non-routine functions and to supervise the performance of other functions, displaying the ability to combine and integrate competencies in application in the Customs Clearing environment.

7. Access to the qualification

There is open access to this qualification for learners who are competent in:

- Verbal and Written Communication Skills at NQF Level 3
- Mathematical Literacy Skills at NQF Level 3
- Computer Literacy Skills at NQF Level 3.

8. Credit composition

Component	Level 3	Level 4	Level 5	TOTAL
Fundamental		55		55
Core		50	29	79
Elective	6	33	10	Minimum 11
TOTAL	6	138	39	145

Fundamental: All Unit Standards in the Fundamental section are compulsory. A total of 55 credits.

Core: All Unit Standards in the Core section are compulsory. A total of 79 credits.

Elective: Unit Standards with a total weighting of 53 credits have been developed for this component. The learner is required to select Unit Standards totalling a minimum of 11 credits from the options complying with the rules of combination. Other electives may be added to this list in the future.

9. Learning assumed to be in place:

The learning assumed to be in place is stated for each of the Unit Standards in this qualification and any learner who does not meet those requirements will need to do so through prior learning before commencing with the relevant Unit Standard.

10. Exit Level Outcomes

The outcomes are specified in terms of a combination of Specific Outcomes and Critical Cross-Field Outcomes.

On completion of this qualification, the learner will have knowledge and understanding of and be able to apply:

- The Operations of Rebate Stores
- The Operations of Customs & Excise Warehouses

13.

Integrated Assessment:

Integrated assessment at the level of qualification provides an opportunity for learners to show that they are able to integrate concepts, ideas, skills and actions across unit standards to achieve competence that is grounded in and coherent in relation to the purpose of the qualification

12.

International comparability

The qualification was compared with qualifications from various institutions accredited in other countries in terms of specific outcomes, assessment criteria and degree of difficulty.

The German Apprenticeship System for Freight Forwarders operates similarly to the South African learnership system and representatives of CATS (Commercial Advancement Training Scheme) which is a joint creation of the Southern African - German Chamber of Commerce and Industry have agreed that the scope, content (Unit Standards), assessment criteria and degree of difficulty of this qualification and of the Level 2, 3 and 4 qualifications in the industry can be benchmarked against training programmes used in the industry in Germany, although direct equivalence with specific German qualifications is not possible.

11.

Associated Assessment Criteria

- The learner will also be able to:
- The Motor Industry Development Programme
 - The Intra Customs Union Movement
 - The General Provisions of Advanced Customs House Procedures
 - The Advanced Tariff Classification
 - The Framing & Submission of Airfreight Export Documents
 - The Framing & Submission of Surface Export Documents
 - The Framing of in-Bond and ex-Warehouse Bills of Entry and Vouchers of Correction
 - Industrial Rebates and the Framing of Schedule 3 Bills of Entry and Vouchers of Correction
 - Refunds & Drawbacks of Duty
 - The Framing of in Schedule 1 & 2 Bills of Entry and Vouchers of Correction
 - General Rebates and the Preparation of Schedule 4 Bills of Entry
 - The Managing of Workplace Relations.
- The learner will also be able to:
- Deal effectively with customers
 - Identify and Solve Problems in the workplace
 - Develop Self within a specific Job Role in the industry
 - Display Cultural Awareness in Dealing with Customers and Colleagues
 - Interact orally and in writing in the workplace
 - Prepare Written Communications
 - Collate, understand and communicate workplace data.

Integrated assessment must judge not only the quality of the observable performance but also the thinking and understanding that underpins it. This applies to both formative and summative assessment. In formative assessment a greater weighting should be given to the application of knowledge in real work situations as well as to the actual demonstration of skills. A greater weighting may be given to the understanding of theory in summative assessment.

Assessment tools must encourage learners to give an account of the thinking and decision-making that forms the basis for their demonstrated performance. In other words, learners must provide an interpretation of their actions. This is especially important with regard to this qualification considering that part of its purpose is to provide a foundation for the learner who is entering or has just entered the industry. In the case of current employees seeking recognition of prior learning or employees who have been a short while in the industry, assessors must be particularly vigilant to ensure that justification for and explanation of actions are provided. This is to prevent routine or repetitive types of behaviour being mistaken for demonstration of competence.

An integrated mix of task-orientated and theoretical assessment tools should be used with the ultimate focus being on the assessment of applied competence.

In particular when assessing the applied competence (practical, foundational and reflective competencies) of this qualification, assessors must assess the ability of the learner to:

1. Identify and solve problems in which responses display that responsible decisions, using critical thinking, have been made
2. Work effectively with others as a member of a team, group, organisation or community
3. Organise and manage his/herself and his/her activities responsibly and effectively
4. Collect, analyse, organise and critically evaluate information
5. Communicate effectively using visual, mathematical, and/or language skills in the modes of written and/or oral presentation.

Specific examples of demonstration of the above Critical Cross-Field Outcomes are described in each Unit Standard.

14. Recognition of Prior Learning

This qualification may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience. The learner can provide evidence of prior learning through assessment of tasks carried out at work, through the presentation of a portfolio of work previously done, through a statement by a supervisor of work carried out, through a testimonial, through assessment against specific outcomes contained in the Unit Standards and by the completion of another qualification which contains Unit Standards or aspects of the content of this qualification.

15. Criteria for the registration of assessors:

Assessors of this qualification will hold a qualification in the field that is at least one level above that of this qualification, or possess the technical expertise to achieve such a qualification. The assessor will be registered with the relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

16. Moderation Options

This qualification can be internally assessed by the provider and moderated by a moderator registered by the relevant ETQA or by an ETQA that has a Memorandum of Understanding with the relevant ETQA. Moderation shall comply with SAQA requirements.

17. Articulation possibilities

Learners who complete this qualification will have access to the following qualifications:

- National Certificate in Freight Forwarding: NQF Level 4
- National Diploma in Freight Forwarding: NQF Level 5.

Competence in individual Unit Standards will be retained by the learner who exits the qualification before completion and can be used for RPL purposes for other qualifications in the field.

18. The following depicts the rules of combination for this qualification

Fundamental Unit Standards. The learner must achieve all of the following:

NUMBER	TITLE	NQF LEVEL	CREDITS
8556	Interact Orally and in Writing in the Workplace	4	10
7822	Prepare Written Communications	4	3
8975	Read, analyse and respond to a variety of texts	4	5
7518	Engage in sustained face-to-face communication	4	5
Total			
23			
Mathematical Literacy			
7468	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	4	6
9015	Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life-related problems	4	6

NUMBER	TITLE	NQF LEVEL	CREDITS
8558	Collate, understand and communicate workplace data	4	5
Total			
Life Skills			
7789	Provide Customer service	4	8
7791	Display cultural awareness in dealing with Customers and Colleagues	4	4
7821	Develop Self within the Job Role	4	3
Total			
TOTAL			
			55

Core Unit Standards. The learner must achieve all of the following:

NUMBER	TITLE	NQF LEVEL	CREDITS
11218	Establish, Register, and Operate Rebate Stores	4	5
11215	Establish, Register, and Operate Customs and Excise storage warehouses	4	4
11221	Frame in Bond and ex Warehouse Bills of Entry and Vouchers of Correction	4	5
11220	Frame Schedule 1 & 2 Bills of Entry and Vouchers of Correction	4	8
11214	Analyse and solve complex Customs problems	4	4
11216	Apply the principles and procedures laid down in Schedule 3 of the Customs Act	4	5
11222	Analyse and solve complex customs tariffs classification problems	5	7
1217	Apply for and obtain Refunds and Drawbacks of Customs Duty	4	8
11219	Formulate, submit and negotiate applications in respect of Tariff Protection and Relief	5	14
11386	Frame and scrutinise Customs entries within Schedule 4 to the Customs Act	4	6
11433	Identify and Solve Problems	4	5
7789	Provide Customer Service	5	8
TOTAL			79

Learners must take:

NUMBER	TITLE	NQF LEVEL	CREDITS
11223	Prepare and submit documents for the movement of goods into, within and through the Southern African Common Customs Union	4	3

AND

NUMBER	TITLE	NQF LEVEL	CREDITS
11224	Frame & Submit Surface Export Documents	4	7

OR

NUMBER	TITLE	NQF LEVEL	CREDITS
11225	Frame and submit applications for Motor Industry Development Programme claims	5	10

AND

Further Unit Standards from the following list to make up a minimum of 11 credits for the Elective Component.

NUMBER	TITLE	NQF LEVEL	CREDITS
11246	Apply a knowledge and understanding of the mechanisms of international trade in a Freight Forwarding Environment	3	6
11244	Perform the processes and procedures required for the administration of import transactions	4	6
11387	Perform the processes and procedures required for the administration of export transactions	4	6
11473	Manage Individual and Team Performance	4	8
TOTAL			49

Unit Standards at NQF Level 3

1. Title: Apply a knowledge and understanding of the mechanisms of international Trade in a Freight Forwarding Environment

List of Unit Standards at NQF Level 4

1. Title: Interact Orally and in writing in the workplace
2. Title: Prepare written communications
3. Title: Read, analyse and respond to a variety of texts
4. Title: Engage in sustained face-to-face communication
5. Title: Use Mathematics to investigate and monitor the financial aspects of personal, business and national issues
6. Title: Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems
7. Title: Collate, understand and communicate workplace data
8. Title: Provide customer service
9. Title: Display cultural awareness in dealing with Customers and Colleagues
10. Title: Develop self within the job role
11. Title: Establish, Register, and Operate Rebate Stores
12. Title: Establish, Register, and Operate Customs and Excise storage warehouses
13. Title: Frame in-Bond and ex-Warehouse Bills of Entry and Vouchers of Correction
14. Title: Frame Schedule 1 & 2 Bills of Entry and Vouchers of Correction
15. Title: Analyse and solve complex Customs problems
16. Title: Apply for and obtain Refunds and Drawbacks of Customs Duty
17. Title: Apply the principles and procedures laid down in Schedule 3 of the Customs Act
18. Title: Frame and scrutinise Customs entries within Schedule 4 to the Customs Act
19. Title: Identify and solve problems
20. Title: Prepare and submit documents for the movement of goods into, within and through the Southern African Common Customs Union
21. Title: Frame and submit Surface Export Documents
22. Title: Perform the processes and procedures required for the administration of import transactions.
23. Title: Perform the processes and procedures required for the administration of export transactions
22. Title: Manage Individual and Team performance

Unit Standards at NQF Level 5

1. Title: Analyse and solve complex customs tariffs classification problems
2. Title: Formulate, submit and negotiate applications in respect of Tariff Protection and Relief
3. Title: Provide Customer Service
4. Title: Frame and submit applications for Motor Industry Development Programme claims

Unit Standards and Specific Outcomes Level 3

1. Title: Apply a knowledge and understanding of the mechanisms of international trade in a Freight Forwarding Environment

Specific Outcomes

- 1.1. Identify the differences between local and international trade

and in doing so explain the concept of protecting the integrity of international borders

1.2. Explain the international trade cycle and identify the roles of the various parties involved

1.3. Explain international logistics mechanisms including modes of transport, protection and packing considerations, containerisation, transport documents, INCOTERMS and freight cost elements.

1.4. Explain the different methods of international payment for goods, the use of foreign currencies, and identify the advantages and disadvantages of each to the buyer and seller.

1.5. Explain the processes and procedures involved in complying with the statutory requirements which govern international trade.

1.6. Identify the various trade documents involved in an international trade transaction and explain their respective purposes, identify the parties responsible for issuing each document.

Unit Standards and Specific Outcomes at NQF Level 4

1. Title: Establish, Register, and Operate Rebate Stores

Specific Outcomes

- 1.1 Establish and register a Rebate Store with Customs, meeting the relevant provisions of the Customs and Excise Act and Rules.
- 1.2 Operate a Rebate Store as a registered Rebate user, meeting the relevant provisions of the Customs and Excise Act and Rules.
- 1.3 Maintain Rebate Store records in accordance with legislative requirements.

2. Title: Establish, Register, and Operate Customs and Excise storage Warehouses

Specific Outcomes

- 2.1 Establish and register a Customs and Excise storage warehouse with Customs, meeting the relevant provisions of the Customs and Excise Act and Rules.

- 2.2 Operate a Customs and Excise storage warehouse as a registered Rebate user, meeting the relevant provisions of the Customs and Excise Act and Rules.

- 2.3 Maintain Rebate Store records in accordance with legislative requirements.

3. Title: Frame in-Bond and ex-Warehouse Bills of Entry and Vouchers of Correction

Specific Outcomes

- 3.1 Prepare Customs Worksheets, using the information contained in source documents, and applying the principles, processes and procedures of tariff classification, customs valuation, duty and tax calculation.

- 3.2 Prepare and declare Bill of Entries and Vouchers of Correction for the purposes of Customs and Excise Storage Warehouse operations and/or the removal of goods in bond and/or in transit.

- 3.3 Frame in-Bond and ex-Warehouse Bills of Entry and Vouchers of Correction, in compliance with the relevant sections of the Customs Act

4. Title: Frame Schedule 1 & 2 Bills of Entry and Vouchers of Correction Specific Outcomes

- 4.1 Prepare a Customs Worksheet using the information contained in source documents.

- 4.2 Prepare import wharfage clearances, applying the Portnet Tariff guidelines, as applicable.

- 4.3 Apply the correct customs act schedules (schedule 1 & 2) and vouchers of correction, as they apply to the entry purpose codes

to the importing of goods by any mode of transport.

5. Title: Analyse and solve complex Customs problems

Specific Outcomes

5.1 Resolve Customs Audit queries, detentions and stops

5.2 Assist importers to comply with the provisions for the release of goods stopped by statutory bodies.

5.3 Detect, trace and obtain release of goods which have been transferred to the State Warehouse or seized

6. Title: Apply the principles and procedures laid down in Schedule 3 of the Customs Act

Specific Outcomes

6.1 Prepare and scrutinise rebate Bills of Entry and Vouchers of Correction demonstrating insight into the requirements of the legislation i.e. Schedule 3 of the Customs Act

6.2 Prepare Customs Worksheets by performing the correct calculations and applying the relevant formulae resulting in accurate declarations

7. Title: Apply for and obtain Refunds and Drawbacks of Customs Duty

Specific Outcomes

7.1 Identify import and export operations and transactions which qualify for refunds or drawbacks of duty and taxes.

7.2 Register importers and exporters for rebates and drawbacks of duty, and apply for the necessary permits to initiate the process.

7.3 Prepare and submit applications and Bills of Entry for refunds or drawbacks of duty and tax, adhering to legislative requirements

7.4 Produce progress reports of refund submissions

8. Title: Frame and scrutinise Customs entries within Schedule 4 to the Customs Act

Specific Outcomes

8.1 Prepare Customs Worksheets by selecting the correct formulae and applying them accurately

8.2 Prepare and complete Bills of Entry and Vouchers of Correction, declaring the duty and information required by Schedule 4 of the Customs Act, for goods imported

8.3 Scrutinise rebate Bills of Entry, applying insight and comprehension of the legislative guidelines and stipulations

8.4 Administer permits issued

9. Title: Prepare and submit documents for the movement of goods into within and through the Southern African Common Customs Union

Specific Outcomes

9.1 Administer the movement of imported and locally manufactured goods into, within and through the Customs Union, in the environments of SARS and the Freight Forwarding industry to the industry standards.

9.2 Display a comprehension of the concept of a Customs Union and the associated processes and procedures related to movement of goods through countries in a Customs Union.

9.3 Apply the concept of the Southern African Common Customs Union to the collection and distribution of duties amongst its members, and the administrative role played by South Africa.

10. Title: Perform the processes and procedures required for the administration of import Transactions

Specific Outcomes

10.1 Plan an import transaction.

10.2 Select the most appropriate providers of international logistics services and modes of transport.

11. Title: Perform the processes and procedures required for the administration of export transactions

Specific Outcomes

- 10.3 Negotiate payment terms with suppliers and arrange trade finance.
- 10.4 Ensure compliance with statutory requirements i.e. customs, port, health, import control.
- 10.5 Issue instructions to relevant parties such as banks, freight forwarder, clearing agents, marine insurers and other bodies, for the purposes of facilitating the international trade cycle.
- 11.1 Plan an export transaction.
- 11.2 Select the most appropriate providers of international logistics services and modes of transport.
- 11.3 Negotiate payment terms with foreign buyers and arrange trade finance.
- 11.4 Ensure compliance with statutory requirements i.e. customs, port, health, import control.
- 11.5 Complete export documentation in compliance with the parameters of the particular transaction.
- 11.6 Apply for and manage available export incentives

NATIONAL CERTIFICATE IN FREIGHT FORWARDING: NQF LEVEL 3

1. Field: Business, Commerce and Management Studies

2. Sub-Field Purchasing

3. Level: 3

4. Credits 135

5. Rationale for the qualification

This qualification is at the level where traditionally individuals in the Freight Forwarding industry have not had an opportunity to gain nationally recognised qualifications or part thereof, resulting in inter-industry movement becoming a process of reassessment and retesting of competence.

Learners who achieve competence in the Unit Standards and/or the whole qualification will be able to move nationally within the industry with a recognised qualification.

