

Government Gazette Staatskoerant

REPUBLIC OF SOUTH AFRICA
REPUBLIEK VAN SUID-AFRIKA

Vol. 525

Pretoria, 5 March 2009
Maart

No. 31984

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GOVERNMENT NOTICE

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

No. 251

5 March 2009



SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

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

Forestry

registered by Organising Field 01 – Agriculture and Nature Conservation, 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 Qualifications and Unit Standards. The full Qualifications and Unit Standards can be accessed via the SAQA web-site at www.saqqa.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Qualifications and Unit Standards should reach SAQA at the address below and **no later than 6 April 2009**. All correspondence should be marked **Standards Setting – SGB for Forestry** and addressed to

The Director: Standards Setting and Development
SAQA

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D. MPHUTHING

ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:**General Education and Training Certificate: Lumber Milling**

SAQA QUAL ID		QUALIFICATION TITLE	
66269		General Education and Training Certificate: Lumber Milling	
ORIGINATOR		PROVIDER	
SGB Forestry			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	1 - Agriculture and Nature Conservation	Forestry and Wood Technology	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	123	Level 1	Regular-Unit Stds Based

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

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

The purpose of this Qualification is to provide the skills required in order for the learners to be able to perform elementary work in the Lumber Mill Industry, within their area of work. The learner will acquire knowledge and skills to:

- > Describe the Lumber Milling Industry in terms of processes and equipment making use of correct terminology.
- > Perform elementary Lumber Milling Operations under supervision.
- > Apply mathematical concepts when performing elementary tasks.
- > Identify the mechanical make-up and the function of elementary equipment needed in area of work.
- > Operate basic equipment safely in line with area of specialisation.
- > Apply lubrication as a maintenance requirement with the Lumber Milling industry.
- > Demonstrate knowledge pertaining to basic health and safety principles in and around a workplace.
- > Adhere to safety, health and environmental requirements in the workplace.
- > Conduct maintenance operation on the machine.
- > Participate as a member of a team.

Rationale:

South African lumber millers depend on the skills level of its workers for the production of high quality products. These product are expected to match up to the set standards and specifications of the industry which includes: SABS, SAWPA and SANS. Failure to comply with the set standards could result in some of the plants' and sites' closure. To offset this, an increased demand for more knowledgeable and better skilled personnel to produce millers has been identified within the sector. This qualification will allow workers at the lower levels an opportunity to gain skills and knowledge appropriate for their areas of work.

The typical range of learners is the currently employed, unemployed and other persons, who want to enter a learning programme to obtain a General Education and Training Certificate in Lumber Milling at NQF Level 1, to continue building a career path in this industry.

These learners, once qualified, will be able to effectively and efficiently work as supervisors or foremen, on tasks they are responsible for at this level in the relevant workplace.

This qualification equips learners with identified competencies, knowledge and skills at NQF Level 1 and also provide a basis for further learning at NQF Level 2. The exit level outcomes, which embody these competencies in knowledge and skills, are listed in paragraph 8 below. The fundamental outcomes as well as the non-industry specific core outcomes required at this level, also provide the learner with building blocks for a learning pathway outside this industry.

The learning programme, which leads to this qualification, produces a person who is knowledgeable about and appropriately skilled in performing the relevant tasks in Lumber Milling. Persons without any training or with another type of training, or persons, who had undergone the ad-hoc type of training which was prevalent under the previous dispensation, will not be of the same quality for this work than a learner with this qualification.

Improved levels of knowledge and skills lead to greater ability to produce at more competitive costs and better quality, increased sales, greater profits, more personal income, which will impact favourably both on the society and the economy of the country.

This qualification supports the National Qualifications Framework regarding access, mobility and progression, quality of learning, redress of unfair discrimination and contribution to personal development and social and economic development of the action.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED IN PLACE

It is assumed that learners are competent in Communication and Literacy Skills at ABET Level 3 or equivalent.

Recognition of Prior Learning:

This qualification may be achieved in part or wholly through recognition of prior learning (RPL) processes.

The provision that the qualification may be obtained through the recognition of prior learning facilitates access to an education, training and career path in engineering and thus accelerates the redress of past unfair discrimination in education, training and employment opportunities.

Evidence of prior learning must be assessed through formal RPL processes through recognized methods. Any other evidence of prior learning should be assessed through formal RPL processes to recognize achievement thereof.

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

The structure of this unit standard based qualification makes the RPL possible, if the learner is able to demonstrate competence in the knowledge, skills, values and attitudes implicit in this qualification.

Learners who already work in the Lumber Milling industry who believe they possess competencies to enable them to meet some or all of the ELOs listed in the qualification will be able to present themselves for assessment against those of their choice.

Access to the Qualification:

Access to this qualification is open.

QUALIFICATION RULES

This Qualification consists of Fundamental, Core and Elective Unit Standards. A minimum of 123 credits is required to achieve this Qualification.

The credits are allocated as follows:

Fundamental Component:

> Language, Literacy and Communication (LLC) Unit Standards, totalling 23 credits. All the credits are compulsory for all the learners.

A choice of either:

> Mathematical Literacy Unit Standards, totalling 16 credits.

Or

> Mathematics and Mathematical Sciences, totalling 16 credits.

A learner must choose Mathematical Literacy or Mathematics and not a combination of both.

Learners must complete all the LLC Unit Standards, totalling 23 credits and either Mathematical Literacy Unit Standards or the Mathematical Sciences Unit Standards, totalling 16 credits to give a total of 39 credits for the Fundamental Component.

Learning Area: Language, Literacy and Communication (LLC):

ID Number; Unit Standard Title; Credits:

> ID 119635; Engage in a range of speaking/signing and listening interactions for a variety of purposes; 6 credits.

> ID 119631; Explore and use a variety of strategies to learn; 5 credits.

> ID 119640; Read/view and respond to a range of text types; 6 credits.

> ID 119636; Write/Sign for a variety of different purposes; 6 credits.

Total = 23 credits.

And

Learning Area: Mathematical Literacy (ML):

ID Number; Unit Standard Title; Credits:

ID 119373; Describe and represent objects in terms of shape, space and measurement; 5 credits

ID 119364; Evaluate and solve data handling and probability problems within given contexts; 5 credits.

ID 119362; Work with numbers, operations with numbers and relationships between numbers; 4 credits.

ID 7450; Work with measurements in a variety of contexts; 6 credits.

Total = 16 credits.

Or

Learning Area: Mathematics and Mathematical Sciences (MMS):

ID Number; Unit Standard Title; Credits:

ID 7448; Work with patterns in various contexts; 4 credits.

ID 7452; Describe, represent and interpret mathematical modes in different contexts; 6 credits.

ID 7453; Use algebraic notations, conventions and terminology to solve problems, 3 credits.

ID 7464; Analyse cultural products and processes as representations of shape, space and time; 2 credits.

Total =16 credits.

Core Component:

All the 8 core unit standards totalling 44 credits are compulsory.

Elective Component:

There are four elective pathways; Lumber Drying; Dry Lumber processing; Saw Doctoring and Green Timber processing.

Note:

> Each of the specialization areas has a different number of credits. The minimum number of elective credits is 40. Therefore the balance of credits required to achieve this qualification must be selected from any of the other elective pathways.

Specialisation path 1: Lumber Drying with 3 Unit Standards titles below:

> ID 263689: Stack lumber for kiln drying.

> ID 263699: Move kiln trolley with load of dried lumber from drying kiln run to cooling shed/facilities.

> ID 263674: Describe drying defects that can occur in wood and methods and techniques to minimize them.

Specialisation path 2: Dry Lumber processing with 4 Unit Standards titles below:

> ID 263676: Prepare and load lumber for drying in the kilns according to prescribed procedure.

> ID 263681: Handle, mix and apply adhesive glue manually in finger jointing and laminating facilities of lumber milling.

Specialisation Area 3: Saw Doctoring with 5 Unit Standards titles below:

> ID 263695: Perform routine maintenance on saw shop machine and tools.

> ID 263655: Move and transport saws and cutters between saw shop and processing machines.

> ID 263654: Clean saws and cutters returned for maintenance in saw shop.

- > ID 263682: Inspect used saw blades before and after servicing in Saw Shop of Lumber Mill.
- > ID 263678: Manually set and sharpen springset saw blades used in Lumber Mill.

Specialisation Area 4: Green Timber Processing with 1 Unit Standard with title below:

- > ID 263690: Operate Log Yard in a Lumber Mill.

EXIT LEVEL OUTCOMES

1. Demonstrate comprehensive knowledge of Lumber Milling Operations with respect to any of the four sub-disciplines of Lumber Milling Technology.

- > Range: Lumber Milling Industry: Lumber drying, green timber processing, dry lumber processing, saw doctoring.

2. Perform elementary Lumber Milling operations under supervision (cross-cut machine, conveyor belt, strapping machine).

3. Adhere to Occupational Health, Safety and Environmental standards in the workplace.

4. Apply basic quality control measures as per Lumber Milling Industry standards.

5. Identify, gather and operate basic equipment safely.

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

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

- > Identifying potential risks in the workplace and implementing appropriate solutions to maintain a safe and secure working environment.
- > Identifying and pro-actively reporting on non-availability of resources and materials.

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

- > Communicating and receiving advice from supervisors.

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

- > Identifying, minimizing and reporting potential occupational health and safety hazards and risks in the workplace.
- > Performing work activities in accordance with industry standard operating procedures.
- > Safety equipment and clothing is selected and prepared in accordance with legislative requirements.

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

- > Carrying out written instructions issued by supervisors, correctly and efficiently.
- > Interpreting and recording correct client contact details.

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

- > Issuing clear verbal instructions to team members, other colleagues and clients.
- > Actively listening to feedback received from team members, other colleagues and clients.
- > Evaluating and reporting problem situations to team members, other colleagues and clients.

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

- > Interpret various gauge settings, readings and recording the impact on the business.
- > Understanding and interpreting the various gauge reading equipment.

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

- > Applying the inter-relatedness of the Lumber Milling industry as a set of related systems.
- > Recognizing the inter-relatedness between the various business units within the organization.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

- 1.1 The correct terminology is used to describe the various operations within the Lumber Milling processes.
- 1.2 Differences between the four sub disciplines of Lumber Milling Technology are given.
- 1.3 Different equipment is listed and differentiated in terms of use.
- 1.4 Different products are described in terms of the different operations.

Associated Assessment Criteria for Exit Level Outcome 2:

- 2.1 Elementary operations are described/ listed in terms of operations performed.
- 2.2 Safety precautions are adhered to during operation.
- 2.3 Correct equipment is used to carry out tasks.
- 2.4 Checks are performed on equipment before carrying out task.
- 2.5 Findings are reported according to company's procedures.
- 2.6 Equipment is operated according to standard operating procedures.
- 2.7 Basic maintenance is performed on equipment (lubrication).
- 2.8 Equipment is cleaned after use.

Associated Assessment Criteria for Exit Level Outcome 3:

- 3.1 Occupational health, safety and environmental legislation applicable to the Lumber Milling Industry is understood and applied correctly at all times as per workplace requirements.
- 3.2 First Aid is administered appropriately and requisite reporting takes place.
- 3.3 Potential hazards are identified as per standard operating standards and norms.
- 3.4 Safety, health and environment related activities are conducted in the Lumber Milling environment and according to Occupational Health, Safety and Environmental requirements.

Associated Assessment Criteria for Exit Level Outcome 4:

- 4.1 Quality requirements are listed.
- 4.2 The products (boards, planks) are graded according to prescribed quality standards.
- 4.3 Products are cut according to company's specifications.
- 4.4 The importance of adherence to quality requirements is explained according to industry standardization.
- 4.5 The consequences of poor quality products on the business are given.

Associated Assessment Criteria for Exit Level Outcome 5:

- 5.1 Correct equipment is identified in terms of work at hand.
- 5.2 The use of equipment is explained.

5.3 Equipment is gathered in terms of operation to be carried out.

5.4 Equipment is operated safely.

5.5 Equipment is cleaned and maintained as per specifications.

5.6 Equipment is stored accordingly.

Integrated Assessment:

Integrated assessment evaluates the learner's ability to combine actions and ideas across a range of activities and knowledge areas. The integrated assessment must specifically assess the learner's ability to:

- > Demonstrate competence by means of the practical application of the embedded knowledge in a manner that meets the required performance standards required.
- > Illustrate a clear understanding of the concepts, theory and principles that underpin the practical action taken.

The assessment will require assessment methods which measure and evaluate evidence generated during learning and on-the-job activities. Because assessment practices must be open and transparent, fair, valid and reliable; ensuring that no learner is disadvantaged in any way whatsoever, an integrated assessment approach is incorporated into the Qualification.

A variety of methods must be used in assessment tools and activities must be appropriate to the context in which the learner is working or will work. Where it is not possible to assess the learner at the workplace, simulations, case studies role plays and other similar techniques should be used to provide a context appropriate to the assessment.