The qualification is also the first in a learning pathway in the Freight Forwarding industry, leading ultimately to the National Diploma in Freight Forwarding: NQF Level 5. The qualification is also an option for those learners who have successfully completed the National Certificate in International Trade: NQF Level 2 which is orientated to Customs Clearing and who wish to specialise in the Freight Forwarding field.

It is also a qualification that is equipped to help new entrants to the industry who have left formal schooling without an FET qualification to gain the necessary knowledge and competencies to enable them to obtain a qualification at that level.

6. Purpose

To provide learners with the conceptual framework to perform routine functions within the Freight Forwarding environment with minimum supervision.

This qualification is intended to equip learners to operate cross-functionally within the Freight Forwarding environment of the Forwarding and Clearing industry.

Qualifying learners will be able to pursue further learning in the area of Freight Forwarding within the Forwarding and Clearing industry.

Access to the qualification

There is open access to this qualification for learners who are competent in:

- Oral and Written Communication Skills at NQF Level 2
- Mathematical Literacy Skills at NQF Level 2
- Computer Literacy Skills at NQF Level 2.

Credit composition

Component	Level 3	Level 4	TOTAL
Fundamental	49		49
Core	73	6	79
Elective	20	18	Minimum 7
TOTAL	142	24	135

Fundamental: All Unit Standards in the Fundamental section are compulsory. A total of 49 credits.

Core: All Unit Standards in the Core section are compulsory. A total of 81 credits

Elective: Unit Standards with a total weighting of 38 credits have been developed for this component. The learner is required to select either Unit Standard no 11396 or no 11397, together with other Unit Standards to give a total of at least 11 credits at NQF Level 3 or above.

Learning assumed to be in place:

As this is a Unit Standard based qualification, it is assumed that the learner will have mastered the learning assumed to be in place as given for each Unit Standard in the Fundamental, Core and Elective components stipulated in the qualification. Any learner who does not comply will have to do additional learning prior to beginning the work on the Unit Standard in question.

Exit Level Outcomes

The outcomes are specified in terms of a combination of Specific Outcomes associated with the Unit Standards and Critical Cross-Field Outcomes. On completion of this qualification, the learner will be able to display knowledge and understanding of and be able to apply:

- The Elementary Tariff Classification
- Customs Valuations
- Duties & Tax Calculations
- Prohibited and Restricted Goods Administration (Imports)
- Prohibited and Restricted Goods Administration (Exports)
- Airfreight Procedures and Practice
- Surface Procedures and Practice
- The Selection of Seafreight Carriers And Agents.

The learner will be able to:

- Communicate Verbally and Non-Verbally
- Function in a Business Environment
- Produce word processing documents for business
- Address problems in the workplace
- Maintain effective working relationships with other members of staff
- Operate a Computer
- Organise him/herself in the workplace
- Perform Basic Business Calculations.

11. Associated Assessment Criteria

The assessment criteria of the qualification are embodied in the Unit Standards. The depth of technical expertise that will be assessed across the various contexts are clearly articulated in the relevant Specific Outcomes, assessment criteria and range statements within these Unit Standards.

12. International comparability

The qualification was compared with qualifications from various institutions accredited in other countries in terms of specific outcomes, assessment criteria and degree of difficulty.

The German Apprenticeship System for Freight Forwarders operates similarly to the South African learnership system. Representatives of CATS (Commercial Advancement Training Scheme), which is a joint creation of the Southern African - German Chamber of Commerce and Industry, have agreed that the scope, content (Unit Standards), assessment criteria and degree of difficulty of the Level 2, 3 and 4 qualifications can be benchmarked against training programmes used in the industry in Germany, although direct equivalence with specific German qualifications is not possible.

13. Integrated Assessment:

Integrated assessment at the level of the qualification provides an opportunity for learners to show that they are able to integrate concepts, ideas, skills and actions across unit standards to achieve competence that is grounded in and coherent in relation to the purpose of the qualification

Integrated assessment must judge not only the quality of the observable performance but also the thinking and understanding that underpins it. This applies to both formative and summative assessment. In formative assessment a greater weighting should be given to the application of knowledge in real work situations as well as to the actual demonstration of skills. A greater weighting may be given to the understanding of theory in summative assessment.

Assessment tools must encourage learners to give an account of the thinking and decision-making that forms the basis for their demonstrated performance. In other words, learners must provide an interpretation of their actions. This is especially important with regard to this qualification considering that part of its purpose is to provide a foundation for the learner who is entering or has just entered the industry. In the case of current employees seeking

recognition of prior learning or employees who have been a short while in the industry, assessors must be particularly vigilant to ensure that justification for and explanation of actions are provided. This is to prevent routine or repetitive types of behaviour being mistaken for demonstration of competence.

An integrated mix of task-orientated and theoretical assessment tools should be used with the ultimate focus being on the assessment of applied competence.

In particular when assessing the applied competence (practical, foundational and reflective competences) of this qualification, assessors must assess the ability of the learner to:

1. Identify and solve problems in which responses display that responsible decisions, using critical thinking, have been made
2. Work effectively with others as a member of a team, group, organisation or community
3. Organise and manage his/herself and his/her activities responsibly and effectively
4. Collect, analyse, organise and critically evaluate information
5. Communicate effectively using visual, mathematical, and/or language skills in the modes of written and/or oral presentation.

Specific examples of demonstration of the above Critical Cross-Field Outcomes are described in each Unit Standard.

Integrated assessment should provide learners with the opportunity to display an ability to integrate practical performance, actions, concepts and theory across Unit Standards to achieve competence in relation to the purpose of this qualification

14.

Recognition of Prior Learning

This qualification may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience. The learner can provide evidence of prior learning through assessment of tasks carried out at work, through the presentation of a portfolio of work previously done, through a statement by a supervisor of work carried out, through a testimonial, through assessment against specific outcomes contained in the Unit Standards and by the completion of another qualification which contains Unit Standards or aspects of the content of this qualification.

15.

Criteria for the registration of assessors:

Assessors of this qualification will hold a qualification in the field that is at least one level above that of this qualification, or possess the technical expertise to achieve such a qualification. The assessor will be registered with the relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

16. Moderation Options

This qualification can be internally assessed by the provider and moderated by a moderator registered by the relevant ETQA or by an ETQA that has a Memorandum of Understanding with the relevant ETQA. Moderation shall comply with SAQA requirements.

17. Articulation possibilities

Learners who complete this qualification will have access to the following qualifications:

- National Certificate in Customs Clearing: NQF Level 4
- National Certificate in Freight Forwarding NQF Level 4.

Competence in individual Unit Standards will be retained by the learner who exits the qualification before completion and can be used for RPL purposes for other qualifications in the field.

The following depicts the rules of combination for this qualification

NUMBER	TITLE	NQF LEVEL	CREDITS
7500	Adapt speech to the needs of audience and context	3	5
8969	Interpret and use information from texts	3	5
7517	Write to meet the requirements of audience, context and purpose	3	5
9961	Communicate verbally and non-verbally in the workplace	3	5
Total			
Computer Literacy			
7786	Operate a Computer	3	8
7570	Produce word processing documents for business	3	5
Total			
Mathematics			
9013	Measure, estimate and calculate physical quantities and explore, describe and represent, interpret and justify geometrical relationships in 2- and 3-dimensional space to the life and workplace of the community.	3	4
11241	Perform Basic Business Calculations	3	6
11240	Perform International Trade Calculations	3	6
Total			
TOTAL			
			49

Core unit standards.

The learner must achieve all of the following:

NUMBER	TITLE	NQF LEVEL	CREDITS
11233	Apply Airfreight procedures to imports and exports	3	15
11230	Apply Surface Carrier Procedures to imports and exports	3	15
11394	Interpret and apply information contained in INCOTERMS	3	4
11395	Evaluate and Select Seafreight Carriers and Agents	3	7
11231	Classify Commodities according to the Customs Tariff	3	5
11415	Calculate Customs Values	3	6
11229	Calculate Duties and Tax payable on internationally traded goods	3	4
11434	Facilitate Customs Clearance in the Forwarding Context	3	2
11398	Pack, Mark, Document & Handle Export Airfreight Hazardous Cargo	3	4
11400	Pack, Mark, Document & Handle Export Hazardous Cargo (Surface)	3	4
11399	Apply Lost, Discrepant & Damaged Cargo Procedures	4	3
11401	Track and Trace International Cargo	4	3
XX13	Maintain effective working relationships with other members of staff	3	1
XX03	Function in a Business Environment	3	4
XX106	Organise oneself in the workplace	3	2
TOTAL			79

Elective Unit Standards

The learner must select a minimum of 7 credits, at or above NQF 3, for the Elective Component as Follows:

Learners must select from the list below:

EITHER

- Unit Standard No 11396

OR

- Unit Standard No 11397

AND

any other Unit Standards to reach the minimum total of 7 credits.

NUMBER	TITLE	NQF LEVEL	CREDITS
11396	Pack, Mark, Document & Handle Export Airfreight General non Hazardous Cargo	3	4
11397	Pack, Mark, Document & Handle Export General non Hazardous Cargo (Surface)	3	5
11243	Demonstrate understanding of employment relations in an organisation	4	3
XX01	Analyse a business and determine the way it functions	4	3
11435	Apply a knowledge and understanding of the mechanisms of international trade in a Freight Forwarding Environment	3	6
11436	Perform the processes and procedures required for the administration of import transactions	4	6
11404	Perform the processes and procedures required for the administration of export transactions	4	6
7567	Produce and use spreadsheets for business	3	5
TOTAL			38

Unit Standards at NQF Level 3

1. Title: Adapt speech to the needs of audience and context
2. Title: Interpret and use information from texts
3. Title: Write to meet the requirements of audience, context and purpose
4. Title: Communicate verbally and non-verbally in the workplace
5. Title: Operate a computer
6. Title: Produce word processing documents for business
7. Title: Measure, estimate and calculate physical quantities and explore, describe and represent, interpret and justify geometrical relationships in 2- and 3-dimensional space to the life and workplace community
8. Title: Perform Basic Business Calculations
9. Title: Perform International Trade Calculations
10. Title: Apply Airfreight procedures to imports and exports
11. Title: Apply Surface Carrier Procedures to imports and exports
12. Title: Interpret and apply information contained in INCOTERMS
13. Title: Evaluate and Select Seafreight Carriers and Agents
14. Title: Classify Commodities according to the Customs Tariff
15. Title: Calculate Customs Values
16. Title: Calculate Duties and Tax payable on internationally traded goods
17. Title: Facilitate Customs Clearance in the Forwarding Context
18. Title: Pack, Mark, Document & Handle Export Airfreight Hazardous Cargo
19. Title: Pack, Mark, Document & Handle Export Hazardous Cargo (Surface)
20. Title: Maintain effective working relationships with other members of staff
21. Title: Function in a Business Environment
22. Title: Organise oneself in the workplace
23. Title: Pack, Mark, Document & Handle Export Airfreight General non Hazardous Cargo

24. Title: Pack, Mark, Document & Handle Export General non Hazardous Cargo (Surface)
 25. Title: Apply a knowledge and understanding of the mechanisms of International Trade in a Freight Forwarding Environment
 26. Title: Produce and use spreadsheets for business

Unit Standards at NQF Level 4

1. Title: Apply Lost, Discrepant & Damaged Cargo Procedures
 2. Title: Track and Trace International Cargo
 3. Title: Demonstrate understanding of employment relations in an organisation
 4. Title: Perform the processes and procedures required for the administration of import transactions
 5. Title: Perform the processes and procedures required for the administration of export transactions

UNIT STANDARDS AND SPECIFIC OUTCOMES at NQF LEVEL 3

1. Title: Perform Basic Business Calculations

Specific Outcomes

- 1.1. Distinguish between items of expenditure and revenue
 1.2. Differentiate between fixed and variable costs
 1.3. Perform invoicing operations and post amounts to the appropriate accounts
 1.4. Reconcile individual transactions with statements of accounts
 1.5. Identify the items disbursed on behalf of the organisation to be recovered in the invoicing process

2. Title: Perform International Trade Calculations

Specific Outcomes

- 2.1. Calculate proportions for the purpose of allocating costs in international trade transactions involving a number of commodities
 2.2. Apply percentage calculations in pricing negotiations, in order to determine their viability
 2.3. Convert foreign currencies as part of the landed and export costs calculations
 2.4. Calculate interest on amounts owing and owed to the business for the purposes of cash flow management
 Range: this includes calculating compound interest
 2.5. Calculate landed and export costings using given variables
 2.6. Perform break-even analysis
 2.7. Perform a critical path analysis as part of international project management

3. Title: Apply Airfreight procedures to imports and exports

Specific Outcomes

- 3.1. Complete documentation for the transportation of goods by air including valuable goods, live animals, perishable goods, human remains and other goods listed by IATA under Class Rates.

- 3.2. Document Dangerous Goods for transport by air, by following the procedures in terms of airline regulations.
- 3.3. Provide an air forwarding service which satisfies client requirements, using the characteristics of airline services
- 3.4. Scrutinise documentation and labelling for all goods prior to handing over to carriers for transportation by air.

4. Title: **Apply Surface Carrier Procedures to imports and exports**

- 4.1. Process documentation for the transportation by surface of bulk cargoes, live animals and perishable cargoes, by following the procedures in terms of legislative guidelines and applicable regulations
- 4.2. Document Dangerous Goods for transport by surface, by following the procedures in terms of legislative guidelines and carrier conditions.
- 4.3. Provide a surface forwarding service which satisfies client requirements, using the characteristics of surface carrier services
- 4.4. **Range:** Characteristics include, frequency, routes, vehicle/vessel type, transit times, rates.
- 4.4. Provide a surface forwarding service that satisfies client requirements.

5. Title: **Interpret and apply information contained in INCOTERMS**

- 5.1. Identify buyers' and sellers' respective responsibilities for carriage, costs and risks, as defined in the INCOTERMS
- 5.2. Interpret buyers' and sellers' respective responsibilities for carriage, costs and risks, as defined in the INCOTERMS
- 5.3. Recommend to international traders the INCOTERM most appropriate to any transaction.
- 5.4. Ensure that buyers' and sellers' respective responsibilities for costs and risks, as defined in the INCOTERMS have been correctly identified and interpreted

6. Title: **Evaluate and Select Seafreight Carriers and Agents**

- 6.1. Distinguish between the roles of the respective parties involved in the carriage of goods by sea
- 6.2. Identify South Africa's major trade routes and commodities
- 6.3. Evaluate and select seafreight carriers and their agents serving South Africa's trading partners.

7. Title: **Classify Commodities according to the Customs Tariff**

- 7.1. Apply the legal principles governing tariff classifications in a work situation.
- 7.2. Classify commodities within the Harmonised System in accordance with the section and chapter titles contained in Schedule 1, Part 1 to the Customs Act.

Specific Outcomes

- 7.3. Determine tariff classifications using mass, area and volume characteristics.
- 7.4. Classify commodities from information contained in source documentation

8. Title: Calculate Customs Values

Specific Outcomes

- 8.1. Identify the currency (ies) and apply the correct rate(s) of exchange for the transaction for which a Value for Customs is required.
- 8.2. Calculate an accurate Value for Customs Purposes as defined in the Customs Act.
- 8.3. Calculate and convert singular and factorised multi-lined customs values to S.A. Rand.

9. Title: Calculate Duties and Tax payable on internationally traded goods

Specific Outcomes

- 9.1. Identify type of duties to be applied based on the characteristics of mass, area and volume.
- 9.2. Apply types of duties to different commodity classifications.
- 9.3. Calculate different types of duties and other statutory charges i.e. V.A.T., Levies etc.

10. Title: Facilitate Customs Clearance in the Forwarding Context

Specific Outcomes

- 10.1. Process importer's documentation, taking into account the urgent nature of these transactions, whilst still complying with the Customs procedures
- 10.2. Advise importers and exporters as to their general obligations with regard to customs matters
- 10.3. Carry out acquittal procedures

11. Title: Pack, Mark, Document & Handle Export Airfreight Hazardous Cargo

Specific Outcomes

- 11.1. Mark dangerous goods in accordance with IATA requirements and Health and Safety regulations.
- 11.2. Pack dangerous goods into ULDs, following the procedures in terms of IATA regulations.
- 11.3. Prepare and process the requisite documentation, following the procedures in terms of IATA regulations.

12. Title: Pack, Mark, Document & Handle Export Hazardous Cargo (Surface)

Specific Outcomes

- 12.1. Mark dangerous goods in accordance with international requirements and Health and Safety regulations.
- 12.2. Pack dangerous goods into containers or road or rail vehicles, by following the procedures in terms of legislative guidelines and carrier regulations.
- 12.3. Prepare and process the requisite documentation, by following the procedures in terms of legislative guidelines and carrier regulations.

13. Title: Pack, Mark, Document & Handle Export Airfreight General non Hazardous Cargo

Specific Outcomes

13.1 Check and/or mark airfreight cargo in accordance with international requirements and health and safety regulations.

13.2 Pack all types of non-hazardous cargo into ULDs in terms of carrier regulations.

13.3 Prepare and process the requisite documentation, by following the procedures in terms of carrier regulations.

14. Title: Pack, Mark, Document & Handle Export General non Hazardous Cargo (Surface)

Specific Outcomes

14.1 Check and/or mark surface freight cargo in accordance with international requirements.

14.2 Pack non-hazardous cargo into containers and onto road or rail vehicles, by following the procedures in terms of legislative guidelines and carrier regulations.

14.3 Prepare and process requisite documentation, by following the procedures in terms of legislative guidelines and carrier regulations.

15. Title: Apply a knowledge and understanding of the mechanisms of international trade in a Freight Forwarding Environment

Specific Outcomes

15.1 Identify the differences between local and international trade and in doing so explain the concept of protecting the integrity of international borders

15.2 Explain the international trade cycle and identify the roles of the various parties involved

15.3 Explain international logistics mechanisms including modes of transport, protection and packing considerations, containerisation, transport documents, Incoterms and freight cost elements.

15.4 Explain the different methods of international payment for goods, the use of foreign currencies, and identify the advantages and disadvantages of each to the buyer and seller.

15.5 Explain the processes and procedures involved in complying

- 15.6. Identify the statutory requirements which govern international trade, identify the various trade documents involved in an international trade transaction and explain their respective purposes, identify the parties responsible for issuing each document.

UNIT STANDARDS AND SPECIFIC OUTCOMES AT NQF LEVEL 4

1. Title: Apply Lost, Discrepant & Damaged Cargo Procedures

Specific Outcomes

- 1.1 Organise action to mitigate against further loss or damage.
1.2 Endorse documentation for the purpose of preserving rights of claim
1.3 Advise cargo receivers of actions which they are required to take
1.4 Initiate and finalise claim action
1.5 Maintain appropriate records

2. Title: Track and Trace International Cargo

Specific Outcomes

- 2.1 Locate and report the position of cargo at each point in the transport chain
2.2 Communicate with the affected parties, in the event of delay, misrouting, damage, loss or other discrepancy, remaining cognisant of the need for urgency.
2.3 Recover misdirected cargo in respect of lost or discrepant cargo

3. Title: Facilitate the final release and delivery of goods imported by surface modes

Specific Outcomes

- 3.1 Identify customer's surface importing and exporting needs.
3.2 Execute procedures for the timely local clearance and delivery /shipment of cargo imported and exported by surface.
3.3 Operate within a network of external service providers and statutory bodies, such as Customs, port authorities and surface carriers.

4. Title: Perform the processes and procedures required for the administration of import Transactions

Specific Outcomes

- 4.1 Plan an import transaction.
4.2 Select the most appropriate providers of international logistics services and modes of transport.
4.3 Negotiate payment terms with suppliers and arrange trade finance.
4.4 Ensure compliance with statutory requirements i.e. customs, port, health, import control.
4.5 Issue instructions to relevant parties such as banks, freight forwarder, clearing agents, marine insurers and other bodies, for the purposes of facilitating the international trade cycle.

5. Title: **Perform the processes and procedures required for the administration of export transactions**

Specific Outcomes

- 5.1. Plan an export transaction.
- 5.2. Select the most appropriate providers of international logistics services and modes of transport.
- 5.3. Negotiate payment terms with foreign buyers and arrange trade finance.
- 5.4. Ensure compliance with statutory requirements i.e. customs, port, health, import control.
- 5.5. Complete export documentation in compliance with the parameters of the particular transaction.
- 5.6. Apply for and manage available export incentives

NATIONAL CERTIFICATE IN FREIGHT FORWARDING: NQF level 4**Field:** Business, Commerce and Management Studies**Sub-Field:** Purchasing**Level:** 4**Credits:** 136**Rationale for the qualification**

This qualification is one in the learning pathway in the Customs Clearing and Freight Forwarding industry which starts with the National Certificate in International Trade: NQF Level 2 and ends, at the present time, with the National Diploma in Freight Forwarding: NQF Level 5. It follows on from the existing employees in the industry who have completed the Level 3 National Certificate in Freight Forwarding: NQF Level 3 and is designed for qualification or who hold qualifications either from the formal school sector or other related industries at NQF Level 3. It is also aimed at new entrants to the industry who wish to become knowledgeable and skilled workers in the Freight Forwarding industry.

The qualification is designed to accommodate those workers who are employed in the Customs Clearing field and who wish to transfer across to the Freight Forwarding field as well as those already in the Freight Forwarding field.

This qualification is also aimed at providing learners, particularly formerly disadvantaged learners, with an FET exit level qualification.

6. Purpose

The qualification is designed to provide learners with the conceptual framework and skills to perform routine and non-routine functions in the Freight Forwarding industry and to supervise the performance of other functions carried out by other employees. The qualification should give the learner the ability to combine and integrate competencies and to apply them in the Freight Forwarding environment.

This qualification is intended to equip learners to manage cross-functionally within the Freight Forwarding environment.

There are many industry specific procedures, which are often laid down by regulation, which have to be performed by employees and this qualification

will equip them with the knowledge and skills required to carry out such functions

The qualification is also aimed at enhancing the learner's ability to interact positively with customers and to solve problems they come across in the workplace.

7. Access to the qualification

There is open access to this qualification.

8. Credit composition

Component	Level 3	Level 4	Total
Fundamental		59	59
Core		67	67
Elective	15	26	Minimum 10
TOTAL	15	152	136

Fundamental: All Unit Standards in the Fundamental section are compulsory. A total of 59 credits.

Core: All Unit Standards in the Core section are compulsory. A total of 67 credits

Elective:

Unit Standards with a total weighting of 41 credits have been developed for this component. The learner is required to select Unit Standards totalling 10 credits at or above NQF Level 4, complying with the rules of combination. Other electives may be added to this list in the future.

9. Learning assumed to be in place:

It is assumed that the learner will be competent in:

- Oral and Written Communication Skills at NQF Level 3
- Mathematical Literacy at NQF Level 3
- Computer Literacy Skills at NQF Level 3.

Each Unit Standard which goes to make up the qualification has clearly stated learning which is assumed to be in place for the learner to be able to do the Standard. Any learner who does not meet the requirement for learning assumed to be in place for any of the Unit Standards will need to do so through prior learning before commencing with the Unit Standard.

Learners who are in possession of the NQF Level 3 Certificate in Freight Forwarding would possess all the learning assumed to be in place as indicated for the individual Unit Standards.

10. Exit Level Outcomes

The outcomes are specified in terms of a combination of Specific Outcomes as detailed for each individual Unit Standard and Critical Cross-Field Outcomes.

On completion of this qualification, the learner will be able to display knowledge and understanding of and apply:

- Clearing Procedures (Surface)
- Clearing Procedures (Air)
- Groupage Operations (Surface Imports)
- Forwarding Invoicing/ Estimating
- Insurance of Goods in Transit
- Client Profitability
- Quality Assurance Systems
- Basic Accounting Practices
- Intermediate Level Databases

The learner will also be able to:

- Manage Workplace Relations
- Identify and Solve Problems in the workplace
- Develop Self within the Job Role
- Display Cultural Awareness in Dealing with Customers and Colleagues
- Interact orally and in writing in the workplace
- Prepare written communications
- Deal effectively with Customers
- Collate, understand and communicate workplace data.

11. Associated Assessment Criteria

The assessment criteria of the qualification are embodied in the Unit Standards. The depth of technical expertise that will be assessed across the various contexts are clearly articulated in the relevant Specific Outcomes, Assessment Criteria and Range Statements within these Unit Standards.

13. International comparability

The South African Association of Freight Forwarders is a founder member of FIATA (The International Federation of Freight Forwarders Associations) which in turn represents the industry in over 150 countries. The National Diploma in Freight Forwarding: NQF Level 5 has been granted registration with FIATA and is regarded as equivalent to the International FIATA Diploma in Freight Forwarding. The International Diploma has subsequently been amended by FIATA to include some of the Unit Standards that go to make up the South African National Diploma in Freight Forwarding NQ Level 5. This qualification must be seen as part of the Freight Forwarding learning pathway that culminates, at present in the Level 5 diploma.

The German Apprenticeship System for Freight Forwarders operates similarly to the South African learnership system. Representatives of CATS (Commercial Advancement Training Scheme), which is a joint creation of the Southern African - German Chamber of Commerce and Industry, have

agreed that the scope, content (Unit Standards), assessment criteria and degree of difficulty of this qualification can be benchmarked against training programmes used in the industry in Germany, although direct equivalence with a specific German qualification is not possible

14. Integrated Assessment:

Integrated assessment of the qualification should provide 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 in industry practice and coherent in relation to the purpose of the qualification

Integrated assessment must judge the quality of the observable performance, and the quality of thinking and understanding that underpins it. Integrated assessment should be applied to both formative and summative assessment although the weighting given to application and understanding of theory may be greater in formative assessment activities.

Assessment tools must encourage learners to give an account of the thinking and decision-making that forms the basis for their demonstrated performance. In other words, learners must provide an interpretation of their actions. This is especially important with regard to this qualification considering that part of its purpose is to provide a foundation for the learner who is entering or has just entered the industry. In the case of current employees seeking recognition of prior learning or employees who have been a short while in the industry, assessors must be particularly vigilant to ensure that justification and explanation for actions are provided. This is to prevent routine or repetitive types of behaviour being mistaken for demonstration of competence

An integrated mix of task-orientated and theoretical assessment tools may be used with the ultimate focus being on the assessment of applied competence. In particular when assessing the applied competence (practical, foundational and reflective competences) of this qualification, assessors must assess the ability of the learner to:

1. Identify and solve problems in which responses display that responsible decisions, using critical thinking, have been made
2. Work effectively with others as a member of a team, group, organisation or community
3. Organise and manage his/herself and his/her activities responsibly and effectively
4. Collect, analyse, organise and critically evaluate information
5. Communicate effectively using visual, mathematical, and/or language skills in the modes of written and/or oral presentation.

Specific examples of demonstration of the above Critical Cross-Field Outcomes are described in each Unit Standard.

15. Recognition of Prior Learning

This qualification may be achieved in part or completely through the recognition of prior learning. The learner can provide evidence of prior learning through assessment of tasks carried out at work, through the

presentation of a portfolio of work previously done, through a statement by a supervisor of work carried out, through a testimonial and by the completion of another qualification which contains Unit Standards or aspects of the content of the contents of this qualification. The prior learning can consist of formal, informal and non-formal learning and work experience.

16. Criteria for the registration of assessors:

Assessors of this qualification will hold a qualification in the field that is at least one level above that of this qualification, or possess the technical expertise to achieve such a qualification. The assessor will be registered with the relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

17. Moderation Options

This qualification can be internally assessed by the provider and moderated by a moderator registered by the relevant ETQA or by an ETQA that has a Memorandum of Understanding with the relevant ETQA. Moderation shall comply with SAQA requirements.

18. Articulation possibilities

Learners who complete this qualification will have access to the following qualifications:

- National Certificate in Customs Clearing: NQF Level 4
- National Diploma in Freight Forwarding: NQF Level 5.

Competence in individual Unit Standards will be retained by the learner who exits the qualification before completion and can be used for RPL purposes for other qualifications in the field.

The following depicts the rules of combination for this qualification

Fundamental unit standards (the learner must achieve all of the following)

NUMBER	TITLE	NQF LEVEL	CREDITS
7784	Communicate in a Business Environment	4	5
8556	Interact Orally and in Writing in the Workplace	4	10
7822	Prepare Written Communications	4	3
8558	Collate, understand and communicate workplace data	4	5
Total			23
Mathematics Literacy			
7468	Use Mathematics to investigate and monitor the financial aspects of personal, business and national issues	4	6

NUMBER	TITLE	NQF LEVEL	CREDITS
9015	Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life-related problems	4	6
	Represent, Analyse and calculate shape and motion in 2- and 3-dimensional space in different contexts	4	4
Total			16
Life Orientation			
XX07	Provide Customer Service	4	8
11393	Identify and Solve Problems	4	5
7821	Develop Self within Job Role	4	3
7791	Display Cultural Awareness in Dealing with Customers and Colleagues	4	4
Total			20
TOTAL			59

Core unit standards. The learner must achieve all of the following:

NUMBER	TITLE	NQF LEVEL	CREDITS
11259	Arrange and Administer Insurance of Goods in Transit	4	11
11262	Facilitate the final release and delivery of goods imported by surface modes	4	6
11261	Facilitate the final release and delivery of goods imported and exported by Airfreight	4	5
11260	Apply Groupage processes and procedures to cargo imported by surface	4	10
11258	Generate shipment costings, invoices, credit notes and estimates	4	8
11257	Analyse and report on client profitability.	4	6
11255	Implement and Manage Quality Assurance Systems in a Freight Forwarding environment	4	4
11256	Perform International Purchasing Functions	4	7
11253	Administer foreign exchange receipt and payment systems in an international trading company	4	5
11254	Demonstrate an integrated understanding of the functional relationships in International Trade	4	5
TOTAL			67

Elective unit standards

Learners must select Unit standards from the list below with a minimum of 10 credits at or above NQF Level 4.

Note the rule of combination of electives with regard to the following Unit Standards:

Learners must select:

EITHER

- Title: Pack, Mark, Document and Handle Export Airfreight General non Hazardous Cargo No 11396

OR

- Title: Pack, Mark, Document and Handle Export General non Hazardous Cargo (Surface) No 11397

The selection will be determined by the elective chosen in the National Certificate in Freight Forwarding: NQF Level 3 as follows:

If the learner completed:

- No 11396, then no 11397 must be selected
- No 11397, then No 11396 must be selected.

If the learner has not completed the Level 3 Qualification then both Unit Standards must be chosen.

NUMBER	TITLE	NQF LEVEL	CREDITS
11263	Apply Breakbulk Operations Processes and Procedures to Cargo Imported by Airfreight	4	6
11396	Pack, Mark, Document & Handle Export Airfreight General non Hazardous Cargo	3	4
11397	Pack, Mark, Document & Handle Export General non Hazardous Cargo (Surface)	3	5
11405	Manage Individual and Team Performance	4	8
11246	Apply a Knowledge and Understanding of the Mechanisms of International Trade in a Freight Forwarding Environment	3	6
11245	Perform the processes and procedures required for the administration of import transactions	4	6
11404	Perform the processes and procedures required for the administration of export transactions	4	6
TOTAL			41

Unit standards at NQF Level 3

1. Title: Pack, Mark, Document & Handle Export Airfreight non Hazardous Cargo
2. Title: Pack, Mark, Document & Handle Export non Hazardous Cargo (Surface)
3. Title: Apply a Knowledge and Understanding of the Mechanisms of International Trade in the Freight Forwarding environment

Unit Standards at NQF Level 4

1. Title: Communicate in a Business Environment
2. Title: Interact Orally and in writing in the Workplace
3. Title: Prepare written Communication
4. Title: Collate, Understand and Communicate workplace Data
5. Title: Use Mathematics to investigate and monitor the financial aspects of personal, business and national issues
6. Title: Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems
7. Title: Represent, Analyse and calculate shape in 2- and 3- dimensional space in different contexts
8. Title: Provide Customer Service
9. Title: Identify and Solve problems
10. Title: Develop Self within Job Role
11. Title: Display Cultural Awareness in Dealing with Customers and Colleagues
12. Title: Arrange and Administer Insurance of Goods in Transit
13. Title: Facilitate the final release and delivery of goods imported by surface Modes
14. Title: Facilitate the final release and delivery of goods imported and exported by Airfreight
15. Title: Apply Groupage processes and procedures to cargo imported by surface
16. Title: Generate shipment costings, invoices, credit notes and estimates
17. Title: Analyse and report on client profitability
18. Title: Implement and Manage Quality Assurance Systems in a Freight

Forwarding environment

19. Title: Perform International Purchasing Functions
20. Title: Administer foreign exchange receipt and payment systems in an international trading company
21. Title: Demonstrate an integrated understanding of the functional interrelationships in International Trade
22. Title: Apply Breakbulk Operations processes and procedures to cargo imported by airfreight
23. Title: Perform the processes and procedures required for the administration of Import transactions
24. Title: Perform the processes and procedures required for the administration of export transactions
25. Title: Manage Individual and Team Performance

Unit Standards and Specific Outcomes NQF Level 3

1. Title: Pack, Mark, Document & Handle Export Airfreight General non Hazardous Cargo

Specific Outcomes

- 1.1. Check and/or mark airfreight cargo in accordance with international requirements and health and safety regulations.
- 1.2. Pack all types of non-hazardous cargo into ULDs in terms of carrier regulations.
- 1.3. Prepare and process the requisite documentation, by following the procedures in terms of carrier regulations.

2. Title: Pack, Mark, Document & Handle Export General non Hazardous Cargo (Surface)

Specific Outcomes

- 2.1. Check and/or mark surface freight cargo in accordance with international requirements.
- 2.2. Pack non-hazardous cargo into containers and onto road or rail vehicles, by following the procedures in terms of legislative guidelines and carrier regulations.
- 2.3. Prepare and process requisite documentation, by following the procedures in terms of legislative guidelines and carrier regulations.