The term integrated assessment implies that theoretical and practical components should be assessed together. Whenever possible, the assessment of knowledge, skills, attitudes and values shown in the Unit Standards should be integrated and, during integrated assessment, the assessor should make use of a range of formative and summative assessment tools and methods. Combinations of practical, applied, foundational and reflective competencies should be assessed. Assessment should further ensure that all specific outcomes, embedded knowledge and critical cross field outcomes are evaluated in an integrated way.

Assessors must assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience as the assessment process is capable of being applied to RPL, subject to the rules and criteria of the relevant ETQA.

INTERNATIONAL COMPARABILITY

The following countries were considered for their best practices in Wood Processing and also for their similarities and differences to the South African model:

- > New Zealand.
- > Canada.
- > USA.
- > Britain.

New Zealand:

Saw Doctoring:

The Qualification recognises the skills and knowledge required for the care and maintenance of handsaws, circular saws, and band saws. It is recommended that candidates should hold a current first aid certificate or are credited with the first aid standards - Unit 6400, Manage first aid

in emergency situations; Unit 6401, Provide first aid; and Unit 6402, Provide resuscitation Level 2.

Topics Covered:

- > Demonstrate knowledge of safety on engineering worksites.
- > Apply safe working practices on an engineering worksite.
- > Safely shut down and isolate machines and equipment.
- > Set circular saws.
- > Maintain household and handy person cutting tools.
- > Demonstrate knowledge of grinding for saw doctoring, timber machining and finger jointing.
- > Tooth circular saws.
- > Demonstrate knowledge of saw tooth profiles in saw doctoring.
- > Demonstrate knowledge of saw grinder application and operation.
- > Perform basic saw doctoring calculations.
- > Demonstrate knowledge of the principles of saw doctoring.
- > Identify and describe workplace risks in a wood manufacturing operation.
- > Sharpen band saws.
- > Sharpen circular saws.
- > Select, use and care for, engineering hand tools.
- > Maintain handsaws.
- > Maintain narrow handsaws.
- > Grind and hone straight knives and anvils.
- > Maintain a chainsaw chain and bar.
- > Maintain metal cutting saw.
- > Tip circular saw teeth and profile circular saw tips.
- > Retooth inserted teeth saws.
- > Tooth band saws.
- > Maintain router bits and drill bits.

This qualification compares favourably with the South African Qualification at NQF Level 2 and 3 in the following:

- > Level of Unit Standards is the same.
- > Number of credits are the same.

Although the qualification is at Level 2, a few competencies in the qualification are expected to be demonstrated by a learner qualifying at the level 1 within the SA context. These are:

- > Demonstrate knowledge of safety on engineering worksites.
- > Apply safe working practices on an engineering worksite.
- > Safely shut down and isolate machines and equipment.
- > Set circular saws.
- > Maintain household and handyperson cutting tools.

Block stack timber Level 1, with 2 credits is also found in the SA Qualification (Lumber Dry area of specialisation).

Due to the fact that Level 1 Qualification offers little specialisation, competencies in all the four areas of specialisation are very minimal, therefore the rest of saw doctoring unit standards listed below, do not form part of the SA Level 1 qualification.

National Certificate in Solid Wood Manufacturing (Level 3) with strands in Engineered Wood Product Operations; Laminated Veneer Lumber (LVL) and Plywood Operations; Planer Operations; Pole and Post Operations; Saw Centre Operations; Timber Drying Operations;

Timber Grading Operations; Timber Treatment Operations; Veneer Preparation; and Wood Product Operations.

Core Skills:

- > Demonstrate knowledge of environmental issues in Wood Manufacturing Industries.
- > Demonstrate knowledge of business basics in a wood manufacturing industry.
- > Take and record measurements and make calculations in wood manufacturing.
- > Demonstrate knowledge of systems and techniques used when working efficiently in wood manufacturing industry.
- > Describe process techniques used on a wood manufacturing worksites.
- > Participate, with technical support, in the investigation of wood manufacturing production issues.
- > Applications of workplace health and safety principles in the wood manufacturing industries.

Core Elective:

Apply hazard identification and risk assessment procedures in the workplace:

- > Explain adhesive use in wood product manufacturing.
- > Carry out procedures for gluing in wood product manufacturing.

Finger Jointing:

- > Feed and tail out finger jointer.
- > Test finger jointed product in solid wood manufacturing.

Operate cross cut saw centre:

Lamination:

- > Laminate straight timber for wood product manufacturing.
- > Test laminated product in wood product manufacturing.
- > Control automatic glue mixing systems for wood product manufacturing.
- > Develop patterns and construct jigs for curved laminate products in wood product manufacturing.
- > Laminate curved products for wood product manufacturing.
- > Store and handle chemicals for energy and chemical plant.

Machinery:

- > Set up a timber planer for dress four sides.
- > Joint straight cutters.
- > Set cutters into cutter heads.

The following competencies have been identified as being similar to the proposed qualification in that they cover the same level for the target group:

- > Health, safety and Environmental issues are covered important in both qualifications.
- > Demonstrate knowledge of environmental issues in wood manufacturing industries.
- > Explain adhesive use in wood product manufacturing.

The difference with this model is that the qualification is well structured and detailed in terms of competencies compared to the South African one. The following are not offered in the SA Level 3 qualification:

- > Demonstrate knowledge of business basics in a wood manufacturing industry.
- > Take and record measurements and make calculations in wood manufacturing.
- > Demonstrate knowledge of systems and techniques used to work efficiently in wood manufacturing.

Application of Glue, handling and storage of glue is done by an operator in a Level 2 qualification.

Canada:

Canada does not offer full qualification however, it should be noted that the Short Courses they offer, are similar in depth and breadth to the South African model. The notional hours and the number of credits are evident. The Body of knowledge titled: safety operation of machinery (BP-WW2-05-01). Identifying Safety Risks in Wood Processing and Precautions for Specific Equipment(equipment used to process wood waste (rolling stock, conveyors, screens, hogs/shredder) Other Wood Processing Machine Operators (NOC_9434). Other Wood Processing Machine Operators 212 are adequately covered in the South African model. The following shows the structure of the Unit Standards covered:

- > Introduction and Overview.
- > Sawmilling, Then and Now.
- > Product Recovery Factors.
- > Sawmill Economics - 101.
- > Lumber Grades.
- > Log Merchandising.
- > Debarking.
- > Large Log Processing.
- > Small Log Processing.
- > Sawfiling Practices.
- > Edging.
- > Resawing.
- > Lumber Trimming and Sorting.
- > Mill/Plant Layout and Design.
- > Lumber Drying.
- > Planing and Grading.
- > Lumber Quality and Process Control.
- > Human Resources.
- > Business Aspects of Manufacturing.

We also noted that other form of specialisation available for training includes:

- > Wood Technology.
- > Timber Grading (NZ, USA, Australian grading rules), and this includes the following Units:
 - > Kiln Drying, Wood Drying, Sawmilling, Wood Preservation, Timber Yarding, and other technical aspects of the timber industry. A comparison to the South African model also shows that these are covered extensively as a learner progresses from one level to the other.

Due to restriction imposed by the scope and parameter of this qualification and its level, a detailed comparison could not be carried out. However, this qualification compares favourably with the South African model in that it covers at the same Level and the proposed competencies, knowledge and skills. Focus on Kiln drying, Wood drying processes, Green Timber processing (Saw Milling) Lumber Drying Processing (Wood Preservation) which is the same as outlined above.

Britain:

Source: National Learners' Records Database

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Certificate in Kiln Drying:

CAWP offers a 150-hour modular course in kiln drying that currently represents the most comprehensive training program on the subject available anywhere in the world. Qualifications from Britain are similar although learning programmes and hours of learning are comparable. The inclusion of labor legislation and other non-industry specific subjects make it even more uniquely South African. The institutions offering these qualification in Britain are all internationally recognized as centres of excellence in training and education in the Forestry/Wood Technology field.

Emerging Economies:

> In an attempt to do a comparison with a country with an emerging economy, no qualification exist.

ARTICULATION OPTIONS

This Qualification articulates both horizontally and vertically.

Horizontal articulation:

- > ID 64309: General Education and Training Certificate: Adult Basic Education and Training, Level 1.
- > ID 49552: General Education and Training Certificate: Environmental Practice, Level 1.
- > ID 49753: General Education and Training Certificate: General Technical Practice, Level 1.

Vertical articulation:

- > ID 61929: National Certificate: Pulp and Paper Operations, Level 2.

MODERATION OPTIONS

> Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with a relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

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

> Moderation of assessment will be overseen by the relevant ETQA or by an ETQA that has a Memorandum of Understanding with the relevant ETQA, according to the relevant ETQA's policies and guidelines for assessment and moderation.

> A learner wishing to be assessed for this qualification can only be assessed through an accredited assessment provider/centre.

> 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 in the Exit Level Outcomes described in the Qualification.

> The Moderator for this qualification must have a similar qualification or that is at least one level higher than this qualification.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

Anyone assessing a learner against this qualification must be registered with the relevant ETQA as an assessor.

Any institution offering learning that will enable the achievement this qualification must be accredited as a provider with the relevant ETQA. Assessment will be overseen by the relevant ETQA according to the policies and guidelines for assessment of that ETQA, in terms of agreements reached around assessment and between various ETQA's (including professional bodies).

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

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

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

- > To be registered as an assessor with the relevant ETQA.
- > To be in possession of the relevant qualification.
- > To have sufficient relevant experience.
- > To have the appropriate qualification to assess communication and mathematical literacy.

NOTES

This qualification is designed to cover focus areas under four specializations in the Forestry industry which are:

- > Dry Lumber.
- > Lumber Drying processes.
- > Green Timber Processing.
- > Saw Doctoring.

The four focus areas of learning allowed for progression from Level 1-4 in each category. The new design allows for four qualifications namely, GETC: Lumber Milling, two National Certificates at Level 2 and 3 and an FETC: Lumber Milling with four specializations in each.

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119373	Describe and represent objects in terms of shape, space and measurement	Level 1	5
Fundamental	119635	Engage in a range of speaking/signing and listening interactions for a variety of purposes	Level 1	6
Fundamental	119364	Evaluate and solve data handling and probability problems within given contexts	Level 1	5
Fundamental	119631	Explore and use a variety of strategies to learn	Level 1	5
Fundamental	119640	Read/view and respond to a range of text types	Level 1	6
Fundamental	7450	Work with measurement in a variety of contexts	Level 1	2
Fundamental	119362	Work with numbers; operations with numbers and relationships between numbers	Level 1	4
Fundamental	119636	Write/Sign for a variety of different purposes	Level 1	6
Core	263684	Explain Lumber Milling Industry activities in terms of processes	Level 1	4
Core	263686	Identify the mechanical makeup and the function of elementary equipment needed in area of work	Level 1	4
Core	117226	Keep work area and equipment clean and safe in a wood products plant	Level 1	5
Core	263685	Perform elementary lumber milling operations	Level 1	15
Core	259639	Explain basic health and safety principles in and around the workplace	Level 2	4

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Core	244075	Maintain the quality of products in a production environment	Level 2	5
Core	259604	Verify compliance to safety, health and environmental requirements in the workplace	Level 2	4
Core	9322	Work in a team	Level 2	3
Elective	252250	Apply fire fighting techniques	Level 1	3
Elective	263654	Clean saws and cutters returned for maintenance in saw shop of lumber mill	Level 1	5
Elective	14656	Demonstrate an understanding of sexuality and sexually transmitted infections including HIV/AIDS	Level 1	5
Elective	13176	Describe and discuss basic issues relating to the nature of business, the stakeholders in a business and business profitability	Level 1	3
Elective	14445	Frame and implement an individual action plan to improve productivity within an organisational unit	Level 1	3
Elective	263681	Handle, mix and apply adhesive glue manually in finger-jointing and laminating facilities of lumber mill	Level 1	5
Elective	263682	Inspect used saw blades before and after servicing in saw shop of lumber mill	Level 1	2
Elective	243189	Manage personal finances	Level 1	8
Elective	263678	Manually set and sharpen springset saw blades used in lumber mill	Level 1	5
Elective	263655	Move/transport saws and cutters between saw shop and processing machines/areas in lumber mill	Level 1	5
Elective	116932	Operate a personal computer system	Level 1	3
Elective	263690	Operate log yard in a Lumber Mill	Level 1	4
Elective	263695	Perform routine maintenance on saw shop machines and tools in lumber mill	Level 1	2
Elective	263676	Prepare and load lumber drying kiln according to prescribed procedure	Level 1	5
Elective	263689	Stack lumber for kiln drying	Level 1	3
Elective	13172	Understand the employer/employee relationship	Level 1	3
Elective	263674	Describe drying defects occurring in wood, and methods to use in minimizing them	Level 2	5
Elective	12466	Explain the individual's role within business	Level 2	4
Elective	263696	Move kiln trolley with load of dried lumber from drying kiln to cooling shed/facilities	Level 2	2
Elective	120496	Provide risk-based primary emergency care/first aid in the workplace	Level 2	5

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Clean saws and cutters returned for maintenance in saw shop of lumber mill***

SAQA US ID	UNIT STANDARD TITLE		
263654	Clean saws and cutters returned for maintenance in saw shop of lumber mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	5

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

SPECIFIC OUTCOME 1

Explain the correct procedures to be followed for cleaning saw blades and cutters in the Saw Doctor Shop.