3. Title: **Apply a knowledge and understanding of the mechanisms of international trade in a Freight Forwarding Environment**

Specific Outcomes

- 3.1. Identify the differences between local and international trade and in doing so explain the concept of protecting the integrity of international borders
- 3.2. Explain the international trade cycle and identify the roles of the various parties involved
- 3.3. Explain international logistics mechanisms including modes of transport, protection and packing considerations, containerisation, transport documents, Incoterms and freight cost elements.
- 3.4. Explain the different methods of international payment for goods, the use of foreign currencies, and identify the advantages and disadvantages of each to the buyer and seller.
- 3.5. Explain the processes and procedures involved in complying with the statutory requirements which govern international trade.
- 3.6. Identify the various trade documents involved in an international trade transaction and explain their respective purposes, identify the parties responsible for issuing each document.

Unit Standards and Specific Outcome: NQF Level 4

1. Title: **Arrange and Administer Insurance of Goods in Transit**

Specific Outcomes

- 1.1. Analyse the exposure of international traders to transit risks and advise them accordingly.
 - 1.2. Arrange appropriate transit insurance for international traders.
 - 1.3. Administer transit insurance on behalf of international traders.
2. Title: **Facilitate the final release and delivery of goods imported by surface modes**

Specific Outcomes

- 2.1. Identify customers, surface importing and exporting needs.
 - 2.2. Execute procedures for the timely local clearance and delivery /shipment of cargo imported and exported by surface.
 - 2.3. Operate within a network of external service providers and statutory bodies, such as Customs, port authorities and surface carriers.
3. Title: **Facilitate the final release and delivery of goods imported and exported by Airfreight**

Specific Outcomes

- 3.1. Identify customers' clearing needs for goods that have been imported and exported by airfreight.
- 3.2. Execute procedures for the timely local clearance and delivery /shipment of cargo imported and exported by air
- 3.3. Operate within a network of external service providers and statutory bodies, such as Customs and surface carriers.

4. Title: **Apply Groupage processes and procedures to cargo imported by surface**

- 4.1. Co-ordinate the movement of groupage containers for the purposes of unpacking, splitting, allocating and calculating groupage charges.
 4.2. Release individual groupage consignments.
 4.3. Process acquittal and groupage claims

5. Title: **Generate shipment costings, invoices, credit notes and estimates**

- 5.1. Produce accurate shipment costings and estimates
 5.2. Generate accurate invoices and credit notes

6. Title: **Analyse and report on client profitability**

- 6.1. Establish individual client profitability benchmarks for the organisation.
 6.2. Analyse individual client profitability against these benchmarks.
 6.3. Report on individual client profitability and make recommendations.

7. Title: **Implement and Manage Quality Assurance Systems in a Freight Forwarding environment**

- 7.1. Administer the quality management of the company in compliance with the applicable ISO system requirements.
 7.2. Co-ordinate training of the organisation employees to meet the requirements of the current applicable ISO system Code of Practice.
 7.3. Maintain quality assurance records.

8. Title: **Perform International Purchasing Functions**

- Specific Outcomes.**
 8.1. Place a purchase order with an appointed supplier on receipt of requisitions
 8.2. Follow up and expedite purchase orders that have been placed on international suppliers.
 8.3. Initiate the payment of international suppliers once proof of delivery has been obtained.
 8.1. Initiate claims procedures in respect of goods that are received lost, damaged or discrepant.

9 Title: Administer foreign exchange receipt and payment systems in an international trading Company

Specific Outcomes

- 9.1. Initiate forward exchange contracts
- 9.2. Ensure that the organisation's international trading activities comply with the applicable reserve bank and other foreign exchange regulations.
- 9.3. Administer the buying and selling of foreign currencies in terms of the organisation's international trading needs.
- 9.4. Verify foreign exchange conversions used for the purposes of supplier payment and the calculation of duty and other import liabilities.

10. Title: Demonstrate an integrated understanding of the functional interrelationships in International Trade

Specific Outcomes

- 10.1. Integrate and apply an understanding of the ways in which the various functions within the organisation's international trading activity interrelate to achieve the organisation's objectives.
- 10.2. Apply the policies and procedures of the organisation in carrying out routine functions related to international trade activities.
- 10.3. Use the policies and procedures of the company as a basis for developing procedures for the handling of individual international trade transactions.
- 10.4. Communicate routine information internally and externally for the purpose of facilitating international trade activities.

11. Title: Apply Breakbulk Operations processes and procedures to cargo imported by airfreight

Specific Outcomes

- 11.1. Co-ordinate the processing of import airfreight consolidations for the purposes of unpacking, splitting, allocating and calculating breakbulk charges
- 11.2. Release shipments from own consolidations.
- 11.3. Process acquittals and claims.

12. Title: Perform the processes and procedures required for the administration of import Transactions

Specific Outcomes

- 12.1. Plan an import transaction.
- 12.2. Select the most appropriate providers of international logistics services and modes of transport.
- 12.3. Negotiate payment terms with suppliers and arrange trade finance.
- 12.4. Ensure compliance with statutory requirements i.e. customs, port, health, import control.
- 12.5. Issue instructions to relevant parties such as banks, freight forwarder, clearing agents, marine insurers and other bodies, for the purposes of facilitating the international trade cycle.

13. Title: **Perform the processes and procedures required for the administration of export transactions**

Specific Outcomes

- 13.1. Plan an export transaction.
- 13.2. Select the most appropriate providers of international logistics services and modes of transport.
- 13.3. Negotiate payment terms with foreign buyers and arrange trade finance.
- 13.4. Ensure compliance with statutory requirements i.e. customs, port, health, import control.
- 13.5. Complete export documentation in compliance with the parameters of the particular transaction.
- 13.6. Apply for and manage available export incentives

NATIONAL DIPLOMA IN FREIGHT FORWARDING: NQF LEVEL 5

1.	Field:	Business, Commerce and Management Studies
2.	Sub-field:	Purchasing
3.	Level:	5
4.	Credits:	240
5.	Rationale of the qualification	

This qualification reflects the workplace-based needs of the Freight Forwarding industry that relates to the strategic management of Freight Forwarding operations that is expressed by employers, employees and providers to meet both current and future needs.

This qualification provides the learner with accessibility to be employed within the Freight Forwarding industry in small, medium and micro enterprises, within the individual functional areas of supply chain management, risk management, negotiation of international contracts of purchase and sale, forwarding and logistics and overseas supplier provider selections and development, foreign exchange payment mechanisms and systems and the legalities of freight forwarding operations. The competence acquired by learners will provide the flexibility to pursue different careers in the broader Freight Forwarding industry.

This qualification will contribute to the upliftment of the Freight Forwarding industry and will set a standard for professionalism in the industry. It will also act as a catalyst for transformation within the Freight Forwarding industry, as successful learners will be models for other employees/learners. This, in turn, will attract quality people, encouraging individuals to aspire to become part of the industry. The attainment of the qualification will also attract and retain quality learners and employees.

The introduction of a National Diploma in Freight Forwarding based on Unit Standards will allow learners to reach their full potential of advancement without formal education becoming an impassable barrier and in addition, allow for the Recognition of Prior Learning

6. Purpose:

The purpose of this qualification is to provide learners, through a planned combination of Unit Standards, with the competencies required to manage the functions of a Freight Forwarding business integrating strategy and operations into coherent application in

the workplace. This qualification is intended for learners who operate at a senior level in a Freight Forwarding organisation or aspire to do so.

This qualification will enable the effective introduction, implementation and management of systems, processes and procedures required for the seamless operation of a Freight Forwarding business

A learner who has achieved this qualification will be capable of combining a range of self-organisation, people management and life-long learning skills with a working knowledge of Freight Forwarding operations, and integrating these within a context to produce a professional practice that adheres to the high quality standards expected by the industry.

In addition learners will be positioned to further their learning, practice and career within the Freight Forwarding industry, either at further levels within the industry or in other learning sub-fields.

This qualification is aimed at providing learners with an HET qualification, providing an opportunity for "specialists" in this learning area to obtain national recognition as such.

Access to the qualification

There is open access to this qualification

8. Credit composition

Component	Level 5	Level 6	Total
Fundamental	34	10	44
Core	163		163
Elective	23	37	Minimum 33
TOTAL	220	47	240

Fundamental: All Unit standards in the Fundamental section are compulsory. A total of 44 credits.

Core: All Unit Standards in the Core section are compulsory. A total of 163 credits.

Elective: Unit Standards with a total weighting of 60 credits have been developed in this component. The learner is required to select Unit Standards totalling a minimum of 33 credits from the electives contained herein, complying with any rules of combination. Other electives will be added to this list in the future.

9. Learning assumed to be in place:

The learning assumed to be in place is stated for each of the Unit Standards in this qualification and any learner who does not meet those requirements will need to do so through prior learning before commencing with the relevant Unit Standard.

Learners in possession of the NQF Level 4 Certificate in Freight Forwarding or equivalent will have the knowledge and be competent in all the skills required for the individual Unit Standards in this qualification.

10. Exit Level Outcomes

The outcomes are specified in terms of a combination of the Specific Outcomes associated with each Unit Standard and Critical Cross-Field Outcomes.

On completion of this qualification, the learner will be able to display knowledge and understanding of and be able to apply:

- Professional values and ethics
- The legal knowledge required for business compliance in the industry
- The Management of Information Flow
- Preparation and Maintenance of Financial Records and Statements
- Leading and Managing teams of people
- The Concepts of Supply Chain Management Optimisation
- Insurance and Risk Management in International Trade
- Negotiation of International Contracts of Purchase and Sale
- Forwarding and Logistics Provider Selection and Development
- Overseas Supplier Sourcing, Selecting and Development
- Foreign Exchange Payment Mechanisms and Systems
- The Legal Framework of Forwarding
- Conditions of Carriage by Landside Carriage & Storage
- Conditions of Carriage by Sea
- Conditions of Carriage by Air
- Forwarders Standard Trading Conditions
- Project Management in the Forwarding Environment
- Principles of Supply Chain Management in the Forwarding Operation
- Securing and Retaining New Business.

11. Associated Assessment Criteria

The assessment criteria of the qualification are embodied in the Unit Standards. The depth of technical expertise that will be assessed across the various contexts are clearly articulated in the relevant specific outcomes, assessment criteria and range statements within these Unit Standards.

12. International comparability

The South African Association of Freight Forwarders is a founder member of FIATA (The International Federation of Freight Forwarders Associations) which in turn represents the industry in over 150 countries. The National Diploma in Freight Forwarding: NQF Level 5 has been granted registration with FIATA and is regarded as equivalent to the International FIATA Diploma in Freight Forwarding. The International Diploma has subsequently been amended by FIATA to include some of the Unit Standards that go to make up the South African National Diploma in Freight Forwarding NQF Level 5.

The German Apprenticeship System for Freight Forwarders operates similarly to the South African learnership system. Representatives of CATS (Commercial Advancement Training Scheme), which is a joint creation of the Southern African - German Chamber of Commerce and Industry, have agreed that the scope, content (Unit Standards), assessment criteria and degree of difficulty of this qualification can be benchmarked against training programmes used in the industry in Germany, although direct equivalence with a specific German qualifications is not possible.

13.

Integrated Assessment:

Integrated assessment of qualification should provide 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 must judge the quality of the observable performance, and the quality of thinking and understanding that underpins it. This applied to both formative and summative assessment although the ratio between assessment of application and understanding of theory may be weighted towards the latter in formative assessment activities.

Assessment tools must encourage learners to give an account of the thinking and decision-making that forms the basis for their demonstrated performance. In other words, learners must provide an interpretation of their actions. In the case of current employees seeking recognition of prior learning or employees who have been a short while in the industry, assessors must be particularly vigilant to ensure that justification and explanation for actions are provided. This is to prevent routine or repetitive types of behaviour being mistaken for demonstration of competence.

An integrated mix of task-orientated and theoretical assessment tools may be used with the ultimate focus being on the assessment of applied competence.

In particular when assessing the applied competence (practical, foundational and reflective competencies) of this qualification, assessors must assess the ability of the learner to:

1. Identify and solve problems in which responses display that responsible decisions, using critical thinking, have been made
2. Work effectively with others as a member of a team, group, organisation or community
3. Organise and manage his/herself and his/her activities responsibly and effectively
4. Collect, analyse, organise and critically evaluate information
5. Communicate effectively using visual, mathematical, and/or language skills in the modes of written and/or oral presentation.

Specific examples of demonstration of the above Critical Cross-Field Outcomes are described in each Unit Standard.

14.

Recognition of Prior Learning

This qualification may be achieved in part or completely through the recognition of prior learning. The learner can provide evidence of prior learning through assessment of tasks carried out at work, through the presentation of a portfolio of work previously done, through a statement by a supervisor of work carried out, through a testimonial and by the completion of another qualification which contains Unit Standards or aspects

15. Criteria for the registration of assessors:
- of the content of the contents of this qualification. The prior learning can consist of formal, informal and non-formal learning and work experience.

Assessors shall have subject-matter expertise and the technical competence to achieve the qualification themselves and shall have achieved an assessor qualification as required by the relevant ETQA. The assessor will be registered with the relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

16. Moderation Options

This qualification can be internally assessed by the provider and moderated by a moderator registered by the relevant ETQA or by an ETQA that has a Memorandum of Understanding with the relevant ETQA.

17. Articulation possibilities

Holders of this qualification will have access to other qualifications in the sub-field once the other qualifications have been registered. It is intended to allow for further learning towards a range of Forwarding and Clearing qualifications, both vertically and horizontally.

Competencies gained from mastery of individual Unit Standards are retained by the learner on completion of the qualification or on exiting prior to completion and may be used in other qualifications in the industry or related industries.

18. The following depicts the rules of combination for this qualification

Fundamental unit standards. The learner must achieve all of the following:

NUMBER	TITLE	NQF LEVEL	CREDITS
8648	Demonstrate an understanding of professional values and ethics	5	4
7885	Research and update the legal knowledge required for business compliance	5	18
XX37	Manage Information Flow	6	4
7878	Prepare and Maintain Financial Records and Statements	5	12
7859	Lead and manage teams of people	6	6
TOTAL			44

Core unit standards. The learner must achieve all of the following:

NUMBER	TITLE	NQF LEVEL	CREDITS
11273	Apply Fundamental Concepts of Supply Chain Management Optimisation	5	8
11265	Assess insurance risks and formulate risk management policies and procedures for international trading companies	5	11
11264	Select and Develop Forwarding and Logistics Service Providers	5	19
11274	Negotiate International Contracts of Purchase and Sale	5	8
11266	Source, Select and Develop Overseas Suppliers	5	15
11271	Implement and Manage Foreign Exchange Payment Mechanisms and Systems	5	17
11269	Demonstrate a comprehensive knowledge of the legal Framework of Freight Forwarding	5	11
11272	Generate solutions to legal problems encountered in the landside carriage and storage of internationally traded goods	5	5
11270	Generate solutions to legal problems encountered in the carriage by sea of internationally traded goods	5	20
11268	Generate solutions to legal problems encountered in the carriage by air of internationally traded goods	5	5
11267	Provide advice and generate solutions in terms of Forwarding Standard Trading Conditions	5	8
11276	Manage the freight forwarding of capital projects	5	14
11277	Apply Principles of Supply Chain Management in a Freight Forwarding Operation	5	6
11275	Secure and Retain new business in the Freight Forwarding industry	5	16
TOTAL			163

Elective unit standards

The learner must select a minimum of 33 credits from the following Unit Standards:

NUMBER	TITLE	NQF LEVEL	CREDITS
11289	Assess and implement e-commerce trading e-systems in a forwarding environment	5	10
11288	Apply the principles of financial operations in a Freight Forwarding environment	5	13
7863	Manage Staff Development	6	4
7889	Manage Quality in the Organisation	6	6
11286	Institute Disciplinary Action	6	5
11287	Conduct a Disciplinary Hearing	6	10
7887	Develop and Manage Marketing Plans and Strategies	6	12
TOTAL			60

19. Unit Standard titles:

Unit Standards at NQF Level 5

1. Title: Demonstrate an understanding of professional values and ethics
2. Title: Research and update the legal knowledge required for business Compliance
3. Title: Prepare and Maintain Financial Records and Statements
4. Title: Apply Fundamental Concepts of Supply Chain Management Optimisation
5. Title: Assess insurance risks and formulate risk management policies and procedures for international trading companies
6. Title: Select and Develop Forwarding and Logistics Service Providers
7. Title: Negotiate International Contracts of Purchase and Sale
8. Title: Source, Select and Develop Overseas Suppliers
9. Title: Implement and Manage Foreign Exchange Payment Mechanisms and Systems
10. Title: Demonstrate a comprehensive knowledge of the legal Framework of Freight Forwarding
11. Title: Generate solutions to legal problems encountered in the landside carriage and storage of internationally traded goods
12. Title: Generate solutions to legal problems encountered in the carriage by sea of internationally traded goods

13. Title: Generate solutions to legal problems encountered in the carriage by air of internationally traded goods
14. Title: Provide advice and generate solutions in terms of Forwarding Standard Trading Conditions
15. Title: Manage the Freight Forwarding of capital projects
16. Title: Apply Principles of Supply Chain Management in a Freight Forwarding Operation
17. Title: Secure and Retain new business in the Freight Forwarding industry
18. Title: Assess and implement e-commerce trading e-systems in a forwarding Environment
19. Title: Apply the principles of financial operations in a Freight Forwarding Environment

Unit Standards at NQF Level 6

1. Title: Manage Information Flow
2. Title: Lead and manage teams of people
3. Title: Manage Staff Development
4. Title: Manage Quality in the Organisation
5. Title: Institute Disciplinary Action
6. Title: Conduct a Disciplinary Hearing
7. Title: Develop and Manage Marketing Plans and Strategies

Unit Standards and Specific Outcomes at NQF Level 5

1. Title: Apply Fundamental Concepts of Supply Chain Management Optimisation

Specific Outcomes

- 1.1. Use a reference model to identify the parties involved and their respective roles in a supply chain
- 1.2. Apply the principles of supply chain optimisation as they pertain to each element
- 1.3. Identify the elements which make up total logistics cost.
- 1.4. Transform the strategic objectives of the organisation into a supply chain optimisation framework.
- 1.5. Make recommendations for supply chain optimisation based on a time frame of implementation.
- 1.6. Achieve appropriate customer-service standards in a cost effective manner through the introduction of supply chain optimisation methodologies.

2. Title: Assess insurance risks and formulate risk management policies and procedures for international trading companies

Specific Outcomes

- 2.1. Provide management with the information required to arrive at informed decisions aimed at managing the company's exposure to cargo transit risks.
- 2.2. Implement management's decisions pertaining to cargo risk through the negotiation and conclusion of cargo risk insurance policy contracts
- 2.3. Advise management of the exposure of the company to commercial risks associated with international trade, and facilitate the formulation of policies and procedures for the control of these risks.
- 2.4. Implement policies and procedures aimed at reducing the company's commercial risks associated with international trade.

3. Title: Select and Develop Forwarding and Logistics Service Providers

Specific Outcomes

- 3.1. Contribute to the policy formation processes of the international trading company insofar as these impact on the selection and appointment of international forwarding and logistics services providers.
- 3.2. Develop tender document in terms of the company's tendering policies for the objective assessment of potential international forwarding and logistics services providers.
- 3.3. Evaluate proposals submitted in response to tenders in terms of the company's policies and procedures relating to financial, commercial, technical and any other relevant issues.
- 3.4. Negotiate final contract conditions and motivate selection and appointment recommendations based on tender information and company contracting policies
- 3.5. Develop and maintain international service operating procedures manuals in consultation with appointed international forwarding and logistics services providers.
- 3.6. Administer international service activities, evaluate and develop international forwarding and logistics services providers in terms of the operating procedures manuals.

4. Title: Negotiate International Contracts of Purchase and Sale

Specific Outcomes

- 4.1. Formulate negotiation strategy and conduct negotiations using supplier, social, cultural and political information.
- 4.2. Apply negotiation techniques and interpersonal skills to facilitate the conduct of overseas supplier negotiations.
- 4.3. Conduct and record post-negotiation analysis of international contracts.
- 4.4. Implement the measures agreed to, update supplier records and monitor supplier performance, utilising the conclusions arrived at during overseas supplier negotiations
- 4.5. Add value to the international trading company's negotiation intellectual capital base, by drawing on the recorded experiences of previous negotiations.

5. Title: Source, Select and Develop Overseas Suppliers

Specific Outcomes

- 5.1. Evaluate existing and/or potential suppliers' performance in terms of the international buying company's commercial, financial and technical requirements.
- 5.2. Assess evaluation reports on overseas suppliers, issue mandates to negotiate, and accept or reject the recommendations on overseas suppliers.
- 5.3. Select and appoint suppliers of goods and services which present the best benefit / risk profile to the international trading company.
- 5.4. Establish legally binding international contracts of supply and modify these in light of changing circumstances by mutual agreement
- 5.5. Establish policies and procedures for the formulation of overseas supplier contingency plans
- 5.6. Evaluate overseas supplier performance reports and authorise additions/ removals from supplier lists.

6. Title: Implement and Manage Foreign Exchange Payment Mechanisms and Systems

Specific Outcomes

- 6.1. Reconcile and verify overseas creditors accounts and pass them for payment.
- 6.2. Arrange forward cover in terms of laid down policies and procedures
- 6.3. Prepare applications for Letters of Credit and Collection Instructions (Documentary Collections) from source documentation
- 6.4. Arrange for the payment of overseas creditors in terms of company authorisation limits
- 6.5. Administer a system for the completion of Inward Letter of Credit transactions in terms of company policy and procedures.
- 6.6. Administer a system of Documentary Collection monitoring and overseas debtor credit control in terms of company policy and procedures.

7. Title: Demonstrate a comprehensive knowledge of the legal Framework of Freight Forwarding

Specific Outcomes

- 7.1. Advise importers and exporters on the essential elements necessary for formulation of international contracts of purchase and sale (indents).
- 7.2. Identify branches of the Law underlying each phase of the door-to-door movement of cargo.

8. Title: Generate solutions to legal problems encountered in the landside carriage and storage of internationally traded goods

Specific Outcomes

- 8.1. Ensure adherence to carriers and warehousemen's conditions in the forwarding operation.
- 8.2. Assess the applicability of these conditions to forwarding operations.

9. Title: Generate solutions to legal problems encountered in the carriage by sea of internationally traded goods

Specific Outcomes

- 9.1. Ensure adherence to ocean carriers Bill of Lading conditions in the forwarding operation.
- 9.2. Assess the applicability of these conditions to forwarding operations.

10. Title: Generate solutions to legal problems encountered in the carriage by air of internationally traded goods

Specific Outcomes

- 10.1. Ensure adherence to air carriers Bill of Lading conditions in the forwarding operation.
- 10.2. Assess the applicability of these conditions to forwarding operations.

11. Title: Provide advice and generate solutions in terms of Forwarding Standard Trading Conditions

Specific Outcomes

- 11.1. Negotiate the acceptance of the Forwarders Standard Trading Conditions by all affected parties.
- 11.2. Advise affected parties of their liabilities and responsibilities in relation to the Forwarders Standard Trading Conditions

12. Title: Manage the freight forwarding of capital projects

Specific Outcomes

- 12.1. Prepare proposals for the securing of contracts
- 12.2. Develop and implement project implementation plan in accordance with clients requirements
- 12.3. Audit project implementation, during and on completion of the project

13. Title: Apply Principles of Supply Chain Management in a Freight Forwarding Operation

Specific Outcomes

- 13.1. Participate in the evaluation of international supply chains for the purpose of achieving optimal efficiency
- 13.2. Select a suitable transport and distribution infrastructure and plan and co-ordinate these so that the customer's needs regarding product, place, time and cost are satisfied.

- 13.3. Recommend added value solutions to the customer's overseas and local supply chain management requirements.
- 13.4. Integrate the company's logistics operations systems, in particular information systems, with the systems of the other participants in the international supply chain.
14. Title: **Secure and Retain new business in the Freight Forwarding industry**
- Specific Outcomes**
- 14.1. Conduct a needs analysis in order to identify the importer's and/or exporter's international logistics needs.
- 14.2. Advise prospective clients in the potential for optimising their international logistics operations.
- 14.3. Secure new business on the basis of the company's products and services.
15. Title: **Assess and implement e-commerce trading e-systems in a forwarding Environment**
- Specific Outcomes**
- 15.1. Evaluate the extent of existing and potential suppliers' ability to trade electronically.
- 15.2. Integrate the logistics functions of various supply chains using electronic commerce technology.
- 15.3. Select and install e-commerce solutions in the construction of supply chains.
- 15.4. Assess the company's e-commerce abilities and make recommendations for their enhancement through the incorporation of existing systems or the writing of customised software.
- 15.5. Select and recommend the appointment of software solution suppliers such as e-commerce hubs, portals exchanges and the like.
- 15.6. Ensure the compliance of the organisation's e-commerce systems with laws and regulations pertaining to international e-commerce procedures and practices as well as quality standards such as ISO.
16. Title: **Apply the principles of financial operations in a Freight Forwarding environment**
- Specific Outcomes**
- 16.1. Establish and administer the bookkeeping and accounting functions
- 16.2. Procure, establish and control the necessary securities
- 16.3. Establish and administer foreign exchange risk management systems
- 16.4. Set up VAT invoicing and control procedures applicable to international trade transactions.
- 16.5. Monitor and control the full range of disbursements applicable to a Forwarding operation

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In order to proceed with the recognition of Standards Generating Bodies in terms of Government Regulations 19(1)(c) and 22(2) of 28 March 1998, National Standards Body 12, Physical Planning and Construction Invites public comment with respect to the acceptability of the nominees and the representativeness of the key education and training stakeholder interest groups listed as SGB applicants below.

In addition, the NSB invite submissions from interested parties wishing to serve on such an SGB. Interested parties should take note of the section on SGB information below.

All nominations/ applications should be accompanied by curricula vitae.

More information regarding this application may be obtained on the SAQA website or from the SAQA offices.

Comment should reach the NSB at the address below **by not later than 28 July 2002.** All correspondence should be marked **SGB Formation – NSB 12, Geographical Information Sciences (GISc)** and be 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 - 482 0992

SGB INFORMATION

As a necessary step in the development and implementation of the National Qualifications Framework, The National Standards Bodies are briefed [regulation 19(1)(c) of 28 March 1998] to recognise or establish Standards Generating Bodies (SGBs). SGBs shall:

- generate standards and qualifications in accordance with the Authority requirements in identified sub-fields and levels;
- update and review standards;
- recommend standards and qualifications to National Standards Bodies;
- recommend criteria for the registration of assessors and moderators or moderating bodies; and
- perform such other functions as may from time-to-time be delegated by their National Standards Body.

Any bodies wishing to nominate representatives, make application to serve on, or make any other submission with regard to the above SGB should note the following information.

SGBs should be composed of organisations, which shall be key education and training stakeholder interest groups and experts in the sub-field. The NSB, when making its final decisions will have due regard for, among other things, the need for *representativeness and equity, redress and relevant expertise in terms of the work of the SGBs.*

Organisations proposing to nominate persons to SGBs should be sensitive to the need for *equity and redress*, and shall nominate persons who-

- (a) will be able to consider issues of productivity, fairness, public interest and international comparability as related to education and training in the sub-field;
- (b) enjoy credibility in the sub-field in question, who enjoy respect, have the necessary expertise and experience in the sub-field and have the support or backing of the nominating body;
- (c) are able to advocate and mediate the needs and interests of all levels within the sub-field covered by the Standards Generating Body;
- (d) are able to exercise critical judgement at a high level; and
- (e) are committed to a communication process between the Standards Generating Body, the National Standards Body and the Constituency.

National Standards Body 12 – Physical Planning and Construction, wishes to recognise a Geographical Information Sciences (GISc) SGB in terms of NSB Regulation 24 (1) (e) in the sub-field of Physical Planning, Design and Management.

PROPOSED BRIEF

1. Develop learning pathways for potential qualifications and unit standards in the sub-field Physical Planning, Design and Management from level 1 through to Level 8 [Regulation 24(1)(e)].
2. Generate GIS unit standard-based qualifications in the sub-field, in accordance with Authority requirements, at NQF levels 1 to 8 in the areas of: Geographical Information Science; GIS Technology; GIS Studies (in a societal context); GIS Management; GIS Applications; and Quality Assurance in terms of standards being developed by SABS and ISO [Regulation 24 (1)(a)].
3. The following qualifications shall be prioritised for generation:
 - National Certificate in Geographical Information Science – level 3
 - National Certificate in Geographical Information Science – level 4
 - National Diploma in Geographical Information Science – Level 5
 - National First Degree in Geographical Information Science – Level 6
 - Masters Degree in Geographical Information Science – Level 8
 - Doctoral Degree in Geographical Information Science – Level 8+
4. Recommend the qualifications and standards generated under 2, above, to the NSB [Regulation 24(1)(c)].
5. Recommend criteria for the registration of assessors and moderators or moderating bodies [Regulation 24 (1)(d)].
6. Liaise with any other SGB, as required, where GIS is involved or being considered [Regulation 24 (1)(e)].
7. Accept and perform other related functions as requested by NSB 12, Physical Planning and Construction [Regulation 24 (1)(e)].

PROPOSED COMPOSITION OF THE SGB

NOMINEE	WORKPLACE	NOMINATING BODY	EXPERIENCE / QUALIFICATIONS
Cooper, A	CSIR	CSIR	MSc (GIS) Geography
Davids, AS	UPE	UPE	BA (Hon.) Geography MSc (GIS)
De La Rey, AJG	Eskom	Eskom	B Land Survey MBL
du Plessis, HJ	Land Affairs (CDSM)	PLATO	ND (Survey) NHD (Survey) Dip. Tech. (Surveying) Advanced Dipl. In Public Administration
Forbes, AM	UN	UN	BSc (Survey) MSc (Survey)
Grundlingh, HW	UPE	UPE	ND (Cartography) Post Grad. Dipl (GIS)
Herbst, W	M Squared Holdings (Pty) Ltd	GISSA	B Mil (Nat. Science)
Hoekstra, C	UWP	UWP	BA (Geography)
Kekana, AA	GIS analyst SITA (Pty) Ltd	GISSA	BSc (Geography/GIS) BSc Hon. (GIS) Project Management Diploma
Kraak, U	Office of the Premier (NW)	NWPG	Std 10, Various short courses (GIS)
McGregor, G	Rhodes University	RU	BA geography BA Hon. Geography MSc Geography
McPherson, E	UWC	UWC	MA (Geography) MSc (GIS)
MacIntyre, D	Land Affairs (CDSM)	Land Affairs	ND (Cartography)
Margeot, H	STATS	STATS	MSc (GIS)
Munnik, S	UWP Engineers	GISSA	BSc (Earth Science) BSc Hon. (Geography)
Osei, S	NSIF	Land Affairs	BSc (Geodetic Eng) MSc (Engineering)
Schmidt, K	WITS	WITS	MA (Mine Surveying)
Smit, J	Emoyeni	Emoyeni	BSc (Survey) PhD (Eng)
Smith, T	NSIF	NSIF	BA (Geography)
Swan, N	CDSM	CDSM	BA Geography
van Wyk, G	University of Pretoria	University of Pretoria	MA (Geography)
Vlok, AC	UNISA	UNISA	BA, BA Hons, MA, HOD
Zietsman, HL	University of Stellenbosch	University of Stellenbosch	BA, BA Hons, MA, DPHII

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

Building Construction

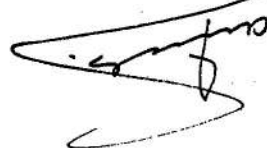
Registered by NSB 12, Physical Planning and Construction publishes the following qualifications and unit standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the unit standards and unit standards upon which qualifications are based. The full qualification and unit standards can be accessed via the SAQA web-site at www.saqa.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Plenaar street, Brooklyn, Pretoria.

Comment on the unit standards should reach SAQA at the address below and no later than 28 July 2002. All correspondence should be marked **Standards Setting - SGB Building Construction** 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 - 482 0907

SAMUEL B.A. ISAACS
EXECUTIVE OFFICER



81

NATIONAL CERTIFICATE IN CONSTRUCTION MASONRY – NQF 03

Level: 3
Field: Physical Planning and Construction
Sub-field: Building Construction
Credit Totals: 221
Issue date:
Review date:

1. Rationale for the qualification

As a result of past legacies many practitioners within the building construction sector were denied career advancement and possible recognition as qualified tradesmen. This was as a direct result of poor educational opportunities at some schools, leading to a lack of entry to formal training institutions. The introduction of a "National Certificate in Construction Masonry" based on unit standards will allow learners to reach their full potential of advancement without formal education becoming an impassable barrier and in addition, allow for the recognition of prior learning.

In terms of existing legislation, designated trades have to become transformed into unit standards-based qualifications. The Sector Skills Plan developed by the CETA indicates a definite need for supervisory personnel requiring relevant technical competencies such as those required in construction masonry.

The "National Certificate in Construction Masonry" reflects the skills, knowledge and understanding required to participate effectively as a Masonry practitioner in the building construction industry, whether in micro, small, medium or large operations.

The range of typical learners includes persons involved in the placing and cementing of manufactured brick/block size units to construct a range of structures and elements.

Typical job roles would include:

1. Brick Layer
2. Block Layer
3. Paver

2. Purpose of the Qualification:

The purpose of the qualification is to provide learners and education and training providers with the standards required to satisfy the challenges of participating effectively in the building construction industry.

For those who have been in the workplace for a long time, this qualification can be used in the recognition of prior learning process to assess and recognise workplace skills acquired without the benefit of formal education and training.

For the new entrant, this qualification describes the learning outcomes required to effectively participate in a structured workplace.

For education and training providers, this qualification provides guidance for the development of appropriate learning programmes and assessment documentation.

For employers, this qualification enables skills gaps to be identified and addressed ensuring that productivity levels are increased and business objectives achieved.

This qualification has been developed to assist with standardisation across the building industry. This will allow persons to register as a construction mason and lay a foundation for future career advancement across similar trades and to supervisory and management qualifications within the sector.

The primary skills that are recognised in this qualification relate to the placing and cementing of manufactured brick/block size units to construct a range of structures and elements. The learner will also have an understanding of the construction industry and how he or she should operate within the legislative, safety and quality systems, which govern the workplace.