SPECIFIC OUTCOME 2

Explain at what point in the sequence of activities in the Saw Doctor Shop, saw blades and cutters are ready for cleaning.

SPECIFIC OUTCOME 3

Explain correctly the prescribed handling procedures regarding cleaning materials and aids used in the Saw Shop.

SPECIFIC OUTCOME 4

Clean saw blades and cutters correctly as prescribed.

SPECIFIC OUTCOME 5

Move saws and cutters to and from cleaning areas in the Saw Shop according to company's procedures.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

ID	QUALIFICATION TITLE	LEVEL
Elective 66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Move/transport saws and cutters between saw shop and processing machines/areas in lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263655	Move/transport saws and cutters between saw shop and processing machines/areas in lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	5

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

SPECIFIC OUTCOME 1

Explain the scheduling of the collection of used and the delivery of serviced saw blades and cutters in the Lumber Mill.

SPECIFIC OUTCOME 2

Explain how to identify used saw blades and cutters/knives at the work/holding areas of the Lumber Mill.

SPECIFIC OUTCOME 3

Explain the correct procedures used for moving saw blades and cutters between the Saw Mill and the Saw Shop.

SPECIFIC OUTCOME 4

Move/transport correctly saw blades and cutters/knives between the Saw Mill and the Saw Shop of the Lumber Mill.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Describe drying defects occurring in wood, and methods to use in minimizing them

SAQA US ID	UNIT STANDARD TITLE		
263674	Describe drying defects occurring in wood, and methods to use in minimizing them		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

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

SPECIFIC OUTCOME 1

Describe the properties of wood that can cause drying defects.

SPECIFIC OUTCOME 2

Describe the lumber drying factors that can cause drying defects.

SPECIFIC OUTCOME 3

Describe methods and techniques required to minimize lumber kiln drying defects.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Prepare and load lumber drying kiln according to prescribed procedure*

SAQA US ID	UNIT STANDARD TITLE		
263676	Prepare and load lumber drying kiln according to prescribed procedure		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	5

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

SPECIFIC OUTCOME 1

Follow procedures to prepare the kiln to receive a load of lumber to dry.

SPECIFIC OUTCOME 2

Position the kiln trolley with load correctly to facilitate loading.

SPECIFIC OUTCOME 3

Apply load restraining devices, where relevant.

SPECIFIC OUTCOME 4

Load and position the trolley with load in a kiln and shut the kiln door.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Manually set and sharpen springset saw blades used in lumber mill***

SAQA US ID	UNIT STANDARD TITLE		
263678	Manually set and sharpen springset saw blades used in lumber mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	5

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

SPECIFIC OUTCOME 1

Explain the differences between spring set and swage set saw blade teeth shapes used on saw blades in the Lumber Mill.

SPECIFIC OUTCOME 2

Explain the procedures used to manually set and sharpen spring set saw blades.

SPECIFIC OUTCOME 3

Explain the correct maintenance and adjustment of tools and equipment used to manually set and sharpen spring set saw blades.

SPECIFIC OUTCOME 4

Set and sharpen manually spring set saw blades.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Handle, mix and apply adhesive glue manually in finger-jointing and laminating facilities of lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263681	Handle, mix and apply adhesive glue manually in finger-jointing and laminating facilities of lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	5

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

SPECIFIC OUTCOME 1

Handle and mix glue manually and deliver to designated work station.

SPECIFIC OUTCOME 2

Apply glue manually to finger-joint profiles in accordance with company's procedures.

SPECIFIC OUTCOME 3

Position laminates for efficient glue application.

SPECIFIC OUTCOME 4

Feed glue to glue spreader for application to laminates.

SPECIFIC OUTCOME 5

Position laminates in pressing jigs.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

ID	QUALIFICATION TITLE	LEVEL
Elective 66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Inspect used saw blades before and afterservicing in saw shop of lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263682	Inspect used saw blades before and afterservicing in saw shop of lumber mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	2

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

SPECIFIC OUTCOME 1

Explain how to identify damage and faults to used saw blades before and after cleaning in the Saw Shop of the Lumber Mill.

SPECIFIC OUTCOME 2

Explain the markings used to highlight damage and faults found on the saw blades.

SPECIFIC OUTCOME 3

Report damage and faults found on used saw blades.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Explain Lumber Milling Industry activities in terms of processes

SAQA US ID	UNIT STANDARD TITLE		
263684	Explain Lumber Milling Industry activities in terms of processes		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	4

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

SPECIFIC OUTCOME 1

Define the operations within each area of specialization.

SPECIFIC OUTCOME 2

Discuss the use of dry timber material in the Lumber Milling Industry.

SPECIFIC OUTCOME 3

List the different equipment used in the various operations within the Lumber Industry.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Perform elementary lumber milling operations***

SAQA US ID		UNIT STANDARD TITLE	
263685		Perform elementary lumber milling operations	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	15

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

SPECIFIC OUTCOME 1

Define activities taking place within the green timber processing in lumber milling.

SPECIFIC OUTCOME 2

Adherence to safety health standards in the primary log breakdown.

SPECIFIC OUTCOME 3

Define activities taking place during the process of drying lumber.

SPECIFIC OUTCOME 4

Adhere to health and safety standards applicable to dry mill.

SPECIFIC OUTCOME 5

Sort boards and planks according to set Industry regulations.

SPECIFIC OUTCOME 6

Define activities taking place within the dry lumber processing and saw doctoring.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Identify the mechanical makeup and the function of elementary equipment needed in area of work

SAQA US ID	UNIT STANDARD TITLE		
263686	Identify the mechanical makeup and the function of elementary equipment needed in area of work		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	4

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

SPECIFIC OUTCOME 1

Distinquish the different parts of equipments and how they relate to each other.

SPECIFIC OUTCOME 2

Apply knowledge of functional usage of every part in the whole machinery system.

SPECIFIC OUTCOME 3

Handle the equipments according to Health and Safety standards as per manufacturer's specifications.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Stack lumber for kiln drying**

SAQA US ID		UNIT STANDARD TITLE	
263689		Stack lumber for kiln drying	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	3

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

SPECIFIC OUTCOME 1

Sort planks from the green chain into the appropriate dimension classes.

SPECIFIC OUTCOME 2

Prepare stacking bay/mechanical stacking for the stacking process.

SPECIFIC OUTCOME 3

Prepare kiln trolley to receive planks/parcels of planks/stack.

SPECIFIC OUTCOME 4

Stack planks/boards for lumber drying as prescribed.

SPECIFIC OUTCOME 5

Place stickers to give appropriate support to each layer of planks.

SPECIFIC OUTCOME 6

Apply restraining devices to kiln load to minimise distortion of planks.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate log yard in a Lumber Mill

SAQA US ID		UNIT STANDARD TITLE	
263690		Operate log yard in a Lumber Mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	4

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

SPECIFIC OUTCOME 1

Offload logs using the correct techniques onto the log receiving deck/offloading deck.

SPECIFIC OUTCOME 2

Sort logs and store using the correct tools and equipment into the correct log classes.

SPECIFIC OUTCOME 3

Feed sorted debarked logs into the Wet Mill in accordance with planned Wet Mill material requirements.

SPECIFIC OUTCOME 4

Keep records of logs received at and processed in the log yard (log tallying).

SPECIFIC OUTCOME 5

Logs are correctly recorded as they are received in the Wet Mill.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Perform routine maintenance on saw shop machines and tools in lumber mill***

SAQA US ID	UNIT STANDARD TITLE		
263695	Perform routine maintenance on saw shop machines and tools in lumber mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	2

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

SPECIFIC OUTCOME 1

Explain the routine maintenance/lubrication programme prescribed for the Saw Doctor shop facilities in the Lumber Mill.

SPECIFIC OUTCOME 2

Describe the tools and materials, and their functions, used for the routine maintenance/lubrication programme of the Saw Doctor shop facilities.

SPECIFIC OUTCOME 3

Explain the stores and inventory procedures of maintenance/lubrication items for Saw Doctor shop.

SPECIFIC OUTCOME 4

Perform the routine maintenance/lubrication programme for the Saw Doctor shop facilities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Move kiln trolley with load of dried lumber from drying kiln to cooling shed/facilities

SAQA US ID		UNIT STANDARD TITLE	
263696		Move kiln trolley with load of dried lumber from drying kiln to cooling shed/facilities	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	2

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

SPECIFIC OUTCOME 1

Prepare the lumber drying kiln for removal of the trolley with stack of dried lumber.

SPECIFIC OUTCOME 2

Move trolley with dried lumber stack from kiln to cooling shed.

SPECIFIC OUTCOME 3

Park trolley with stack of dried lumber in cooling shed and remove the pulling equipment and the load restraining devices/weights (at the correct time) where relevant.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
National Certificate: Lumber Milling

SAQA QUAL ID		QUALIFICATION TITLE	
66312		National Certificate: Lumber Milling	
ORIGINATOR		PROVIDER	
SGB Forestry			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	1 - Agriculture and Nature Conservation	Forestry and Wood Technology	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	120	Level 2	Regular-Unit Stds Based

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

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

The purpose of this Qualification is to provide opportunity to learners to advance their learning in the Lumber Milling Industry.

This Qualification will allow learners to contribute to the economic growth of the industry in that they will be better positioned and skilled in their own area of specialisation which includes:

- > Green Timber Processing.
- > Lumber Drying.
- > Dry Lumber processing.
- > Saw doctoring.

The learners will also be exposed to mathematical literacy and computer literacy, which will permeate through to their specific knowledge fields, thus easing the application of skills required at this level.

Specifically, on completion of this qualification, learners will be able to:

- > Apply regulatory occupational safety, health and environmental practices.
- > Demonstrate an understanding of productivity requirement in the Dry Mill.
- > Operate machinery across the areas of specialisation within the Lumber Milling Industry according to set quality standards.
- > Apply the Quality Management Systems in Timber grading as outlined in the organisational policies.

Rationale:

South Africa has a need to create a skill pool of people who can apply the regulatory pieces of legislature which is earmarked for the sustainable development of the Forestry and the Environment. These include tools such as the framework regulating the Forest Management, Conserving the Environment whilst ensuring that safety principles are adhered to.

In the context above, the Wood and Forestry stakeholders need to increase the number of relevantly qualified and skilled people to undertake these tasks. The envisaged learners are workers who have been engaged in a similar environment and those who wish to join the industry. These learners, once qualified, will be able to effectively and efficiently work as operators on tasks they are responsible for at this level in the relevant workplace.

The benefits of this qualification will encompass sectors such as Water and Forestry, Department of Environmental Affairs and Tourism (DEAT), Department of Agriculture and Department of Trade and Industry.

In general, learners will:

- > Use machinery effectively.
- > Apply integrated knowledge of the products and chemicals and their impact on the environment.
- > Practice the elements and principles of Quality Management Systems.
- > Develop a sense of responsibility towards their work and environment.

Improved levels of knowledge and skills lead to greater ability to produce at more competitive costs and better quality, increased sales, greater profits, more personal income, which will impact favourably both on the society and the economy of the country.

This qualification supports the National Qualifications Framework regarding access, mobility and progression, quality of learning, redress of unfair discrimination and contribution to personal development and social and economic development of the action.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED IN PLACE

- > Communication and Mathematical Literacy at NQF Level 1 or equivalent.

Recognition of Prior Learning:

This qualification may be achieved in part or wholly through recognition of prior learning (RPL) processes.

The provision that the qualification may be obtained through the recognition of prior learning facilitates access to an education, training and career path in engineering and thus accelerates the redress of past unfair discrimination in education, training and employment opportunities.

Evidence of prior learning must be assessed through formal RPL processes through recognized methods. Any other evidence of prior learning should be assessed through formal RPL processes to recognize achievement thereof.

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

The structure of this unit standard based qualification makes the RPL possible, if the learner is able to demonstrate competence in the knowledge, skills, values and attitudes implicit in this qualification.

Learners who already work in the Lumber Milling industry who believe they possess competencies to enable them to meet some or all of the ELOs listed in the qualification will be able to present themselves for assessment against those of their choice.

Access to the Qualification:

Access to this qualification is open however, learners should have:

> Completed the General Education and Training Certificate in Lumber Milling NQF Level 1 or equivalent.

QUALIFICATION RULES

The Qualification consists of Fundamental, Core and Elective Unit Standards. A minimum of 120 credits is required to achieve this Qualification. The credits are allocated as follows:

Fundamental Component:

> The fundamental component of this Qualification consists of four Unit Standards in communication and four in mathematical literacy. All fundamental Unit Standards are compulsory for all the learners. The total number of credits in this component is 36 credits.