3. Access to the qualification

As this is a unit standard based qualification, any learner who is competent in the unit standards as required by the fundamental, core and elective components stipulated in the qualification, will have free access to this qualification with the provision that he/she meets requirements for the learning assumed to be in place for each unit standard.

This qualification recognises skills, knowledge and values relevant to a workplace. It is designed for learners who engage actively in the construction masonry process. It is suitable for learners who:

- Have attended 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 or learnerships and the appropriate work experience
- Acquire the learning through any combination of the above

4. Learning assumed to be in place

Learners should have acquired the numeracy and literacy competencies of NQF Level 2 in the Further Education and Training (FET) Band, prior to embarking on learning towards this qualification.

5. Exit level outcomes

On completion of this qualification learners are able to:

- Demonstrate a basic understanding of the construction industry in terms of its composition, role players and the impact of the industry on the South African economy
- Read and interpret drawings and prepare the work area, tools, equipment and materials accordingly
- Apply health and safety legislation to a work area in the form of standards and procedures, as well as the rendering of basic first aid
- Set out and prepare construction masonry work areas
- Set out, excavate, cast and build concrete strip foundations and foundation walling
- Build masonry superstructures using both solid and hollow units of brick and block size
- Build decorative masonry elements

- Competence in the area of specialisation opted for by the learner in any of the following:

- Prepare to tile and apply tiles to plastered surfaces
- Prepare to plaster and plaster walls and screed a floor and steps
- Install refractory lining
- Prepare and pave various surfaces

6.

International Comparability:

This qualification is comparable to the equivalent New Zealand qualification. The following differences between the South African qualification and the New Zealand qualification are noted:

- The New Zealand National Certificate in Masonry (Bricklaying) – Level 3, has two distinct areas of specialisation (1) Brick and Block Laying and (2) Refractory Installation.
- There are also two Carpentry unit standards included as an area of specialisation

Unit standards are written at task level. This essentially means the New Zealand qualification is structured with a greater number of unit standards with smaller credit allocations.

Scottish Vocational Qualifications Authority

The qualification has also been compared against qualifications registered on the Scottish Qualifications Framework (SVQF), Area 003: Constructing. The following differences are noted:

Certificate qualifications have been developed for Levels 2 and 3 of the SVQF and have been structured for construction bricklaying practice in the following manner:

AREA 003: CONSTRUCTING	
Qualification	Levels
Construction: Bricklaying	2 and 3

Details of each of the above qualification structures were not available from the SVQ website at the time of research however the following unit standard titles were found on the database and have relevance to these two qualifications:

- Brickwork: Arch Construction
- Brickwork: Architectural and Feature Work
- Brickwork: Architectural Landscape Walling
- Brickwork: Circular Walls on Plan and Elevation
- Brickwork: Cladding methods
- Brickwork: External Corners and Piers in Reconstituted Stone
- Brickwork: Facing Blockwork and Glass Block Panels
- Brickwork: Installation of Domestic Heat Appliances, Surrounds and Firebacks
- Brickwork: Setting Out and Establishing Levels in Domestic Construction
- Brickwork: Steps in Brick and Concrete
- Brickwork: Underground Chambers
- Brickwork: Underpinning and Shoring in Alteration and Repair Work

- It is assumed from the benchmarking exercise carried out on the SVQF for Construction Carpentry that each level of the Construction: Bricklaying qualification will follow the same format identified for the Construction Carpentry qualifications i.e. that these comprise a smaller number of mandatory units made up of generic workplace core skills and skills that are specific to the area of practice.
- Complexity of skill is denoted in the level of the qualification

Australian National Qualifications Framework

The Technical and Further Education Authority (TAFE) New South Wales was also used as a resource for international benchmarking. TAFE provides nationally accredited training. The following information highlights the nationally accredited training programme offered by TAFE and which are aligned to the General Construction (Bricklaying/Blocklaying) Certificate qualification registered on the Australian Qualifications Framework at Level 3.

7. Integrated Assessment:

Formative assessments conducted during the learning process will consist of written tests, demonstrations and a number of self-assessments. The purpose of formative assessment is to diagnose learner strengths and weaknesses and to determine readiness for summative assessment.

Summative assessment would consist of written tests coupled with assignments, case studies and practical demonstrations. Summative assessments would only be conducted once the learner has indicated that he/she is ready to undergo summative assessment.

Before qualifying, the learners will be expected to demonstrate competence in a practical situation that integrates the assessment of all specific outcomes, for all unit standards. Integrated assessment provides learners with an opportunity to display an ability to integrate practical performance, actions, concepts and theory across unit standards to achieve competence in relation to the purpose of this qualification.

- In particular assessors should check that the learner is able to demonstrate the ability to consider a range of options and make decisions about:
- The quality of the observed practical performance as well as the theory and underpinning knowledge behind it.
 - The different methods that can be used by the learner to display thinking and decision making in the demonstration of practical performance.
 - Reflexive competencies
- For an applicant to register as an assessor, the applicant needs:

- A minimum of 2 (two) years' practical, relevant occupational experience
- Detailed documentary proof of educational qualification, practical training undergone, and experience gained (Portfolio of Evidence)
- A recognised assessor qualification

8. Recognition of Prior Learning:

The qualification may be obtained through the process of Recognition of Prior Learning. Learners who have met the requirements of any unit standard in this qualification may apply for recognition of prior learning to the Construction Education and Training Authority (CETA), and will be assessed against the assessment criteria and specific outcomes for the relevant unit standard/s.

9. Articulation Possibilities

This qualification has been developed for mobility trades within the construction industry and is intended to allow for further learning towards supervisory and management qualifications within this and other sectors.

This qualification builds on other certificates from a range of sub-sectors and will provide articulation with a range of qualifications in both technical and management areas.

The qualification has been designed and structured so that qualifying learners can move from one context to another. Equally holders of other qualifications may be evaluated against this qualification for the purpose of RPL.

10. Moderation:

Assessment of learner achievements takes place at providers accredited by the relevant ETQA (RSA, 1998b) for the provision of programs that result in the outcomes specified for the National Certificate in Construction Masonry. The relevant ETQA is responsible for the moderation of learner achievements of learners who meet the requirements of this qualification.

Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with the relevant ETQA. Any institution offering learning that will enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA.

Assessment and moderation of assessment will be overseen by the relevant ETQA according to the ETQAs policies and guidelines for assessment and moderation; in terms of agreements reached around assessment and moderation between ETQAs and in terms of the moderation guideline detailed immediately below.

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

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

11. Unit Standards matrix for National Certificate in Construction Masonry – NQF Level 3

ELECTIVE			
U.S. No	Unit Standard Title	Level	Credits
122	Prepare And Install Imprint Concrete Pavement	3	9
9	Pave Surfaces Using Rigid Segmental Clay Paving	3	9
9	Pave Surfaces Using Flexible Segmental Paving	3	9
25	Build Decorative Masonry Elements	3	25
<i>Unit Standards to be accessed</i>			
To be written	Install Refractory Lining		
	Apply tiles to plastered surfaces	3	15
	Plan and Prepare to Tile	3	10
	Plaster walls and screed a floor and steps	3	15
	Apply plaster to surfaces	3	15
	Prepare for plastering	3	15
CORE			
U.S. No	Unit Standard Title	Level	Credits
50	Build Masonry Superstructures Using Concrete Hollow Units	3	14
	Build Masonry Superstructures Using Solid Units	3	14
	Set Out, Excavate, Cast Concrete Strip Foundations And Build Foundation Walling	3	6
	Set Out And Prepare Construction Masonry Work Areas	3	6
9967	Erect and Dismantle Access Equipment	3	4
9966	Render basic First Aid	2	3
9995	Apply Health and Safety to a work area	2	3
FUNDAMENTAL			
U.S. No	Unit Standard Title	Level	Credits
49	Use Drawings and Identify And Use Tools, Equipment And Materials For Construction Masonry Site Practice	3	3
	Describe The Composition, Roleplayers And The Role Of The Construction Industry In The South African Economy	3	4
<i>Unit Standards to be accessed</i>			
9015	Apply the knowledge of statistics and probability to inform the collection and use of data and procedures in order to investigate life related problems and interpret the findings	3	5
9013	Describe, apply, analyse and calculate shape and motion in 2 and 3 dimensional shapes in different contexts	3	4
9007	Work with a wide range of patterns and basic functions and solve related problems	3	3
9014	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	3	2
9010	Demonstrate understanding of numbers and relationships among numbers and number systems and interpret numbers in different ways	3	2
LITERACY			
8969	Maintain and adapt oral communication	2	5
8963	Access and use information from texts	2	5
8964	Write for a defined context	2	5
8	Communicate verbally and non-verbally	3	8

UNIT STANDARD TITLES

Titles 1:	Describe The Composition, Roleplayers And The Role Of The Construction Industry
Titles 2:	In The South African Economy Use Drawings and Identify And Use Tools, Equipment And Materials For Construction Masonry Site Practice
Titles 3:	Set Out And Prepare Construction Masonry Work Areas
Titles 4:	Set Out, Excavate, Cast Concrete Strip Foundations And Build Foundation Walling
Titles 5:	Build Masonry Superstructures Using Solid Units
Titles 6:	Build Masonry Superstructures Using Concrete Hollow Units
Titles 7:	Build Decorative Masonry Elements
Titles 8:	Pave Surfaces Using Flexible Segmental Paving
Titles 9:	Pave surfaces Using Rigid Segmental Clay Paving
Titles 10:	Prepare and install Imprint Concrete Pavement

UNIT STANDARD TITLES AND SPECIFIC OUTCOMES

Title 1: Describe The Composition, Roleplayers And The Role Of The Construction Industry In The South African Economy

Specific Outcome	1	Describe the role of the construction industry and its impact on the South African economy
Specific Outcome	2	Identify and describe the roles of stakeholders in the construction industry
Specific Outcome	3	Develop an understanding of the impact of legislation, regulations and codes of practice across construction practices
Specific Outcome	4	Identify and describe education, training and development initiatives and opportunities in the construction industry
Specific Outcome	5	Describe the impact of environmental awareness on construction practice

Title 2: Use Drawings and Identify And Use Tools, Equipment And Materials For Construction Masonry Site Practice

Specific Outcome	1	Read and interpret working drawings and determine dimensions
Specific Outcome	2	Use and maintain masonry tools and equipment
Specific Outcome	3	Select masonry materials and use appropriate application methods
Specific Outcome	4	Select and use appropriate devices to set out and transfer levels

Title 3: Set Out And Prepare Construction Masonry Work Areas

Specific Outcome	1	Determine quantities of materials, including special materials when required
Specific Outcome	2	Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	3	Erect, use and dismantle scaffolding
Specific Outcome	4	Set up corner profiles, set out buildings and prepare a gauge rod
Specific Outcome	5	Mix, place and cure concrete
Specific Outcome	6	Stack masonry units and store materials and tools

Title 4: Set Out, Excavate, Cast Concrete Strip Foundations And Build Foundation Walling

Specific Outcome	1	Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	2	Prepare site and set out building foundations
Specific Outcome	3	Excavate foundation trenches, evaluate and report on soil conditions
Specific Outcome	4	Install level pegs for top of concrete foundations including step foundations where required
Specific Outcome	5	Mix, cast and level concrete and introduce steps
Specific Outcome	6	Build and finish foundation walls up to damp proof course using supplied masonry units and mortar materials

Range: Foundation walling includes solid and cavity construction in hollow or solid masonry units
Fill and consolidate and install under floor DPC and cast ground floor concrete slabs

Title 5: Build Masonry Superstructures Using Solid Units

Specific Outcome	1	Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	2	Erect, use and dismantle scaffolding
Specific Outcome	3	Set up vertical profiles and set out walls
Specific Outcome	4	Install damp proof course, set up doorframes and mark position of window frames
Specific Outcome	5	Build walls, build in doorframes, install and build in window frames and install above lintel reinforcement
Specific Outcome		Range: Doors and window frames include but are not limited to: steel, aluminium, concrete, timber, plastic (polypropylene, polyurethane)
Specific Outcome	6	Apply wall surface finishes
Specific Outcome	7	Range: Finishes include plasterwork, jointing and pointing
Specific Outcome	8	Mark off, position and build in roof anchors (tie downs)
Specific Outcome		Build ancillary walls to complete structure
Specific Outcome	9	Range: Ancillary walls include gable walls, retaining walls, buttress walls, parapet walls, coping walls, curved walls, arches
Specific Outcome		Clean brickwork and clear building site

Title 6: Build Masonry Superstructures Using Concrete Hollow Units

Specific Outcome	1	Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	2	Erect, use and dismantle scaffolding
Specific Outcome	3	Set up vertical profiles and set out walls
Specific Outcome	4	Install damp proof course, set up doorframes and mark position of window frames
Specific Outcome	5	Build walls, build in doorframes, install and build in window frames and install above lintel reinforcement
Specific Outcome		Range: Doors and window frames include but are not limited to: steel, aluminium, concrete, timber, plastic (polypropylene, polyurethane)
Specific Outcome	6	Apply wall surface finishes
Specific Outcome	7	Range: Finishes include plasterwork, jointing and pointing
Specific Outcome	8	Mark off, position and build in roof anchors (tie downs)
Specific Outcome		Build ancillary walls to complete structure
Specific Outcome	9	Range: Ancillary walls include gable walls, retaining walls, buttress walls, parapet walls, coping walls, curved walls
Specific Outcome		Clean brickwork and clear building site

Title 7: Build Decorative Masonry Elements

Specific Outcome	1	Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	2	Erect, use and dismantle scaffolding
Specific Outcome	3	Interpret working drawing and set out
Specific Outcome	4	Identify materials and required quantities
Specific Outcome	5	Build decorative elements
Specific Outcome		Range: Flat, semi-circular and segmented arches, steps, fireplaces and chimneys, decorative screen walls
Specific Outcome	6	Finish decorative elements
Specific Outcome	7	Range: Jointing and pointing
Specific Outcome		Clean site and masonry work

Specific Outcome	1	Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	2	Clear site of vegetation
Specific Outcome	3	Set out to plan and levels
Specific Outcome	4	Erect shuttering to line and level
Specific Outcome	5	Cast concrete (coloured if required)
Specific Outcome	6	Introduce imprint pattern
Specific Outcome	7	Finish and cure pavement surface

Title 10: Prepare and install Imprint Concrete Pavement

Specific Outcome	1	Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	2	Clear site of vegetation, set out levels, falls and extent (geometric configuration) of paving
Specific Outcome	3	Excavate soil and compact sub-grade and import sub-grade materials (if required), level and compact
Specific Outcome	4	Install edge restraints (kerbs) and channels and import and screed bedding sand to required levels
Specific Outcome	5	Lay paving units to appropriate pattern, cut and lay infill paving units and install movement joints if specified
Specific Outcome	6	Compact paving units and fill joints with mortar and finish and clean paving surfaces

Title 9: Pave surfaces Using Rigid Segmental Clay Paving

Specific Outcome	1	Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	2	Clear site of vegetation, set out levels, falls and extent (geometric configuration) of paving
Specific Outcome	3	Excavate soil and compact sub-grade and import sub-grade materials (if required), level and compact
Specific Outcome	4	Install edge restraints (kerbs) and channels and import and screed bedding sand to required levels
Specific Outcome	5	Lay paving units to appropriate pattern and cut and lay infill paving units and install movement joints if specified
Specific Outcome	6	Range: Paving units include: • Complete geometrical interlock • Partial geometrical interlock • Rectangular (No geometrical interlock) Compact paving units and fill joints with sand and finish and clean paving surfaces

Title 8: Pave Surfaces Using Flexible Segmental Paving

NATIONAL CERTIFICATE IN CONSTRUCTION CARPENTRY – NQF 03

Level:	3
Field:	Physical Planning and Construction
Sub-field:	Building Construction
Credit:	219
Issue date:	
Review date:	

1. Rationale of the qualification

As a result of past legacies many practitioners within the building construction sector were denied career advancement and possible recognition as qualified tradesmen. This was as a direct result of poor educational opportunities at some schools, leading to a lack of entry to formal training institutions. The introduction of a National Certificate in Construction Carpentry based on unit standards will allow learners to reach their full potential of advancement without formal education becoming an impassable barrier and in addition, allow for the recognition of prior learning.

In terms of existing legislation, designated trades have to become transformed into unit standards-based qualifications. The Sector Skills Plan developed by the CETA indicates a definite need for supervisory personnel requiring relevant technical competencies such as those required in construction carpentry.

The National Certificate in Construction Carpentry reflects the skills, knowledge and understanding required to participate effectively in the building construction industry, whether in micro, small, medium or large operations.

The range of typical learners include persons involved in:

2. Purpose of the Qualification:

The purpose of the qualification is to provide learners and education and training providers with the standards required to satisfy the challenges of participating effectively in the building construction industry.

For those who have been in the workplace for a long time, this qualification can be used in the recognition of prior learning process to assess and recognise workplace skills acquired without the benefit of formal education and training.

For the new entrant, this qualification describes the learning outcomes required to effectively participate in a structured workplace.

For education and training providers, this qualification provides guidance for the development of appropriate learning programmes and assessment documentation.

For employers, this qualification enables skills gaps to be identified and addressed ensuring that productivity levels are increased and business objectives achieved.