Core Component:

> The core component consists of 4 Unit Standards and 26 credits. All the Unit Standards are compulsory for all the learners.

Elective Component:

> There are four elective pathways; Lumber Drying; Dry Lumber processing; Saw Doctoring and Green Timber processing.

Note: Each of the specialization areas has a different number of credits. The minimum number of elective credits is 58. Therefore the balance of credits required to achieve this qualification must be selected from any of the other elective pathways.

Specialisation path 1: Dry Lumber Processing with 4 unit standards titles below:

> Produce finger jointed lumber in lumber 3/6.

Specialisation path 2: Lumber Drying with 4 unit standards titles below:

- > ID 263720: Describe kiln types, construction materials and auxiliary equipment.
- > ID 263693: Select, prepare, produce and use samples in lumber drying process.
- > ID 263683: Describe basic principles of lumber kiln drying schedule.
- > ID 263674: Describe drying effect that can occur in wood, and methods and techniques to minimize them.

Specialisation path 3: Saw Doctoring with 8 unit standards titles below with 50 credits:

- > ID 263755: Use and care for grinding wheels, blade, knife and cutter maintenance in saw doctor shop of lumber mill.
- > ID 263723: Maintain and set up cutter blocks with profiled and disposable cutters.
- > ID 263724: Set up circular saw blade(s) in machines used for processing timber in lumber mill.
- > ID 263734: Weld saw blades using metal inert gas (MIG) and tungsten inert gas (TIG) in saw shop of lumber mill.
- > ID 263716: Hang frame saw blades and set up frame saw machine used in lumber mill.

- > ID 263691: Set up and sharpen swaged tooth saw blades used in the lumber mill.
- > ID 263715: Sharpen and set up knives and profile cutters used in lumber mill.
- > ID 263677: Weld and braze saw blades using oxygen/acetylene during maintenance in saw shop of lumber mill.

Specialisation path 4: Green Timber Processing with 5 unit standards titles below:

- > ID 263675: Operate and monitor the green chip production facilities in green timber processing area of lumber mill.
- > ID 263687: Operate green lumber edging facilities in green timber processing area of lumber mill.
- > ID 263679: Operate green lumber crosscutting trimming facilities in green timber processing area of lumber mill.
- > ID 263721: Operate log debarking facilities in green timber processing area of lumber mill.

EXIT LEVEL OUTCOMES

1. Operate equipment safely and carry out basic maintenance on machinery in a responsible manner.
2. Demonstrate an understanding of productivity requirements.
3. Explain the application of the Basic Conditions of Employment Act and its effect on earnings in own contract.
4. Perform duties assigned to as per standard operating procedures.
5. Identify potential hazards and critical safety issues in the workplace.
6. Demonstrate an understanding of the regulatory occupational safety, health and environmental practices.

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

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

- > Identifying potential hazards in the workplace in relation to area of work.
- > Identifying productivity requirements.
- > Identifying lubrication equipment and methods of applying a lubricant.

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

- > Reporting findings to supervisor.
- > Communicating and receiving advice from supervisors.

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

- > Performing work related task accordance with industry standard operating procedures.
- > Setting up machinery.
- > Identifying, minimizing and reporting potential occupational health and safety hazards and risks in the workplace.
- > Adhere to health and safety requirements in accordance with legislative requirements.

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

- > Carrying out written instructions issued by supervisors, correctly and efficiently.
- > Interpreting and recording correct client contact details.

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

- > Communicate with supervisor and client.
- > Evaluating and reporting problem situations to team members, other colleagues and clients.

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

- > Lubricate equipment.
- > Understanding and interpreting the various gauge reading equipment.

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

- > Applying the inter-relatedness of the Lumber Milling industry as a set of related systems.
- > Recognizing the inter-relationship between the various business units within the organization.

ASSOCIATED ASSESSMENT CRITERIA

Assessment Criteria for Exit Level Outcome 1:

- 1.1 Pre-checks are conducted as per standard operating procedures.
- 1.2 Findings are communicated to the relevant person.
- 1.3 Blades are changed as per company's procedures.
- 1.4 Machinery is lubricated according to manufactures specification.
- 1.5 Machinery is cleaned as per company's specification.
- 1.6 Equipment is operated according to company's procedures.

Assessment Criteria for Exit Level Outcome 2:

- 2.1 Productivity principles as applied to manufacturing processes are described.
- 2.2 Productivity practice in the workplace is described.
- 2.3 Knowledge of the importance of productivity improvement practices in the workplace is demonstrated.

Assessment Criteria for Exit Level Outcome 3:

- 3.1 Financial elements of an employment contract are explained.
- 3.2 Standard deductions reflected on a salary advice are interpreted.
- 3.3 The financial responsibilities that a company has to its employees are explained.
- 3.4 The responsibilities of the employee to her/his employer are explained.

Assessment Criteria for Exit Level Outcome 4:

- 4.1 Roles and responsibilities assigned to are explained to supervisor.
- 4.2 Tasks are performed within the prescribed time frame efficiently and effectively.
- 4.3 Quality requirements are adhered to at all times.
- 4.4 The necessary templates are completed as per requirements.
- 4.5 Written or verbal reporting is done as per standard operating procedures.

Assessment Criteria for Exit Level Outcome 5:

- 5.1 Safety rules related to the specific workplace are explained.
- 5.2 Safety signs and colour codes are recognised and interpreted.
- 5.3 Personal protective clothing and equipment for different situations are identified and described.
- 5.4 Potential hazards in the workplace are identified and prevention measures are described.
- 5.5 Learners role in maintaining a safe environment is described.
- 5.6 An appropriate response to injuries is demonstrated.

Assessment Criteria for Exit Level Outcome 6:

- 6.1 Knowledge of safe work requirements in the workplace is demonstrated.
- 6.2 Machines and equipment for safety compliance are inspected.
- 6.3 Knowledge of fire protection and prevention, fire fighting practices and emergency procedures is demonstrated.

Integrated Assessment:

Integrated assessment evaluates the learner's ability to combine actions and ideas across a range of activities and knowledge areas. The integrated assessment must specifically assess the learner's ability to:

- > Demonstrate competence by means of the practical application of the embedded knowledge in a manner that meets the required performance standards required.
- > Illustrate a clear understanding of the concepts, theory and principles that underpin the practical action taken.

The assessment will require assessment methods which measure and evaluate evidence generated during learning and on-the-job activities. Because assessment practices must be open and transparent, fair, valid and reliable; ensuring that no learner is disadvantaged in any way whatsoever, an integrated assessment approach is incorporated into the Qualification.

A variety of methods must be used in assessment tools and activities must be appropriate to the context in which the learner is working or will work. Where it is not possible to assess the learner at the workplace, simulations, case studies role plays and other similar techniques should be used to provide a context appropriate to the assessment.

The term integrated assessment implies that theoretical and practical components should be assessed together. Whenever possible, the assessment of knowledge, skills, attitudes and values shown in the Unit Standards should be integrated and, during integrated assessment, the assessor should make use of a range of formative and summative assessment tools and methods. Combinations of practical, applied, foundational and reflective competencies should be assessed. Assessment should further ensure that all specific outcomes, embedded knowledge and critical cross field outcomes are evaluated in an integrated way.

Assessors must assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience as the assessment process is capable of being applied to RPL, subject to the rules and criteria of the relevant ETQA.

INTERNATIONAL COMPARABILITY

Countries listed below were selected for their renowned excellence in the field of Wood processing.

- > New Zealand.
- > Canada.

> USA.

Saw Doctoring:

The Qualification recognises the skills and knowledge required for the care and maintenance of handsaws, circular saws, and bandsaws.

It is recommended that candidates should hold a current first aid certificate or are credited with the first aid standards - Unit 6400, Manage first aid in emergency situations; Unit 6401, Provide first aid; and Unit 6402, Provide resuscitation Level 2.

Topics Covered:

- > Demonstrate knowledge of safety on engineering worksites.
- > Apply safe working practices on an engineering worksite.
- > Safely shut down and isolate machines and equipment.
- > Set circular saws.
- > Maintain household and handyperson cutting tools.
- > Demonstrate knowledge of grinding for saw doctoring, timber machining and finger jointing.
- > Tooth circular saws.
- > Demonstrate knowledge of saw tooth profiles in saw doctoring.
- > Demonstrate knowledge of saw grinder application and operation.
- > Perform basic saw doctoring calculations.
- > Demonstrate knowledge of the principles of saw doctoring.
- > Identify and describe workplace risks in a wood manufacturing operation.
- > Sharpen bandsaws.
- > Sharpen circular saws.
- > Select, use and care for, engineering hand tools.
- > Maintain handsaws.
- > Maintain narrow bandsaws.
- > Grind and hone straight knives and anvils.
- > Maintain a chainsaw chain and bar.
- > Maintain metal cutting saw.
- > Tip circular saw teeth and profile circular saw tips.
- > Retooth inserted teeth saws.
- > Tooth bandsaws.
- > Maintain router bits and drill bits.

This qualification compares favourably with the South African Qualifications at NQF Level 2 and 3 in that the Unit Standards are pitched at the same level, and the number of credits are also the same.

However slight differences were noted wherein the South African Qualifications Level 2 and 3 in Saw Doctoring has been identified as a specialization area in the Lumber Milling Qualification whereas in New Zealand, it is offered as a stand alone Qualification. No emphasis on the need for First Aid as a requirement is mentioned on the New Zealand Qualification. Additionally, the competency below does not form part of the Saw Doctoring specialization area in both Level 2 and 3 Qualifications:

- > Perform basic saw doctoring calculations.
- > Set circular saws.
- > Maintain a chainsaw chain and bar.
- > Demonstrate knowledge of grinding for saw doctoring, timber machining and finger jointing.

Green Timber Processing:

Demonstrate knowledge of the principles of sawmilling, Level 2, 5 Credits.

Competencies:

- > Demonstrate knowledge of economic factors impacting on sawmill operations.
- > Demonstrate knowledge of principles of the sawmilling process.
- > Demonstrate knowledge of the concepts of timber conversion and grade recovery.
- > Describe safety requirements in the sawmill.

Demonstrate knowledge of the solid wood manufacturing industry, Level 2, 5 credits.

People credited with this unit standard are able to demonstrate knowledge of:

- > Solid wood manufacturing operations.
- > Markets for solid wood products.
- > Solid wood manufacturing key performance indicators.

SA Level 2 Qualification:

- > Markets for solid wood products.
- > Solid wood manufacturing key performance indicators.

Are not covered at level 2.

Additional unit standards:

Fillet timber for further processing, Level 2 with 3 credits:

> National Certificate in Solid Wood Manufacturing (Level 3) with strands in Engineered Wood Product Operations; Laminated Veneer Lumber (LVL) and Plywood Operations; Planer Operations; Pole and Post Operations; Saw Centre Operations; Timber Drying Operations; Timber Grading Operations; Timber Treatment Operations; Veneer Preparation; and Wood Product Operations.

Core Skills:

- > Demonstrate knowledge of environmental issues in wood manufacturing industries.
- > Demonstrate knowledge of business basics in a wood manufacturing industry.
- > Take and record measurements and make calculations in wood manufacturing.
- > Demonstrate knowledge of systems and techniques used to work efficiently in wood manufacturing.
- > Describe process techniques used on a wood manufacturing worksite.
- > Participate, with technical support, in the investigation of wood manufacturing production issues.
- > Demonstrate knowledge of workplace health and safety in the wood manufacturing industries.

Core Elective:

Apply hazard identification and risk assessment procedures in the workplace:

- > Explain adhesive use in wood product manufacturing.
- > Carry out procedures for gluing in wood product manufacturing.

Finger Jointing:

- > Feed and tail out finger jointer.
- > Test finger jointed product in solid wood manufacturing.

Operate cross cut saw centre:

Lamination:

- > Laminate straight timber for wood product manufacturing.
- > Test laminated product in wood product manufacturing.
- > Control automatic glue mixing systems for wood product manufacturing.
- > Develop patterns and construct jigs for curved laminate products in wood product manufacturing.
- > Laminate curved products for wood product manufacturing.
- > Store and handle chemicals for energy and chemical plant.

Machinery:

- > Set up a timber planer for dress four sides.
- > Joint straight cutters.
- > Set cutters into cutterheads.

Similarities were identified within the Health, safety and Environmental Unit Standards which are also covered as important in both qualifications.

Research conducted on this qualification indicated that New Zealand's qualification is well structured and detailed in terms of competencies. This can be attested to the qualification rules as set out in their policy documents.

The following competencies do not form part of the South African Level 3 qualification: Demonstrate knowledge of business basics in a wood manufacturing industry, take and record measurements and make calculations in wood manufacturing, demonstrate knowledge of systems and techniques used to work efficiently in wood manufacturing, application of Glue, handling and storage of glue is done by an operator in a Level 2 qualification.

Canada:

Short Courses related to safety operation of machinery (BP-VV2-05-01).

Identifying Safety Risks in Wood Processing and Precautions for Specific Equipment (equipment used to process wood waste (rolling stock, conveyors, screens, and hogs/shredder).

Other Wood Processing Machine Operators (NOC_9434).

Other Wood Processing Machine Operators 212.

- > Introduction and Overview.
- > Sawmilling, Then and Now.
- > Product Recovery Factors.
- > Sawmill Economics - 101.
- > Lumber Grades.
- > Log Merchandising.
- > Debarking.
- > Large Log Processing.
- > Small Log Processing.
- > Sawfiling Practices.

- > Edging.
- > Resawing.
- > Lumber Trimming and Sorting.
- > Mill/Plant Layout and Design.
- > Lumber Drying.
- > Planing and Grading.
- > Lumber Quality and Process Control.
- > Human Resources.
- > Business Aspects of Manufacturing.

Wood wise LTD: Wood Industry Skills Education.

Specialised training in:

- > Wood Technology, Timber Grading (NZ, USA, Australian grading rules).

Topics:

- > Kiln Drying, Wood Drying, Sawmilling, Wood Preservation, Timber Yarding, and other technical aspects of the timber industry.

This learning programme has similar feature to the South African one in that it also focuses Kiln drying, Wood drying processes, Green Timber processing (Saw Milling) Lumber Drying Processing (Wood Preservation) Due to lack of subject matter content, a detailed comparison could not be carried out.

University of British Columbia: Centre for Advanced Wood Processing:

UBC Certificate in Kiln Drying:

CAWP offers a 150-hour modular course in kiln drying that currently represents the most comprehensive training program on the subject available anywhere in the world.

Other sites visited:

- > The British Columbia Institute for Technology, Vancouver Canada.
- > The community college at Ashville in North Caroline, U.S.A.
- > The Forestry Training Centre at Rotorua, New Zealand.
- > The Technical and Further Education (TAFE) training institute in Mt Gambier, Australia influenced the thinking on this and other Wood Technology qualifications.

Qualifications from those institutions and these are not exactly the same but learning programmes and hours of learning are comparable. The inclusion of labor legislation and other non-industry specific subjects make it even more uniquely South African.

The institutions listed above are all internationally recognized as centres of excellence in training and education in the Forestry/Wood Technology field.

Emerging Economies:

- > In an attempt to do a comparison with a country with an emerging economy, the, this qualification could not be found as existing in the SADC.

ARTICULATION OPTIONS

Upon completion of this Qualification, the learner will articulate horizontally to:

- > ID 48961: National Certificate: Construction: Crane Operation, NQF Level 2.

This Qualification articulates vertically to:

- > ID 50062: National Certificate: Occupational Hygiene and Safety, NQF Level 3.
- > National Certificate: Construction and Roofing, FET Phase, NQF Level 3.
- > ID 22670: National Certificate: Construction Carpentry, NQF Level 3.
- > ID 49080: National Certificate: Construction: Advanced Crane Operations, NQF Level 3.

MODERATION OPTIONS

> Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with a relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

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

> Moderation of assessment will be overseen by the relevant ETQA or by an ETQA that has a Memorandum of Understanding with the relevant ETQA, according to the relevant ETQA's policies and guidelines for assessment and moderation.

> A learner wishing to be assessed for this qualification can only be assessed through an accredited assessment provider/centre.

> 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 in the Exit Level Outcomes described in the Qualification.

> The Moderator for this qualification must have a similar qualification or that is at least one level higher than this qualification.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

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

- > To be registered as an assessor with the relevant ETQA.
- > To be in possession of the relevant qualification above the level of this qualification.
- > To have sufficient relevant experience in the field of Lumber Milling.

NOTES

N/A

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	9009	Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems	Level 2	3
Fundamental	12461	Communicate at work	Level 2	5
Fundamental	7480	Demonstrate understanding of rational and irrational numbers and number systems	Level 2	3
Fundamental	119454	Maintain and adapt oral/signed communication	Level 2	5
Fundamental	12444	Measure, estimate and calculate physical quantities and explore, describe and represent geometrical relationships in 2-dimensions in different life or workplace contexts	Level 2	3
Fundamental	119464	Respond to literary texts	Level 2	5

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	7469	Use mathematics to investigate and monitor the financial aspects of personal and community life	Level 2	2
Fundamental	9007	Work with a range of patterns and functions and solve problems	Level 2	5
Fundamental	119456	Write/present for a defined context	Level 2	5
Core	13167	Identify potential hazards and critical safety issues in the workplace	Level 1	2
Core	243688	Demonstrate an understanding of productivity requirements	Level 2	10
Core	243701	Demonstrate an understanding of the regulatory occupational safety, health and environmental practices	Level 2	12
Core	113915	Explain the application of the basic conditions of employment act in an employment contract	Level 3	2
Elective	243189	Manage personal finances	Level 1	8
Elective	116932	Operate a personal computer system	Level 1	3
Elective	259619	Conduct workplace Occupational Health and Safety (OHS) inspections	Level 2	3
Elective	263683	Describe basic principles of a lumber kiln drying schedule	Level 2	7
Elective	263674	Describe drying defects occurring in wood, and methods to use in minimizing them	Level 2	5
Elective	263757	Describe kiln types, construction materials for kilns, and auxiliary equipment	Level 2	5
Elective	12466	Explain the individual's role within business	Level 2	4
Elective	263716	Hang frame saw blades and set up frame saw machine used in lumber mill	Level 2	5
Elective	263723	Maintain and set up cutter blocks with profiled and disposable cutters for machines used in Lumber Mill	Level 2	3
Elective	263675	Operate and monitor the green chip production facilities in green timber processing area of lumber mill	Level 2	3
Elective	263679	Operate green lumber crosscutting/trimming facilities in green timber processing area of lumber mill	Level 2	5
Elective	263687	Operate green lumber edging facilities in green timber processing area of lumber mill	Level 2	5
Elective	263721	Operate log debarking facilities in green timber processing area of lumber mill	Level 2	5
Elective	263693	Select, prepare, place and use samples in lumber drying process	Level 2	5
Elective	263691	Set and sharpen swaged tooth saw blades used in the lumber mill	Level 2	5
Elective	263724	Set up circular saw blade(s) in machines used for processing timber in lumber mill	Level 2	2
Elective	263715	Sharpen and set up knives and profile cutters used in Lumber Mill	Level 2	4
Elective	263755	Use and care for grinding wheels, blade, knife and cutter, maintenance in saw doctor shop of lumber mill	Level 2	5
Elective	263677	Weld and braze saw blades using oxygen/acetylene during maintenance in saw shop of lumber mill	Level 2	10
Elective	263734	Weld saw Blades using Metal Inert Gas (MIG) and Tungsten Inert Gas (TIG), in Saw Shop of Lumber Mill	Level 2	5
Elective	263720	Describe lumber drying kiln types, their construction materials and auxiliary equipment	Level 3	5
Elective	117171	Manage time effectively to enhance productivity and enable a balanced lifestyle	Level 3	2
Elective	263726	Produce finger-jointed lumber in lumber mill	Level 3	6
Elective	114978	Use a word processing package to produce business documents	Level 3	3

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION**None**



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate and monitor the green chip production facilities in green timber processing area of lumber mill

SAQA US ID		UNIT STANDARD TITLE	
263675		Operate and monitor the green chip production facilities in green timber processing area of lumber mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	3

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

SPECIFIC OUTCOME 1

Assemble tools, equipment and cutting tools for the chipping green lumber.

SPECIFIC OUTCOME 2

Operate the green lumber chipping equipment and install the required cutting tools, to prescribed standards, in the prescribed manner.

SPECIFIC OUTCOME 3

Operate the chipping equipment in the prescribed manner.

SPECIFIC OUTCOME 4

Monitor the throughput and quality to maintain prescribed standards.

SPECIFIC OUTCOME 5

Carry out basic routine maintenance and lubrication of chip production and ancillary handling equipment.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

ID	QUALIFICATION TITLE	LEVEL
Elective 66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Weld and braze saw blades using oxygen/acetylene during maintenance in saw shop of lumber mill

SAQA US ID		UNIT STANDARD TITLE	
263677		Weld and braze saw blades using oxygen/acetylene during maintenance in saw shop of lumber mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	10

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

SPECIFIC OUTCOME 1

Explain the materials and equipment used with oxygen/acetylene to weld and braze saw blades.

SPECIFIC OUTCOME 2

Explain the procedures to be followed when welding and brazing using oxygen/acetylene in the saw shop.

SPECIFIC OUTCOME 3

Weld and braze saw blades using oxygen/acetylene in the saw shop.

SPECIFIC OUTCOME 4

Clean the faces and edges after welding saw blades using oxygen/acetylene.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate green lumber crosscutting/trimming facilities in green timber processing area of lumber mill

SAQA US ID		UNIT STANDARD TITLE	
263679		Operate green lumber crosscutting/trimming facilities in green timber processing area of lumber mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

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

SPECIFIC OUTCOME 1

Collect all the prescribed setting up tools and equipment and cutting tools for the crosscutting green lumber.

SPECIFIC OUTCOME 2

Set up the green lumber crosscutting equipment and install the required cutting tools, to prescribed standards, in the prescribed manner (Green lumber = board, flitch, slab).

SPECIFIC OUTCOME 3

Operate the crosscutting equipment in the prescribed manner to produce lumber of the prescribed lengths.

SPECIFIC OUTCOME 4

Carry out prescribed routine maintenance and lubrication of board crosscutting and ancillary handling equipment.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Describe basic principles of a lumber kiln drying schedule*

SAQA US ID	UNIT STANDARD TITLE		
263683	Describe basic principles of a lumber kiln drying schedule		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	7

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

SPECIFIC OUTCOME 1

Explain the basic factors that must be taken into consideration in a kiln drying schedule.

SPECIFIC OUTCOME 2

Explain types of kiln drying schedules.

SPECIFIC OUTCOME 3

Describe the stages of a kiln drying schedule.

SPECIFIC OUTCOME 4

Explain the process of determining drying rate and end point of drying cycle.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate green lumber edging facilities in green timber processing area of lumber mill

SAQA US ID		UNIT STANDARD TITLE	
263687		Operate green lumber edging facilities in green timber processing area of lumber mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

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

SPECIFIC OUTCOME 1

Collect all the prescribed setting up tools and equipment and cutting tools (blades, knives) for the green lumber edging.

SPECIFIC OUTCOME 2

Set up the green lumber edging equipment and install the required cutting tools, to prescribed standards, in the prescribed manner.

SPECIFIC OUTCOME 3

Operate the board edging equipment in the prescribed manner to produce lumber of the prescribed width.

SPECIFIC OUTCOME 4

Control the throughput and quality to maintain prescribed standards.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Set and sharpen swaged tooth saw blades used in the lumber mill***

SAQA US ID	UNIT STANDARD TITLE		
263691	Set and sharpen swaged tooth saw blades used in the lumber mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

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

SPECIFIC OUTCOME 1

Explain the procedures used to set and sharpen swaged tooth saw blades used in the Lumber Mill.

SPECIFIC OUTCOME 2

Explain the set up and adjustment of tools and equipment used to set and sharpen swaged tooth saw blades used in the Lumber Mill.

SPECIFIC OUTCOME 3

Set and sharpen swaged tooth saw blades using manually operated and automated machines and tools in the saw shop of the Lumber Mill.

SPECIFIC OUTCOME 4

Explain the prescribed maintenance and adjustment of tools and equipment used to set and sharpen swaged tooth set saw blades.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Select, prepare, place and use samples in lumber drying process*

SAQA US ID	UNIT STANDARD TITLE		
263693	Select, prepare, place and use samples in lumber drying process		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

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

SPECIFIC OUTCOME 1

Collect kiln drying samples which will be representative in number and appearance to the total number of planks in a kiln stack.

SPECIFIC OUTCOME 2

Prepare samples for placement in the kiln stack to be dried.

SPECIFIC OUTCOME 3

Place samples in the correct positions in the stack, and connect to moisture content monitors where relevant.

SPECIFIC OUTCOME 4

Determine moisture content accurately at the relevant times.

SPECIFIC OUTCOME 5

Record kiln sample data correctly.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Sharpen and set up knives and profile cutters used in Lumber Mill

SAQA US ID	UNIT STANDARD TITLE		
263715	Sharpen and set up knives and profile cutters used in Lumber Mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

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

SPECIFIC OUTCOME 1

Explain the inspections carried out on used/blunt knives and profile cutters used in the Lumber Mill.

SPECIFIC OUTCOME 2

Assemble knife and profile cutter grinding machines in the Saw Shop.

SPECIFIC OUTCOME 3

Sharpen knives and profile cutters using the appropriate grinding machines in the Saw Shop.

SPECIFIC OUTCOME 4

Put knives and cutters in cutter blocks after sharpening.

SPECIFIC OUTCOME 5

Carry out the routine maintenance of the knife and profile cutter grinding machines used in the Saw Shop.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Hang frame saw blades and set up frame saw machine used in lumber mill*

SAQA US ID		UNIT STANDARD TITLE	
263716		Hang frame saw blades and set up frame saw machine used in lumber mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

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

SPECIFIC OUTCOME 1

Describe the tools, gauges and equipment used to set up/hang a set of frame saw blades in a frame saw machine used in the Lumber Mill.