This qualification has been developed to assist with standardisation across the building industry. This will allow persons to register as a construction carpenter and lay a foundation for future career advancement across similar trades and to supervisory and management qualifications within the sector.

The primary skills that are recognised in this qualification relate to the manufacturing of wood products, constructing and finishing buildings and structural elements using wood and/or other related materials. The learner will also have an understanding of the construction industry and how he or she should operate within the legislative, safety and quality systems, which govern the workplace.

3.

Access to the qualification

As this is a unit standard based qualification, any learner who is competent in the unit standards as required by the fundamental, core and elective components stipulated in the qualification, will have free access to this qualification with the provision that he/she meets requirements for the learning assumed to be in place for each unit standard.

This qualification recognises skills, knowledge and values relevant to a workplace. It is designed for learners who engage actively in the construction carpentry process. It is suitable for learners who:

- Have attended 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 or learnerships and the appropriate work experience
- Acquire the learning through any combination of the above

4.

Learning assumed to be in place:

Learners should have acquired the numeracy and literacy competencies of NQF Level 2 in the Further Education and Training (FET) Band, prior to embarking on learning towards this qualification.

5.

Exit level outcomes

On completion of this qualification learners are able to:

- Demonstrate a basic understanding of the construction industry in terms of its composition, role players and the impact of the industry on the South African economy

6.

International Comparability:

- Read and interpret drawings and prepare the work area, tools, equipment and materials accordingly
- Apply health and safety legislation to a work area in the form of standards and procedures, including the rendering of basic first aid
- Set out and prepare construction carpentry work areas
- Construct and erect steel and timber formwork and shoring
- Competence in the area of specialisation opted for by the learner in any of the following:
 - Install shopfitting components manufactured from wood
 - Install finishing components
 - Manufacture wood products
 - Erect ceilings and timber frame partitions
 - Manufacture and erect roof trusses and clad roof structures
 - Install gutters and downpipes
 - Lay floor coverings

This qualification is comparable to the equivalent New Zealand qualification. The following differences are noted:

- The New Zealand Qualifications Framework has two qualifications for Carpentry: National Certificate in Carpentry Level 4
- National Certificate in Carpentry Level 4 (Advanced) for learners who aspire to a position of responsibility

National Certificate in Carpentry Level 4

- This qualification has a greater number of unit standards for knowledge of the theoretical aspects, which underpin the practical skills involved in carpentry. There are 39 of these knowledge-based unit standards in total, each with a credit allocation varying between 1, 2 or 3 credits.
- Unit standards are written at task level. This essentially means the New Zealand qualification is structured with a greater number of unit standards with smaller credit allocations.
- There is an elective unit standard "Sling and communicate during crane operations"

National Certificate in Carpentry Level 4 (Advanced)

- The unit standards comprising this qualification cover theoretical aspects only
- This qualification is awarded to learners who have been credited with the compulsory unit standards (18 credits) and a minimum of 22 credits at Level 4 or above from the Construction trades sub-field (Elective).

Construction trades refer to:

Architectural Aluminium Joinery
Bricklaying
Carpentry
Carpentry Theory
Concrete Construction
Concrete Production
Concrete Roof Tiling
Concrete Technology
Core construction
Elementary Construction Skills

Fibre Cement Linings
Fibrous Plaster
Floor and wall tiling
Flooring
Glazing
Lighting Design
Plaster Board
Proprietary Plaster Cladding Systems
Solid Plastering
Specialist Interiors

Scottish Vocational Qualifications Authority

The qualification has also been compared against Certificate qualifications registered on the Scottish Qualifications Framework (SVQF), Area 003: Constructing. The following differences are noted:

Certificate qualifications have been developed for Levels 1 – 4 of the SVQF and have been structured around the different areas of construction carpentry practice in the following manner:

AREA 003: CONSTRUCTING	
Qualification	Levels
Construction: Carpentry and Joinery	2 and 3
Construction: Formworking	1, 2 and 3
Construction: Roof Sheeting and Cladding	2
Construction: Roof Slating, Tiling and Cement Work	2 and 3
Construction: Shopfitting	2 and 3
Construction: Wood Machining	1, 2 and 3
Construction: Wood Occupations	1

- Each qualification at each level comprises a smaller number of mandatory units that comprise generic workplace core skills and skills that are specific to the area of practice.
- Complexity of skill is denoted in the level of the qualification
- Two examples of the way in which SVQ's are made up is provided below. These examples are provided to give an indication of both structure and level of complexity:

Australian National Qualifications Framework

The Technical and Further Education Authority (TAFE) New South Wales was also used as a resource for international benchmarking. TAFE provides nationally accredited training. The following information highlights the nationally accredited training programme offered by TAFE and which is aligned to the Construction Carpentry Certificate qualification registered on the Australian Qualifications Framework at Level 3.

CONSTRUCTION CARPENTRY – TRADE

Qualification:
National Code:
Course No:
Vocational Area:
Program Area:

Certificate III (AQF)
 90203NSW
 8044
 Construction and Transport
 Construction and Architectural

Nominal Hours:

480

This course, which can be done as part of an apprenticeship is for people who want to learn construction and formwork skills.

You will gain knowledge and skills needed for the construction and formwork industry. You will learn about plan reading, timber and concrete stairs, falsework, formwork, construction methods and scaffolding.

Career Opportunities:

Construction Carpenter

Articulation:

When you finish this course you can do other construction courses at Australian Qualification Framework (AQF) IV-VII

Entry Requirements:

There are no formal educational requirements for this course.

Integrated Assessment:

7.

Formative assessments conducted during the learning process will consist of written tests, demonstrations and a number of self-assessments. The purpose of formative assessment is to diagnose learner strengths and weaknesses and to determine readiness for summative assessment.

Summative assessment would consist of written tests coupled with assignments, case studies and practical demonstrations. Summative assessments would only be conducted once the learner has indicated that he/she is ready to undergo summative assessment.

Before qualifying, the learners will be expected to demonstrate competence in a practical situation that integrates the assessment of all specific outcomes, for all unit standards. Integrated assessment provides learners with an opportunity to display an ability to integrate practical performance, actions, concepts and theory across unit standards to achieve competence in relation to the purpose of this qualification.

In particular assessors should check that the learner is able to demonstrate the ability to consider a range of options and make decisions about:

- The quality of the observed practical performance as well as the theory and underpinning knowledge behind it.
- The different methods that can be used by the learner to display thinking and decision making in the demonstration of practical performance.
- Reflexive competencies

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

- A minimum of 2 (two) years' practical, relevant occupational experience
- Detailed documentary proof of educational qualification, practical training undergone, and experience gained (Portfolio of Evidence)
- A recognised assessor qualification

Recognition of Prior Learning:

8.

The qualification may be obtained through the process of Recognition of Prior Learning. Learners who have met the requirements of any unit standard in this qualification may apply for recognition of prior learning to the Construction Education and Training Authority (CETA), and will be assessed against the assessment criteria and specific outcomes for the relevant unit standard/s.

Articulation Possibilities

9.

This qualification has been developed for mobility across similar trades within the construction industry and is intended to allow for further learning towards supervisory and management qualifications within this and other sectors.

This qualification builds on other certificates from a range of sub-sectors and will provide articulation with a range of qualifications in both technical and management areas.

The qualification has been designed and structured so that qualifying learners can move from one context to another. Equally holders of other qualifications may be evaluated against this qualification for the purpose of RPL.

Moderation:

10.

Assessment of learner achievements takes place at providers accredited by appropriate ETQA (RSA, 1998b) for the provision of programs that result in the outcomes specified for the National Certificate in Construction Carpentry. The ETQA is responsible for the moderation of learner achievements of learners who meet the requirements of this qualification.

Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with the relevant ETQA. Any institution offering learning that will enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA.

Assessment and moderation of assessment will be overseen by the relevant ETQA according to the ETQAs policies and guidelines for assessment and moderation; in terms of agreements reached around assessment and moderation between ETQAs and in terms of the moderation guideline detailed immediately below.

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

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

14. Unit Standards matrix for National Certificate in Construction Carpentry – NQF Level 3

ELECTIVE			
US No	Unit Standard Title	Level	Credits
	Install shoptitting components manufactured from wood	3	16
	Install Finishing Components	3	16
	Erect Ceilings And Timber Frame Partitions	3	10
	Manufacture Products from Wood	3	32
	Clad Roof Structures	3	16
	Erect Roof Trusses	3	16
	Manufacture Timber Roof Trusses	3	6
<i>Unit Standards to be accessed</i>			
To be written	Install gutters and downpipes		
To be written	Lay floor coverings		
CORE			
US No	Unit Standard Title	Level	Credits
	Construct And Erect Steel And Timber Formwork and Shoring	3	40
	Set out and Prepare Construction Carpentry Work Areas	3	8
<i>Unit Standards to be accessed</i>			
	Erect, Use and Dismantle Access Equipment	3	4
	Render basic First Aid	2	3
	Apply Health and Safety to a Work Area	2	3
FUNDAMENTAL			
US No	Unit Standard Title		Credits
	Use Drawings and Identify, Use And Maintain Tools, Machines, Equipment And Materials For Construction Carpentry Site Practice	3	6
	Describe The Composition, Roleplayers And The Role Of The Construction Industry In The South African Economy	3	4
<i>Unit Standards to be accessed</i>			
Numeracy			
9015	Apply the knowledge of statistics and probability to inform the collection and use of data and procedures in order to investigate life related problems and interpret the findings	3	5
9013	Describe, apply, analyse and calculate shape and motion in 2 and 3 dimensional shapes in different contexts	3	4
9007	Work with a wide range of patterns and basic functions and solve related problems	3	3
9014	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	3	2
9010	Demonstrate understanding of numbers and relationships among numbers and number systems and interpret numbers in different ways	3	2
Literacy			
8969	Maintain and adapt oral communication	2	5
8963	Access and use information from texts	2	5
8964	Write for a defined context	2	5
US No 3	Communicate verbally and non-verbally	3	8
Plastering			

UNIT STANDARD TITLES

Titles 1:	Describe The Composition, Roleplayers And The Role Of The Construction Industry In The South African Economy
Titles 2:	Use Drawings and Identify And Use Tools, Equipment And Materials For Construction Carpentry Site Practice
Titles 3:	Set Out And Prepare Construction Carpentry Work Areas
Titles 4:	Construct and erect Steel and Timber Formwork and Shoring
Titles 5:	Manufacture Timber Roof Trusses
Titles 6:	Erect roof trusses
Titles 7:	Clad Roof Structures
Titles 8:	Manufacture Products from Wood
Titles 9:	Erect Ceilings and Timber Frame Partitions
Titles 10:	Install Finishing Components
Titles 11:	Install shopfitting components manufactured from wood

UNIT STANDARD TITLES AND SPECIFIC OUTCOMES

Title 1:	Describe The Composition, Roleplayers And The Role Of The Construction Industry In The South African Economy
Specific Outcome	1 Describe the role of the construction industry and its impact on the South African economy
Specific Outcome	2 Identify and describe the roles of stakeholders in the construction industry
Specific Outcome	3 Develop an understanding of the impact of legislation, regulations and codes of practice across construction practices
Specific Outcome	4 Range: National Building Regulations, Occupational Health and Safety Legislation, relevant SABS Codes Identify and describe education, training and development initiatives and opportunities in the construction industry
Specific Outcome	5 Describe the impact of environmental awareness on construction practice
Title 2:	Use Drawings and Identify And Use Tools, Equipment And Materials For Construction Carpentry Site Practice
Specific Outcome	1 Read and interpret basic working drawings Identify, use and maintain a range of hand and power tools, machines and equipment
Specific Outcome	Range of hand tools: Saws, hammers, set square Range of power tools: Drills, cross-cut saws, jigsaws Range of machines: circular saws, radial arm saws, band saws, jig saws, planing, moulding, morticing, tenoning, sanding, wood turning, drilling, cutter, grinding machines and spindles
Specific Outcome	3 Use a range of levelling devices to determine and transfer levels Range: Spirit level, water level and dumpy level
Specific Outcome	4 Select materials and use appropriate application methods Set out and construct a range of basic joints
Specific Outcome	5 Range: Mortice and tenon joint, T-halving joint, tongue and groove, finger jointing
Specific Outcome	6 Select and apply appropriate fixing methods to materials Range: adhesives (glue), nails, screws, bolts, staples
Specific Outcome	7 Apply good housekeeping practices and protect work in all stages of construction
Title 3:	Set Out And Prepare Construction Carpentry Work Areas
Specific Outcome	1 Interpret working drawings and prepare cutting lists Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	3 Set out buildings
Specific Outcome	4 Erect, use and dismantle scaffolding
Specific Outcome	Range: Basic scaffolding and ladders used in the carpentry trade Construct templates and jigs
Specific Outcome	6 Mix, place and cure concrete
Specific Outcome	7 Stack, store and position materials, tools and equipment
Title 4:	Construct and erect Steel and Timber Formwork and Shoring
Specific Outcome	1 Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	2 Erect, use and dismantle scaffolding
Specific Outcome	3 Set out and position formwork in accordance with working drawings
Specific Outcome	4 Place and position steel reinforcements
Specific Outcome	5 Secure and level formwork

Specific Outcome	6	Fix cover blocks to reinforcing
Specific Outcome	7	Clean interior of formwork
Specific Outcome	8	Mix, place and cure concrete
Title 5: Manufacture Timber Roof Trusses		

Specific Outcome	1	Interpret drawings and prepare cutting lists
Specific Outcome	2	Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	3	Set out roof truss dimensions and cut templates (jigs)
Specific Outcome	4	Mark and cut timber to specifications
Specific Outcome	5	Assemble (construct) roof truss components
Specific Outcome	6	Protect and store timber roof trusses
Title 6: Erect roof trusses		

Specific Outcome	1	Read and interpret roof layout plans
Specific Outcome	2	Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	3	Erect and dismantle scaffolding
Specific Outcome	4	Range: Ladder and trestle
Specific Outcome	4	Anchor wall plates, locate and mark-off positions of roof trusses on wall plate
Specific Outcome	5	Set out, position and secure roof trusses
Specific Outcome	6	Set out, position and secure hips, valleys and gable ends
Specific Outcome	7	Install valley gutters and include under-tile membrane when specified
Title 7: Clad Roof Structures		

Specific Outcome	1	Read and interpret roof plan drawings
Specific Outcome	2	Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	3	Erect and dismantle scaffolding
Specific Outcome	4	Set out, position and install battens or purlins
Specific Outcome	5	Set out and clad roof structures
Specific Outcome	6	Range of cladding: Concrete and clay tiles, slate tiles, corrugated galvanised sheeting, corrugated fibre cement sheeting
Specific Outcome	6	Set out, position and install finishing components
Title 8: Manufacture Products from Wood		

Specific Outcome	1	Prepare cutting lists from working drawings
Specific Outcome	2	Set out and mark off for machining purposes working from drawings and cutting lists
Specific Outcome	3	Set up and operate machines and machine wooden components
Specific Outcome	4	Create and use templates and jigs, develop and sharpen moulding cutters
Specific Outcome	5	Join machined components and complete a range of products made from wood
Specific Outcome	6	Range of products: Windows, Doors and Fittings, Cupboards, Counters, Drawers, Wall Panelling, wooden staircases, partitioning
Specific Outcome	6	Set out and manufacture a range of wooden moulds
Specific Outcome	7	Range of moulds: Architraves, Cornices, Precast and Custom Moulds
Specific Outcome	7	Prepare surfaces for application of wood treatments and final finishes by hand or machine
Range of surface preparation: Sandpapering, scraping, spray painting, varnishing and oiling		

Title 9: Erect Ceilings and Timber Frame Partitions	
Specific Outcome	1 Read and interpret drawings and prepare cutting lists
Specific Outcome	2 Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	3 Erect, use and dismantle scaffolding
Specific Outcome	4 Erect ceilings
Specific Outcome	Range: Brandered, suspended and timber ceilings
Specific Outcome	5 Install insulation
Specific Outcome	6 Erect and clad timber frame partitions
Specific Outcome	7 Joint and prepare partition cladding for finishing applications
Title 10: Install Finishing Components	
Specific Outcome	1 Read and interpret working drawings
Specific Outcome	2 Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	3 Erect, use and dismantle scaffolding
Specific Outcome	4 Install a range of finishing components
	Range: Wall panelling material, picture rails, architraves and skirting, domestic windows, doors and frames, (ledged and braced doors, framed and ledged stable type doors), ironmongery, timber floors, timber staircases, cupboards and shelving, kitchen units, towel rails, medicine cabinets, timber sills, pelmets, curtain tracks, metal and timber garage doors
Specific Outcome	5 Prepare components for finishing applications and apply surface touch-ups
Specific Outcome	6 Service and check functionality of finishing components
Title 11: Install shopfitting components manufactured from wood	
Specific Outcome	1 Read and interpret working drawings and prepare cutting lists
Specific Outcome	2 Prepare the work area and select, use and maintain tools, equipment and materials
Specific Outcome	3 Erect and dismantle working platforms
Specific Outcome	4 Assemble and install a range of purpose-made wood products for shopfitting purposes
	Range: Doors, cupboards, counters, mouldings, partitions and wall panels (wood and glass), brandered and suspended ceilings, shop fronts and staircases
Specific Outcome	5 Prepare shopfitted components for finishing applications and apply surface finishes
Specific Outcome	6 Service and check functionality of shopfitted components

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

Physical, Mathematical, Computer and Life Sciences

Registered by NSB 10, Physical, Mathematical, Computer and Life Sciences, publishes the following qualifications 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 upon which qualifications are based. The full qualification and unit standards can be accessed via the SAQA web-site at www.saqa.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Pienaar street, Brooklyn, Pretoria.