SPECIFIC OUTCOME 2

Hang a set of frame saw blades in a frame saw machine according to company's procedures.

SPECIFIC OUTCOME 3

Check the alignment of blades after hanging in a frame saw machine.

SPECIFIC OUTCOME 4

Check the condition of all tools and gauges used to control the set up of a frame saw machine used in the Lumber Mill.

SPECIFIC OUTCOME 5

Check the condition of the important frame saw machine parts.

SPECIFIC OUTCOME 6

Check the timing of operating sequences on automatic frame saw machines.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Operate log debarking facilities in green timber processing area of lumber mill***

SAQA US ID	UNIT STANDARD TITLE		
263721	Operate log debarking facilities in green timber processing area of lumber mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

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

SPECIFIC OUTCOME 1

Assemble all the tools and equipment required to set up and operate the debarking facility in the prescribed manner.

SPECIFIC OUTCOME 2

Set up and test the debarking facility according to industry standards.

SPECIFIC OUTCOME 3

Operate the debarking facility in the prescribed manner to prescribed standards.

SPECIFIC OUTCOME 4

Control the quantity and quality of debarked logs processed through the debarker(s).

SPECIFIC OUTCOME 5

Complete routine maintenance and lubrication schedules of the debarking facility.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Maintain and set up cutter blocks with profiled and disposable cutters for machines used in Lumber Mill

SAQA US ID	UNIT STANDARD TITLE		
263723	Maintain and set up cutter blocks with profiled and disposable cutters for machines used in Lumber Mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	3

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

SPECIFIC OUTCOME 1

Maintain cutter blocks with profiled and disposable cutters for machines used in the Lumber Mill.

SPECIFIC OUTCOME 2

Set up a cutter block with profiled cutters according to company's procedures.

SPECIFIC OUTCOME 3

Set up a cutter block with disposable cutters.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Set up circular saw blade(s) in machines used for processing timber in lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263724	Set up circular saw blade(s) in machines used for processing timber in lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	2

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

SPECIFIC OUTCOME 1

Check the mechanical components and the adjustment that affects the correct performance of the saw blade in the saw bench.

SPECIFIC OUTCOME 2

Mount/fit correctly circular saw blade(s) in a saw bench.

SPECIFIC OUTCOME 3

Monitor the performance of the serviced saw blade in production in the Lumber Mill.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Weld saw Blades using Metal Inert Gas (MIG) and Tungsten Inert Gas (TIG), in Saw Shop of Lumber Mill

SAQA US ID		UNIT STANDARD TITLE	
263734		Weld saw Blades using Metal Inert Gas (MIG) and Tungsten Inert Gas (TIG), in Saw Shop of Lumber Mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

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

SPECIFIC OUTCOME 1

Set up an MIG arc welder for welding saw blades in the Saw Shop of a Lumber Mill.

SPECIFIC OUTCOME 2

Set up a TIG arc welder for welding saw blades in the Saw Shop.

SPECIFIC OUTCOME 3

Weld saw blades using a MIG arc welder.

SPECIFIC OUTCOME 4

Weld saw blades using a TIG arc welder.

SPECIFIC OUTCOME 5

Clean the faces and edges of welds after using a MIG/TIG arc welder in the Saw Shop.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Use and care for grinding wheels, blade, knife and cutter, maintenance in saw doctor shop of lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263755	Use and care for grinding wheels, blade, knife and cutter, maintenance in saw doctor shop of lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

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

SPECIFIC OUTCOME 1

Explain the different types and purposes of grinding wheels used for sharpening saw blades, knives and cutters in the Saw Doctor Shop.

SPECIFIC OUTCOME 2

Explain the procedures for maintaining grinding wheels and stones used in the Saw Shop of the Lumber Mill.

SPECIFIC OUTCOME 3

Set up a grinding wheel on a grinding machine according to company's procedure.

SPECIFIC OUTCOME 4

Use a grinding machine safely to sharpen saw blades, knives and cutters.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Describe kiln types, construction materials for kilns, and auxiliary equipment*

SAQA US ID		UNIT STANDARD TITLE	
263757		Describe kiln types, construction materials for kilns, and auxiliary equipment	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

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

SPECIFIC OUTCOME 1

Identify and describe basic kiln types.

SPECIFIC OUTCOME 2

List the structural materials that can be used for kiln construction.

SPECIFIC OUTCOME 3

Explain the standard methods of loading a lumber drying kiln.

SPECIFIC OUTCOME 4

Describe the auxiliary equipment necessary for operating a lumber drying kiln.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
National Certificate: Lumber Milling

SAQA QUAL ID		QUALIFICATION TITLE	
66329		National Certificate: Lumber Milling	
ORIGINATOR		PROVIDER	
SGB Forestry			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	1 - Agriculture and Nature Conservation	Forestry and Wood Technology	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	120	Level 3	Regular-Unit Stds Based

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

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

This Qualification is for learners wishing to pursue their studies further within the Lumber Milling Industry and also for those who want to upskill themselves. The qualification has been structured such that it reflects the competencies required at NQF Level 3 which are at an advanced level compared to the previous one. This is outlined in the Exit Level Outcomes and the following are some of the skills learners will acquire:

- > Control basic maintenance and lubrication programmes in relevant workplaces in a Lumber Mill.
- > Demonstrate understanding of structure of wood and how it relates to its appearance, strength and how it holds water.
- > Apply quality control in the wood preservation plan.
- > Conduct a continuous risk assessment on the workplace.
- > Operate conversion equipment used to profile cross-section of products in the dry mill of lumber mill.
- > Operate conversion equipment used for surfacing and thickness products in the dry mill of lumber mill.

Rationale:

South Africa has a need to create a skill pool of people who can apply the regulatory pieces of legislature which is earmarked for the sustainable development of the Forestry and the Environment. These include tools such as the framework regulating the Forest Management, Conserving the Environment whilst ensuring that safety principles are adhered to.

In the context of the above, the Wood and Forestry stakeholders need to increase the number of relevantly qualified and skilled people to undertake these tasks. The envisaged learners are workers who have been engaged in a similar environment and those who wish to join the industry. These learners, once qualified, will be able to effectively and efficiently work as operators on tasks they are responsible for at this level in the relevant workplace, at a supervisory level.

The benefits of this qualification will encompass sectors such as Water and Forestry, Department of Environmental Affairs and Tourism (DEAT), Department of Agriculture and Department of Trade and Industry.

Improved levels of knowledge and skills lead to greater ability to produce at more competitive costs and better quality, increased sales, greater profits, more personal income, which will impact favourably both on the society and the economy of the country.

This qualification supports the National Qualifications Framework regarding access, mobility and progression, quality of learning, redress of unfair discrimination and contribution to personal development and social and economic development of the action.

It facilitates access to and mobility within learning pathways in Lumber Milling and other Wood Technology learning pathways.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED IN PLACE

It is assumed that a learner, who registers for this qualification will demonstrate competency in:

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

Recognition of Prior Learning:

This qualification may be achieved in part or wholly through recognition of prior learning (RPL) processes.

The provision that the qualification may be obtained through the recognition of prior learning facilitates access to an education, training and career path in engineering and thus accelerates the redress of past unfair discrimination in education, training and employment opportunities.

Evidence of prior learning must be assessed through formal RPL processes through recognized methods. Any other evidence of prior learning should be assessed through formal RPL processes to recognize achievement thereof.

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

The structure of this unit standard based qualification makes the RPL possible, if the learner is able to demonstrate competence in the knowledge, skills, values and attitudes implicit in this qualification.

Learners who already work in the Lumber Milling industry who believe they possess competencies to enable them to meet some or all of the ELOs listed in the qualification will be able to present themselves for assessment against those of their choice.

Access to the Qualification:

> Access to this qualification is open.

QUALIFICATION RULES

The Qualification consists of Fundamental, Core and Elective Unit Standards. A minimum of 120 credits is required to achieve this Qualification. The credits are allocated as follows:

Fundamental Component:

The fundamental component of this Qualification consists of four Unit Standards in literacy and four in mathematical literacy. A total of 37 credits is compulsory for all the learners.

Core Component:

The core component consists of 4 Unit Standards and 44 credits. All the Unit Standards are compulsory for all the learners.

Elective Component:

There are four elective pathways, Lumber Drying, Dry Lumber processing, Saw Doctoring and Green Timber processing.

Note: Each of the specialization areas has a different number of credits. The minimum number of elective credits is 39. Therefore the balance of credits required to achieve this qualification must be selected from any of the other elective pathways.

Specialisation path 1: Lumber Drying with 4 unit standards titles below with 28 credits:

- > Dry lumber in lumber drying kiln applying appropriate drying schedule with all possible stages, NQF Level 3, 15 credits.
- > Control lumber drying process in lumber mill, NQF Level 3, 10 credits.
- > Describe lumber drying kiln types in terms of their construction material and auxiliary equipment, NQF Level 3, 5 credits.
- > Describe properties of wood related to drying, NQF Level 3, 8 credits.

Specialisation path 2: Dry Lumber Processing with 2 unit standards titles below with 16 credits:

- > Control lumber grading processing process in Lumber Mill, NQF Level 3, 10 credits.
- > Produce finger jointed lumber in lumber Mill, NQF Level 3, 6 credits.

Specialisation path 3 Saw Doctoring with 8 unit standards titles with 49 credits:

- > Demonstrate understanding of technology applicable to use in lumber mill of grinding wheels made from advanced/specialized materials in saw and cutter maintenance in lumber mill, NQF Level 3, 4 credits.
- > Level and tension wide bandsaw blades in saw shop of lumber mill, NQF Level 3, 8 credits.
- > Operate an automatic satellite tipping and profile grinding machine in saw shop, NQF Level 3, 10 credits.
- > Level and tension circular saw blades used in lumber mill, NQF Level 3, 8 credits.
- > Maintain and set up narrow band saws used in bandsaw in lumber mill, NQF Level 3, 2 credits.
- > Set up wide blade bandsaw machine and log carriage, NQF Level 3, 4 credits.
- > Level and tension frame blade(s) used in lumber mill, NQF Level 3, 8 credits.
- > Maintain and set up chipper knives and anvils in chipper machines in lumber mill, NQF Level 3, 5 credits.

Specialisation path 4: Green Timber Processing with 6 unit standards titles below with 40 credits:

- > Operate primary log breakdown facilities in green timber processing area of lumber milling, NQF Level 2, 10 credits.
- > Operate secondary log breakdown facilities in green timber processing area of lumber milling, NQF Level 3, 10 credits.
- > Operate log handling sorting and storage facilities, NQF Level 3, 5 credits.
- > Operate green timber edging facilities in green timber processing area of lumber milling, NQF Level 2, 5 credits.
- > Operate green timber cross cutting, trimmers facilities in green timber processing area, NQF Level 2, 5 credits.
- > Control green chip production facilities in green timber processing area, NQF Level 3, 5 credits.

EXIT LEVEL OUTCOMES

1. Control basic maintenance and lubrication programme in the relevant workplace.

2. Demonstrate understanding of structure of wood and how it relates to its appearance, strength and how it holds water.

3. Apply quality control in the wood preservation plan.

4. Conduct a continuous risk assessment in workplace.

Critical Cross-Field Outcomes:

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

- > Identifying steps to be followed in carrying out basic maintenance.
- > Deciding lubrication methods.
- > Selecting samples for inspection.
- > Deciding on correct inspection procedures.

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

- > Communicating quality results to managers.
- > Reporting faults regarding machinery.

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

- > Operate relevant machinery specific to area of work.
- > Conducting risk assessments.
- > Deciding on correct inspection methods.

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

- > Writing reports on quality control findings.
- > Controlling basic maintenance activities.

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

- > Issuing clear verbal instructions to team members, other colleagues and clients.
- > Actively listening to feedback received from team members, other colleagues and clients.
- > Evaluating and reporting problem situations to team members, other colleagues and clients.

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

- > Using sampling procedures.
- > Applying grading marks on the sample.

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

- > Demonstrating the inter-relationship of the Lumber Milling industry as a set of related systems.
- > Recognizing the inter-relationship between the various business units within the organization.

ASSOCIATED ASSESSMENT CRITERIA

Assessment Criteria for Exit Level Outcome 1:

- 1.1 Steps to be followed in carrying out basic maintenance & lubrication programme are listed.
- 1.2 The lubrication methods of application and purpose of application when carrying out maintenance are given.
- 1.3 Storage facilities are controlled as per standard operating procedures.
- 1.4 Inventory of basic maintenance & lubrication equipment & materials is kept.
- 1.5 The basic maintenance and lubrication of the equipment in the relevant workplace is managed.

Assessment Criteria for Exit Level Outcome 2:

- 2.1 The fine (microscopic) structure of wood, i.e. the "units" is described.
- 2.2 The relationship between the microscopic structure and weight (density) and strength of wood is explained.
- 2.3 The chemistry of wood in relation to water retention is explained.
- 2.4 The influence of the density, weight and structure of wood is describe.

Assessment Criteria for Exit Level Outcome 3:

- 3.1 The required samples for inspecting the quality of the grading of incoming material, of strength tests on products and of the quality of treatment of products are selected.
- 3.2 The correct inspection procedures to examine these samples for the characteristics determining the relevant prescribed quality is applied.
- 3.3 Markings are applied and recorded the in the correct positions on the final treated products to indicate the results of the inspections.
- 3.4 Operational settings on the relevant processing equipment for producing the processed poles for the wood preservation process are checked.

Assessment Criteria for Exit Level Outcome 4:

- 4.1 The legal and specified requirements for conducting continuous risk assessments are explained.
- 4.2 Preparations to conduct risk assessment are made.
- 4.3 Risk assessment is conducted according to specifications.
- 4.4 Remedial action is initiated and follow up on Continuous Risk Assessment is performed.

Integrated Assessment:

Integrated assessment evaluates the learner's ability to combine actions and ideas across a range of activities and knowledge areas. The integrated assessment must specifically assess the learner's ability to:

- > Demonstrate competence by means of the practical application of the embedded knowledge in a manner that meets the required performance standards required.
- > Illustrate a clear understanding of the concepts, theory and principles that underpin the practical action taken.

The assessment will require assessment methods which measure and evaluate evidence generated during learning and on-the-job activities. Because assessment practices must be open and transparent, fair, valid and reliable, ensuring that no learner is disadvantaged in any way whatsoever, an integrated assessment approach is incorporated into the Qualification.

A variety of methods must be used in assessment tools and activities must be appropriate to the context in which the learner is working or will work. Where it is not possible to assess the learner at the workplace, simulations, case studies role plays and other similar techniques should be used to provide a context appropriate to the assessment.

The term integrated assessment implies that theoretical and practical components should be assessed together. Whenever possible, the assessment of knowledge, skills, attitudes and values shown in the Unit Standards should be integrated and, during integrated assessment, the assessor should make use of a range of formative and summative assessment tools and methods. Combinations of practical, applied, foundational and reflective competencies should be assessed. Assessment should further ensure that all specific outcomes, embedded knowledge and critical cross field outcomes are evaluated in an integrated way.

Assessors must assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience as the assessment process is capable of being applied to RPL, subject to the rules and criteria of the relevant ETQA.

INTERNATIONAL COMPARABILITY

Countries listed below were selected for their renowned excellence in the field of Wood processing.

- > New Zealand.
- > Canada.
- > USA.

Saw Doctoring:

The Qualification recognises the skills and knowledge required for the care and maintenance of handsaws, circular saws, and bandsaws. It is recommended that candidates should hold a current first aid certificate or are credited with the first aid standards; Unit 6400, Manage first aid in emergency situations; Unit 6401, Provide first aid; and Unit 6402, Provide resuscitation level 2.

Topics Covered:

- > Demonstrate knowledge of safety on engineering worksites.
- > Apply safe working practices on an engineering worksite.
- > Safely shut down and isolate machines and equipment.
- > Set circular saws.
- > Maintain household and handyperson cutting tools.
- > Demonstrate knowledge of grinding for saw doctoring, timber machining and finger jointing.

- > Tooth circular saws.
- > Demonstrate knowledge of saw tooth profiles in saw doctoring.
- > Demonstrate knowledge of saw grinder application and operation.
- > Perform basic saw doctoring calculations.
- > Demonstrate knowledge of the principles of saw doctoring.
- > Identify and describe workplace risks in a wood manufacturing operation.
- > Sharpen bandsaws.
- > Sharpen circular saws.
- > Select, use and care for, engineering hand tools.
- > Maintain handsaws.
- > Maintain narrow bandsaws.
- > Grind and hone straight knives and anvils.
- > Maintain a chainsaw chain and bar.
- > Maintain metal cutting saw.
- > Tip circular saw teeth and profile circular saw tips.
- > Retooth inserted teeth saws.
- > Tooth bandsaws.
- > Maintain router bits and drill bits.

This qualification compares favourably with the South African Qualifications at NQF Level 2 and 3 in that the Unit Standards are pitched at the same level, and the number of credits are also the same.

However slight differences were noted wherein the South African Qualifications Level 2 and 3 in Saw Doctoring has been identified as a specialization area in the Lumber Milling Qualification whereas in New Zealand, it is offered as a stand alone Qualification. No emphasis on the need for First Aid as a requirement is mentioned on the New Zealand Qualification. Additionally, the competency below does not form part of the Saw Doctoring specialization area in both Level 2 and 3 Qualifications:

- > Perform basic saw doctoring calculations.
- > Set circular saws.
- > Maintain a chainsaw chain and bar.
- > Demonstrate knowledge of grinding for saw doctoring, timber machining and finger jointing.

Green Timber Processing:

- > Demonstrate knowledge of the principles of sawmilling, Level 2, 5 Credits.

Competencies:

- > Demonstrate knowledge of economic factors impacting on sawmill operations.
- > Demonstrate knowledge of principles of the sawmilling process.
- > Demonstrate knowledge of the concepts of timber conversion and grade recovery.
- > Describe safety requirements in the sawmill.
- > Demonstrate knowledge of the solid wood manufacturing industry, Level 2, 5 credits.

People credited with this unit standard are able to demonstrate knowledge of:

- > Solid wood manufacturing operations.
- > Markets for solid wood products.
- > Solid wood manufacturing key performance indicators.

SA Level 2 Qualification:

- > Markets for solid wood products.
- > Solid wood manufacturing key performance indicators.
- > Are not covered at level 2.

Additional unit standards:

National Certificate in Solid Wood Manufacturing (Level 3) with strands in Engineered Wood Product Operations, Laminated Veneer Lumber (LVL) and Plywood Operations, Planer Operations, Pole and Post Operations, Saw Centre Operations, Timber Drying Operations, Timber Grading Operations, Timber Treatment Operations, Veneer Preparation, and Wood Product Operations.

Core Skills:

- > Demonstrate knowledge of environmental issues in wood manufacturing industries.
- > Demonstrate knowledge of business basics in a wood manufacturing industry.
- > Take and record measurements and make calculations in wood manufacturing.
- > Demonstrate knowledge of systems and techniques used to work efficiently in wood manufacturing.
- > Describe process techniques used on a wood manufacturing worksite.
- > Participate, with technical support, in the investigation of wood manufacturing production issues.
- > Demonstrate knowledge of workplace health and safety in the wood manufacturing industries.

Core Elective:

Apply hazard identification and risk assessment procedures in the workplace:

- > Explain adhesive use in wood product manufacturing.
- > Carry out procedures for gluing in wood product manufacturing.

Finger Jointing:

- > Feed and tail out finger jointer.
- > Test finger jointed product in solid wood manufacturing.

Operate cross cut saw centre:

Lamination:

- > Laminate straight timber for wood product manufacturing.
- > Test laminated product in wood product manufacturing.
- > Control automatic glue mixing systems for wood product manufacturing.
- > Develop patterns and construct jigs for curved laminate products in wood product manufacturing.
- > Laminate curved products for wood product manufacturing.
- > Store and handle chemicals for energy and chemical plant.

Machinery:

- > Set up a timber planer for dress four sides.
- > Joint straight cutters.
- > Set cutters into cutterheads.

Similarities were identified within the Health, safety and Environmental Unit Standards which are also covered as important in both qualifications.

Research conducted on this qualification indicated that New Zealand's qualification is well structured and detailed in terms of competencies. This can be attested to the qualification rules as set out in their policy documents.

The following competencies do not form part of the South African Level 3 qualification:

> Demonstrate knowledge of business basics in a wood manufacturing industry, take and record measurements and make calculations in wood manufacturing, demonstrate knowledge of systems and techniques used to work efficiently in wood manufacturing, application of Glue, handling and storage of glue is done by an operator in a Level 2 qualification.

Canada:

- > Short Courses related to safety operation of machinery (BP-WW2-05-01).
- > Identifying Safety Risks in Wood Processing and Precautions for Specific Equipment (equipment used to process wood waste (rolling stock, conveyors, screens, hogs/shredder).
- > Other Wood Processing Machine Operators (NOC_9434).
- > Other Wood Processing Machine Operators 212.
- > Introduction and Overview.
- > Sawmilling, Then and Now.
- > Product Recovery Factors.
- > Sawmill Economics - 101.
- > Lumber Grades.
- > Log Merchandising.
- > Debarking.
- > Large Log Processing.
- > Small Log Processing.
- > Sawfiling Practices.
- > Edging.
- > Resawing.
- > Lumber Trimming and Sorting.
- > Mill/Plant Layout and Design.
- > Lumber Drying.
- > Planing and Grading.
- > Lumber Quality & Process Control.
- > Human Resources.
- > Business Aspects of Manufacturing.

Wood wise LTD: Wood Industry Skills Education:

Specialised training in:

> Wood Technology, Timber Grading (NZ, USA, Australian grading rules):

Topics:

Kiln Drying, Wood Drying, Sawmilling, Wood Preservation, Timber Yarding, and other technical aspects of the timber industry.

This learning programme has similar feature to the South African one in that it also focuses Kiln drying, Wood drying processes, Green Timber processing (Saw Milling) Lumber Drying

Processing (Wood Preservation) Due to lack of subject matter content, a detailed comparison could not be carried out.

University of British Columbia: Centre for Advanced Wood Processing:

UBC Certificate in Kiln Drying:

CAWP offers a 150-hour modular course in kiln drying that currently represents the most comprehensive training program on the subject available anywhere in the world.

Other sites visited:

- > The British Columbia Institute for Technology, Vancouver Canada.
- > The community college at Ashville in North Caroline, U.S.A.
- > The Forestry Training Centre at Rotorua, New Zealand.
- > The Technical and Further Education (TAFE) training institute in Mt Gambier, Australia influenced the thinking on this and other Wood Technology qualifications.

Qualifications from those institutions and these are not exactly the same but learning programmes and hours of learning are comparable. The inclusion of labor legislation and other non-industry specific subjects make it even more uniquely South African.

The institutions listed above are all internationally recognized as centres of excellence in training and education in the Forestry/Wood Technology field.

Conclusion

The qualification compares favourably with their international equivalents in the countries reviewed above. This equivalence is in respect of content, outlook and course orientation. The differences noted are minor.

ARTICULATION OPTIONS

Upon completion of this Qualification, the learner will articulate horizontally to:

- > ID 50062: National Certificate: Occupational Hygiene and Safety, NQF Level 3.
- > National Certificate: Construction and Roofing, FET Phase, NQF Level 3.
- > ID 22670: National Certificate: Construction Carpentry, NQF Level 3.
- > ID 49080: National Certificate: Construction: Advanced Crane Operations, Level 3.

Vertical Articulation:

- > ID 66249: FETC New Venture Creation, NQF Level 4.

MODERATION OPTIONS

> Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with a relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

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

> Moderation of assessment will be overseen by the relevant ETQA or by an ETQA that has a Memorandum of Understanding with the relevant ETQA, according to the relevant ETQA's policies and guidelines for assessment and moderation.

> A learner wishing to be assessed for this qualification can only be assessed through an accredited assessment provider/centre.

> 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 in the Exit Level Outcomes described in the Qualification.

> The Moderator for this qualification must have a similar qualification or that is at least one level higher than this qualification.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

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

- > To be registered as an assessor with the relevant ETQA.
- > To be in possession of the relevant qualification at the level above this qualification.
- > To have sufficient relevant experience in Lumber Milling Industry.