Comment on the unit standards should reach SAQA at the address below and no later than 28 July 2002. All correspondence should be marked **Standards Setting – NSB 10, Physical, Mathematical, Computer and Life Sciences** 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 – 482 0907

SAMUEL B.A. ISACS
EXECUTIVE OFFICER

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SOUTH AFRICAN QUALIFICATIONS AUTHORITY

Title: Bachelor of Science Degree – NQF Level 6

Field: Physical, Mathematical, Computer and Life Sciences

Sub-field: All sub-fields

Level: 6

Credit: 360

Issue date:

Review Date: 3 Years from date of registration

Rationale for the B.Sc. Qualification

There is an urgent need in South Africa for more scientists and technologists and the new 'National Plan for Higher Education' (February 2001) recognises that the proportion of students enrolled in science and technology programmes in Higher Education must increase. This *Generic BSc qualification* will help providers in Higher Education to establish appropriate curricula in science.

There is a strong need to produce scientists with a broad range of skills and Government and employers have recognised this. For example, some five years after the 'White Paper on Science and Technology: Preparing for the 21st Century' (September 1996) there is still a need for higher education and training to promote innovation and multi-disciplinary approaches within science education. Furthermore, surveys of employers of scientists and technologists emphasise the importance of general applied competencies within a scientific context. This *Generic BSc qualification* provides an opportunity to promote the establishment of curricula that emphasise enquiry, innovation, and science within social development, and which develop generic skills such as observation, problem-solving, effective communication, analysis and critical thinking.

This *Generic BSc qualification* provides clear statements of the outcomes of BSc qualifications to employers and makes explicit the competencies which can be expected of their potential employees. Thus programmes of learning which meet this qualification have specified exit level outcomes which can be both directly related to the aspirations of learners seeking careers in science and technology and to the range of competencies required in different employment

sectors (industry and business, research and development, local and national government, development and planning, management, and education).

Purpose of the Qualification

The purpose of the qualification is, in one or more sub-fields within the physical, mathematical, computer, life, earth, and environmental sciences:

- To produce science graduates who have: a systematic and coherent body of knowledge and an understanding of underlying concepts and principles; the ability to access and evaluate scientific information including knowing how scientific knowledge is created; a high level of cognitive and other generic skills including problem-solving, written and spoken communication and computer literacy; and competence in applying knowledge through basic research methods and practice.

- To provide every graduate with a sufficient depth of knowledge and skills that give opportunities for continued personal intellectual growth, including postgraduate study, for gainful economic activity in a range of careers, and for rewarding and constructive contributions to society.

- To provide society with science graduates who demonstrate initiative and responsibility, who are professional and ethical in their roles within the economy and society, and who are able to be intellectual leaders within their society.

- To produce graduates in all scientific fields, in order to increase, widen and transform the leadership base in South Africa, both for innovation and science-based economic and research development, and for the education of future generations of scientists, technologists, engineers and other professional people.

Level, Credits and Learning Components assigned to Qualification

There will be a minimum of 360 credits awarded for the qualification from an entry level at Level 5 (immediately post-level 4). There should be a minimum of 120 credits at the exit level, which is at level 6 on the NQF. At the exit level, Level 6, there should be at least 60 credits, which are in one discipline or sub-field with at least 60 credits in the same discipline or sub-field at Level 5. Level 5 will have a minimum of 180 credits.

It is required that students must satisfy minimum standards in core skills including: scientific reasoning; communication skills in the context of a science discipline or sub-field; numeracy; and computer skills. These competencies are fundamental to achieving the purpose of this BSc Qualification standard. In addition, for programmes of learning for the BSc qualification due consideration should be given to the learner's depth and breadth of knowledge. It is important that breadth is achieved through the appreciation of a scientific discipline different in content and method from the one in which the learner will specialise.

Access to the Qualification

Access to the qualification must be determined by the learning assumptions in place (see relevant section below). A satisfactory level of achievement in mathematics and a language of instruction in HET (currently English or Afrikaans) as given in section outlining the learning assumptions in place, is essential. Further guidance on current, and possible future, formal qualifications are given below. Recognition of prior learning (formal, informal or non-formal) must be included in the consideration of access to the qualification.

1. Minimum qualifications required may be currently demonstrated by a senior certificate with endorsement with a minimum level of achievement equivalent to at least 40% at Higher Grade or 60% at Standard Grade in mathematics and english (first or second language).
2. In the future, minimum requirements for access to the qualification may be demonstrated through the successful completion of a Further Education and Training Certificate at NQF Level 4 with a content and at a level of achievement equivalent to 1 above. The further completion of a Bridging Certificate (at level 4) or a Foundation Certificate (at Level 5) may be necessary for access to particular programmes of study.
3. Possession of an appropriate certificate or diploma at NQF Level 5 may be considered suitable for access to the qualification for recognition of prior learning as part of a programme of study leading to the qualification.

Field and sub-field of the Qualification

Field: Physical, Mathematical, Computer and Life Sciences

Sub-fields: All the sub-fields of NSB 10 will be covered by this generic bachelors degree in science including: physical sciences, mathematical sciences, information technology and computer, life sciences, earth and space sciences, and environmental sciences. Also, various sub-fields outside NSB 10 may wish to develop a BSc qualification. These may include: forestry, horticulture, nature conservation, and health sciences. This BSc Qualification Standard will apply as a minimum standard to all types of 360-credit BSc qualifications in the 'General Track' of the NQF.

Learning assumed to be in place

Learners who register for this qualification at Level 5 are assumed to have:

- a foundational knowledge and understanding of mathematics equivalent to NQF Level 4;
- basic information-gathering, analysis and presentation skills equivalent to NQF Level 4
- the capacity to learn from written material in the technical language of mathematics and science;
- the ability to communicate what they have learned reliably, accurately, and comprehensively in the required medium of instruction (currently English or Afrikaans);
- the ability to begin to take responsibility for their own learning and its progress within a well-structured and managed learning environment;
- the ability to evaluate their own performance

Exit-level Outcomes and Associated Assessment Criteria

	Exit-level Outcomes Bsc graduates, in at least one science discipline, can:	Assessment Criteria
1	a) Demonstrate a knowledge and understanding of fundamental concepts and principles. b) Recognise that scientific knowledge and understanding are changeable.	The core concepts and principles of the discipline are identified, described and explained. The relationships among the core concepts and principles are demonstrated. The range and limits of applicability of the core concepts and principles are identified. The core concepts and principles are applied to standard problems. Examples of changes in knowledge and understanding in a discipline are described and explained. The limitations of basic techniques used in a discipline are appraised. The significance of contested scientific knowledge in a contemporary context is recognised. An understanding of how scientific information and ideas become generally accepted is demonstrated.

2	a) Access, evaluate and synthesise scientific information.	The library, internet and other data storage and retrieval facilities are used to access information. Scientific reasoning is used to evaluate the quality of information. Information from a variety of sources, which may be contradictory or divergent, is synthesised. Appropriate procedures for generating relevant information are designed, selected and applied with due concern for bias and for any ethical or safety considerations. Appropriate forms of enquiry are conducted by applying standard procedures within the discipline such as experimental or computational techniques, or deductive reasoning. Data are collected and recorded accurately, truthfully and in appropriate formats. Data and scientific evidence are analysed and from such analysis valid arguments and conclusions are presented.
3	Demonstrate key scientific reasoning skills	Logical thinking is demonstrated and naive and flawed scientific reasoning is identified. Inductive (effect to cause or specific to general) and deductive (cause to effect or general to specific) reasoning can be discriminated. Hypothesis-deductive reasoning can be performed. Cause-effect relations can be discerned in the face of some level of uncertainty or gap in available information. Thinking and reasoning processes are reflected upon. The self-conscious capacity to judge when understanding has been achieved or a problem has been adequately solved is demonstrated.
4	Communicate scientific understanding in writing, orally and using visual, symbolic and/or other forms of representation.	Scientific language is used correctly to produce clear and coherent written documents, which follow appropriate scientific conventions. Scientific information is presented verbally in front of others. Appropriate referencing conventions are used, plagiarism is avoided and intellectual property is respected. Non-verbal forms of representation are used correctly and appropriately.

5	Solve scientific problems.	Concrete and abstract problems, in familiar and unfamiliar contexts, are formulated, analysed and solved. The knowledge of theory is applied to particular real-world contexts. Knowledge is integrated, e.g. from various disciplines or modes of enquiry, in solving scientific problems.	Tasks related to basic computer literacy skills are performed. The validity of ICT solutions for problems posed by a discipline are critically assessed. ICT that is appropriate to the particular discipline is used, e.g., for: computational applications; simulation applications; pattern recognition; automation and control; managing large volumes of data.	Evidence of successful and effective contributions in group work is provided. The outcomes of scientific group work are communicated effectively and with respect for the contributions of each group member. Organisational skills in managing group work are applied.	7	Work effectively as a member of a team or group in scientific projects or investigations.	Apply scientific knowledge and ways of thinking to societal issues, taking into account ethical and cultural considerations.	8	Ethically and culturally sensitive decisions on the effects of scientifically based activities on the society are made. The socio-economic impact of scientific interventions in society is identified. Scientific knowledge is applied for the direct benefit of others, e.g. to junior students, in schools or in the community.	9	Manage and organise their learning activities responsibly.	Appropriate study skills are demonstrated (e.g. learning from text, note-taking, summarising, analysis and synthesis) Effective learning strategies which suit personal needs and contexts are developed and used. Effective time management is demonstrated, e.g. by completing tasks to deadlines.
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International Comparability

This generic BSc Qualification Standard is comparable to other similar BSc qualifications from around the world with regards to outcomes and assessment criteria, degree of difficulty and notional learning time. The development of this standard involved the following:

This SAQA Level Descriptors for NQF Level 6 were used to design this qualification standard. These Level Descriptors are internationally benchmarked criteria based upon published work of the National Quality Assurance bodies in England, Scotland, Northern Ireland, New Zealand, and Australia.

This Qualification has used the Qualification Descriptors for the General Bachelor's Degree, which are currently in the CHE draft 'National Academic Policy'.

The process followed in developing this Qualification has been reached through the consensus of the South African universities (SAUVCA) and other accreditation bodies e.g. SACNASP and represents the collective experience of universities and individual scientists in South Africa.

Integrated Assessment

Learning and assessment should be integrated. Continual formative assessment is required so that students are given feedback on their progress in the achievement of specific learning outcomes. Summative assessment is concerned with the judgement of the learning in relation to the exit-level outcomes of the qualification. Such judgement must include 'integrated assessment(s)' which test the students' ability to integrate the larger body of knowledge, skills and attitudes that are represented by the exit-level outcomes as a whole.

Integrated assessments must be designed to achieve:

- An integration of the achievement of exit-level outcomes in a way which demonstrates that the purpose of the qualification as a whole has been achieved;
- the evaluation of learner performance which can provide evidence of applied competence;
- criterion-referenced assessment which is clearly explained to, and understood by, the learners and which can be applied in the recognition of prior learning.

Recognition of Prior Learning (RPL)

Formal prior learning

Prior accredited learning of a learner at the FET or HET level in relevant domains which constitute credit-bearing units or modules should be recognised if evidence can be produced that shows that the learner has achieved, at a satisfactory level, the outcomes and associated assessment criteria specified for the Bachelor of Science and, if appropriate, allow the recognition of prior learning for the achievement of the qualification in part or in full.

Non-formal and informal prior experiential learning

An applicant who falls outside of the formal qualifications system but who can demonstrate (through the production of substantial and satisfactory evidence) experiential or work-based learning or a non-formal qualification (or a combination), may be considered for admission and/or for the recognition of prior learning for the achievement of the qualification in part or in full. An applicant who, after such assessment, is deemed to have sufficient potential but is in need of further academic development, must be directed to other suitable learning programmes prior to admission or to parallel programmes after admission.

Articulation Possibilities

The BSc qualification is one of the main high volume qualifications in South African universities and allows learners access to NQF level 7 qualifications such as BSc Honours which is currently the main route of entry to producing MSc and PhD graduates in all the sub-fields of the physical sciences, mathematical sciences, information technology and computer sciences, life sciences, earth and space sciences, and environmental sciences. In addition it allows both vertical and horizontal articulation to specialize in, for example, science education, technology and other areas of the applied sciences on the career-focussed track of the NQF.

Moderation

The ETQA system for HET (the HEQC) is not fully developed but moderation procedures for learner achievement must be fully compatible with such national systems as they evolve. Moderation of learners' achievements and the overall award of the qualification at the exit level must be based on the well-established procedures of using accredited/registered external examiners (external to the provider). External examiners should moderate at least 60% of the credits at the exit level. This must include all assessments which are specifically designated as integrated assessments, and all summative assessments such as examinations (including, inter alia, the moderation of the question papers, the marking process, and marked scripts) and portfolios which demonstrate the achievement of exit-level outcomes. In addition, a proportion of the formative assessments should be externally moderated.

Criteria for the registration of assessors

Any assessor must be a recognised expert in their discipline or sub-field with qualifications in the relevant discipline at least at Master of Science or equivalent NQF level and be currently teaching or have 3 years experience of teaching in HET, or be recognised by academic peers as a leader in a particular discipline from industry, commerce etc.

Assessors must be accredited by the HEQC.

No. 892

28 June 2002

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

Food

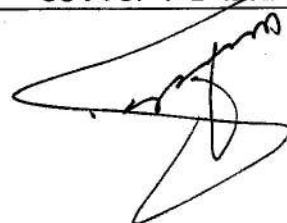
Registered by NSB 06, Manufacturing, Engineering and Technology, publishes the following unit standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the unit standards upon which qualifications are based. The unit standards can be accessed via the SAQA web-site at www.saqa.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Pienaar street, Brooklyn, Pretoria.

Comment on the unit standards should reach SAQA at the address **below and no later than 28 July 2002**. All correspondence should be marked **Standards Setting – SGB Food** 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 – 482 0907

SAMUEL B.A. ISAACS
EXECUTIVE OFFICER



UNIT STANDARDS IN NATIONAL CERTIFICATES IN FOOD AND BEVERAGES PROCESSING NQF 3

UNIT STANDARDS ON NQF LEVEL 2

- Title 1:** Read and adjust instruments on food or beverage production or packing equipment.
Title 2: Identify computerised systems in a food or beverage processing system.

UNIT STANDARDS AT NQF LEVEL 3

- Title 1:** Demonstrate an understanding of basic machine operations in a food or beverage environment.
Title 2: Perform first line maintenance on food or beverage production or packing equipment.
Title 3: Perform change overs in a food or beverage production environment.

UNIT STANDARDS AND SPECIFIC OUTCOMES IN NATIONAL CERTIFICATES IN FOOD AND BEVERAGES PROCESSING NQF 3

UNIT STANDARDS ON NQF LEVEL 2

- 1. Title:** Read and adjust instruments on food or beverage production or packing equipment.

- Specific outcome 1.1:** Demonstrate understanding of reading and setting processing instruments.
Specific outcome 1.2: Read and interpret measuring instruments on a processing line.
Specific outcome 1.3: Adjust and set processing measuring instruments.
Specific outcome 1.4: Record the measurements of the processing instruments.

- 2. Title:** Identify computerised systems in a food or beverage processing system.

- Specific outcome 2.1:** Demonstrate an understanding of computerised systems in processing environment.
Specific outcome 2.2: Identify and use programmable logic controllers.
Specific outcome 2.3: Identify and use a computer system that controls automated processes.
Specific outcome 2.4: Identify and use man machine interface.

UNIT STANDARDS ON NQF LEVEL 3

- 1. Title:** Demonstrate an understanding of basic machine operations in a food or beverage environment.

- Specific outcome 1.1:** Demonstrate an understanding of machine inputs and outputs.
Specific outcome 1.2: Start-up a food or beverage machine.
Specific outcome 1.3: Make adjustments to a food or machine while in operation.
Specific outcome 1.4: Shut-down a food or beverage machine.
Specific outcome 1.5: Complete production documentation.

- 2. Title:** Perform first line maintenance on food or beverage production or packing equipment.

- Specific outcome 2.1:** Demonstrate understanding of production or packaging surfaces.
Specific outcome 2.2: Handle and use measuring and maintenance tools.
Specific outcome 2.3: Handle and use lubricants.
Specific outcome 2.4: Apply basic hand skills to perform first line maintenance on a food or beverage production or packaging equipment.

- 3. Title:** Perform change overs in a food or beverage production environment.

- Specific outcome 3.1:** Demonstrate knowledge of change overs in a food or beverage environment.
Specific outcome 3.2: Prepare for equipment change overs on a food or beverage production or packaging equipment.
Specific outcome 3.3: Perform a change over procedure in a food or beverage production or packaging environment.
Specific outcome 3.4: Perform end-of-change over procedures.

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