NOTES

N/A

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	5
Fundamental	253656	Communicate with clients	Level 3	3
Fundamental	12488	Complete feasibility and commissioning reports	Level 3	3
Fundamental	9010	Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations	Level 3	2
Fundamental	9013	Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 3	4
Fundamental	119457	Interpret and use information from texts	Level 3	5
Fundamental	9012	Investigate life and work related problems using data and probabilities	Level 3	5
Fundamental	7456	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	Level 3	5
Fundamental	119465	Write/present/sign texts for a range of communicative contexts	Level 3	5
Core	117275	Apply quality control in the wood preservation plant	Level 3	10
Core	120330	Conduct a continuous risk assessment in a workplace	Level 3	4
Core	263837	Control basic maintenance and lubrication programme in relevant workplace in lumber mill	Level 3	15
Core	263839	Demonstrate understanding of influence of wood structure and properties, and certain production factors on wood quality	Level 4	15
Elective	263679	Operate green lumber crosscutting/trimming facilities in green timber processing area of lumber mill	Level 2	5
Elective	263687	Operate green lumber edging facilities in green timber processing area of lumber mill	Level 2	5
Elective	120335	Conduct an investigation into workplace incidents	Level 3	5
Elective	263692	Control green chip production facilities in green timber processing area of lumber mill	Level 3	5
Elective	263754	Control lumber drying process in lumber mill	Level 3	5
Elective	263718	Control lumber grading process in lumber mill	Level 3	12
Elective	263722	Demonstrate understanding of technology applicable to use in lumber mill of grinding wheels made from specialised material.	Level 3	4
Elective	263720	Describe lumber drying kiln types, their construction materials and auxiliary equipment	Level 3	5
Elective	263719	Describe properties of wood related to drying	Level 3	8

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Elective	263759	Dry lumber in lumber drying kiln applying appropriate drying schedule with all possible stages	Level 3	15
Elective	113915	Explain the application of the basic conditions of employment act in an employment contract	Level 3	2
Elective	263714	Level and tension circular saw blades used in Lumber Mill	Level 3	8
Elective	263763	Level and tension frame saw blades use in lumber mill	Level 3	8
Elective	263761	Level and tension wide bandsaw blades in saw shop of lumber mill	Level 3	8
Elective	263725	Maintain and set up chipper knives and anvils in chipper machines in lumber mill	Level 3	5
Elective	263774	Maintain and set up narrow band saw blade(s) used on bandsaws in lumber mill	Level 3	2
Elective	117171	Manage time effectively to enhance productivity and enable a balanced lifestyle	Level 3	2
Elective	263756	Operate automatic satellite tipping and profile grinding machines in saw shop of lumber mill	Level 3	10
Elective	263736	Operate log handling, sorting and storage facilities (log yard) in green timber processing area of lumber mill	Level 3	5
Elective	263735	Operate secondary log breakdown facilities in green timber processing area of lumber mill	Level 3	10
Elective	263726	Produce finger-jointed lumber in lumber mill	Level 3	6
Elective	263765	Set up wide blade bandsaw machine and its log carriage used in lumber mill	Level 3	4
Elective	13952	Demonstrate basic understanding of the Primary labour legislation that impacts on a business unit	Level 4	8

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Control green chip production facilities in green timber processing area of lumber mill***

SAQA US ID	UNIT STANDARD TITLE		
263692	Control green chip production facilities in green timber processing area of lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	5

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

SPECIFIC OUTCOME 1

Collect all the prescribed setting up tools and equipment and cutting tools for the chipping green lumber.

SPECIFIC OUTCOME 2

Set up the green lumber chipping equipment and install the required cutting tools, to prescribed standards, in the prescribed manner.

SPECIFIC OUTCOME 3

Control the operation of the chipping equipment in the prescribed manner.

SPECIFIC OUTCOME 4

Carry out basic routine maintenance and lubrication of chip production and ancillary handling equipment.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Level and tension circular saw blades used in Lumber Mill

SAQA US ID	UNIT STANDARD TITLE		
263714	Level and tension circular saw blades used in Lumber Mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	8

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

SPECIFIC OUTCOME 1

Describe the tools, gauges, and equipment used to level and tension circular saw blades in the Saw Shop of the Lumber Mill.

SPECIFIC OUTCOME 2

Explain the levelling and tensioning of circular saw blades in the Saw Shop of a Lumber Mill.

SPECIFIC OUTCOME 3

Level circular saw blades used in the Lumber Mill.

SPECIFIC OUTCOME 4

Tension saw blades used in the Lumber Mill.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Control lumber grading process in lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263718	Control lumber grading process in lumber mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	12

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

SPECIFIC OUTCOME 1

Prepare the lumber grading facility according to company procedures.

SPECIFIC OUTCOME 2

Bring lumber on site for grading as per company procedure. Check that the products to be graded have been correctly identified, collected and presented at the grading facility.

SPECIFIC OUTCOME 3

Control the actual grading process.

SPECIFIC OUTCOME 4

Supervise the correct sorting and assembling into parcels of graded lumber with similar dimensions and graders' markings.

SPECIFIC OUTCOME 5

Supervise the correct stacking, stamping/marketing and strapping of graded and marked products into prescribed size parcels for dispatch.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

ID	QUALIFICATION TITLE	LEVEL
Elective 66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Describe properties of wood related to drying*

SAQA US ID		UNIT STANDARD TITLE	
263719		Describe properties of wood related to drying	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	8

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

SPECIFIC OUTCOME 1

Describe the microscopic structure of wood.

SPECIFIC OUTCOME 2

Explain how wood holds water using the correct terminology.

SPECIFIC OUTCOME 3

Explain why and how wood shrinks and swells ("moves").

SPECIFIC OUTCOME 4

Describe the influence of all the above factors on the distortion of wood.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Describe lumber drying kiln types, their construction materials and auxiliary equipment

SAQA US ID		UNIT STANDARD TITLE	
263720		Describe lumber drying kiln types, their construction materials and auxiliary equipment	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	5

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

SPECIFIC OUTCOME 1

Describe the basic kiln types commonly in use, and how they function.

SPECIFIC OUTCOME 2

Describe the construction materials used to build kilns for lumber drying, and their respective advantages and disadvantages.

SPECIFIC OUTCOME 3

Explain the standard methods that could be used to load kilns.

SPECIFIC OUTCOME 4

Describe the auxiliary equipment necessary, and its functioning, for air circulation, heat supply, humidification and kiln controls.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate understanding of technology applicable to use in lumber mill of grinding wheels made from specialised material.

SAQA US ID	UNIT STANDARD TITLE		
263722	Demonstrate understanding of technology applicable to use in lumber mill of grinding wheels made from specialised material.		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

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

SPECIFIC OUTCOME 1

Explain the construction and maintenance of grinding wheels made from specialised materials, used for saw and cutter maintenance in the Saw Shop of the Lumber Mill.

SPECIFIC OUTCOME 2

Classify grinding wheels made from advanced/specialised materials, for use in saw and cutter maintenance.

SPECIFIC OUTCOME 3

Set up an advanced/specialised material grinding wheel on a grinding machine in the Saw Shop.

SPECIFIC OUTCOME 4

Sharpen cutting tools using grinding wheels of advanced/specialised materials, in the Saw Shop of the Lumber Mill.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Maintain and set up chipper knives and anvils in chipper machines in lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263725	Maintain and set up chipper knives and anvils in chipper machines in lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	5

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

SPECIFIC OUTCOME 1

Service a set of used/blunt chipper knives from a chipper used in the Lumber Mill.

SPECIFIC OUTCOME 2

Service a worn anvil from a chipper used in a Lumber Mill according to company's procedures.

SPECIFIC OUTCOME 3

Install a serviced set of knives and anvil in a chipper according to standard operating procedures.

SPECIFIC OUTCOME 4

Check wood chip quality of a serviced chipper.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Produce finger-jointed lumber in lumber mill***

SAQA US ID	UNIT STANDARD TITLE		
263726	Produce finger-jointed lumber in lumber mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	6

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

SPECIFIC OUTCOME 1

Explain the purpose and process of setting up Finger Joint Cutter Machine.

SPECIFIC OUTCOME 2

Explain purpose and process of establishing Finger Joints with the correct profile dimensions.

SPECIFIC OUTCOME 3

Explain the process of sorting lumber according to company's procedures.

SPECIFIC OUTCOME 4

Explain the process of stacking and distributing graded Finger-Jointing lumber to the correct destination.

SPECIFIC OUTCOME 5

Explain the process of cross cutting, stacking and curing of Finger Jointed lumber.

SPECIFIC OUTCOME 6

Explain the work procedures, safety and health measures and environmental requirements pertaining to the Finger Jointing and Laminating area.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

*Operate secondary log breakdown facilities in green timber processing area of
lumber mill*

SAQA US ID	UNIT STANDARD TITLE		
263735	Operate secondary log breakdown facilities in green timber processing area of lumber mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	10

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

SPECIFIC OUTCOME 1

Collect setting up tools and equipment and green lumber cutting tools (blades, knives) for the individual secondary log breakdown and ancillary materials handling equipment.

SPECIFIC OUTCOME 2

Set up the secondary log breakdown facilities equipment and install the required cutting tools, to prescribed standards, in the prescribed manner.

SPECIFIC OUTCOME 3

Operate secondary log breakdown equipment safely in accordance with company's procedures to convert cants into green lumber of prescribed thickness.

SPECIFIC OUTCOME 4

Operate and control the critical machinery used in secondary log breakdown according to standard operating procedures in Wet Mill.

SPECIFIC OUTCOME 5

Carry out routine maintenance and lubrication of secondary log breakdown and ancillary handling equipment according to company's procedures.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate log handling, sorting and storage facilities (log yard) in green timber processing area of lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263736	Operate log handling, sorting and storage facilities (log yard) in green timber processing area of lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	5

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

SPECIFIC OUTCOME 1

Collect all prescribed tools required for log handling and sorting in the log yard.

SPECIFIC OUTCOME 2

Sort and store logs according to dimensions according to standard operating procedures (Facilities = people, tools and equipment).

SPECIFIC OUTCOME 3

Control the log yard operations in the prescribed manner to the prescribed standards.

SPECIFIC OUTCOME 4

Control log yard throughput and quality to maintain prescribed product standards.

SPECIFIC OUTCOME 5

Carry out routine maintenance and lubrication of log yard handling and recording equipment.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Control lumber drying process in lumber mill***

SAQA US ID		UNIT STANDARD TITLE	
263754		Control lumber drying process in lumber mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	5

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

SPECIFIC OUTCOME 1

Schedule the appropriate lumber to be accessed for the drying process, dried and delivered to the next stage of production in the lumber mill.

SPECIFIC OUTCOME 2

Ensure the availability of the required equipment for and the correctness of the stacking process to prevent distortion during drying.

SPECIFIC OUTCOME 3

Use samples to control and monitor the drying process.

SPECIFIC OUTCOME 4

Ensure an appropriate and sustained steam supply to the lumber drying kilns.

SPECIFIC OUTCOME 5

Control preparation, loading and unloading of lumber drying kilns.

SPECIFIC OUTCOME 6

Apply effective measures to prevent or minimize drying defects in lumber.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

ID	QUALIFICATION TITLE	LEVEL
Elective 66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate automatic satellite tipping and profile grinding machines in saw shop of lumber mill

SAQA US ID		UNIT STANDARD TITLE	
263756		Operate automatic satellite tipping and profile grinding machines in saw shop of lumber mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	10

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

SPECIFIC OUTCOME 1

Set up an automatic stellite tipping machine in the Saw Shop of the Lumber Mill.

SPECIFIC OUTCOME 2

Prepare a saw blade safely for automatic stellite tipping.

SPECIFIC OUTCOME 3

Stellite tip and anneal a saw blade correctly using an automatic stellite tipping machine.

SPECIFIC OUTCOME 4

Set up an automatic profile grinding machine.

SPECIFIC OUTCOME 5

Side grind a stellite tipped saw blade, using an automatic profile grinding machine according to prescribed standards.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Dry lumber in lumber drying kiln applying appropriate drying schedule with all possible stages

SAQA US ID		UNIT STANDARD TITLE	
263759		Dry lumber in lumber drying kiln applying appropriate drying schedule with all possible stages	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	15

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

SPECIFIC OUTCOME 1

Heat up the kiln till the lumber has attained the prescribed temperature.

SPECIFIC OUTCOME 2

Run the relevant drying cycle with all its stages.

SPECIFIC OUTCOME 3

Determine endpoint and terminate drying cycle.

SPECIFIC OUTCOME 4

Apply treatment to equalize moisture contents of planks in load at the end of the drying cycle.

SPECIFIC OUTCOME 5

Apply a conditioning treatment, after the equalizing treatment (where relevant) to release drying stresses in the lumber.

SPECIFIC OUTCOME 6

Keep the appropriate records of the drying process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Level and tension wide bandsaw blades in saw shop of lumber mill***

SAQA US ID	UNIT STANDARD TITLE		
263761	Level and tension wide bandsaw blades in saw shop of lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	8

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

SPECIFIC OUTCOME 1

Describe the tools; gauges and equipment used to level and tension wide bandsaw blades in the Saw Shop of the Lumber Mill.

SPECIFIC OUTCOME 2

Level wide bandsaw blades used in the Lumber Mill in accordance with industry standards.

SPECIFIC OUTCOME 3

Tension wide bandsaw blades used in the Lumber Mill.

SPECIFIC OUTCOME 4

Service the back of a wide bandsaw blade used in the Lumber Mill.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Level and tension frame saw blades use in lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263763	Level and tension frame saw blades use in lumber mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	8

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

SPECIFIC OUTCOME 1

Describe the tools, gauges and equipment used to level and tension frame saw blades in the Saw Shop of the Lumber Mill.

SPECIFIC OUTCOME 2

Level frame saw blades according to industry standards.

SPECIFIC OUTCOME 3

Tension frame saw blades.

SPECIFIC OUTCOME 4

Service the back of a frame saw blade.

SPECIFIC OUTCOME 5

Service both extremities of the frame saw blade tooth line.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Set up wide blade bandsaw machine and its log carriage used in lumber mill*

SAQA US ID	UNIT STANDARD TITLE		
263765	Set up wide blade bandsaw machine and its log carriage used in lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

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

SPECIFIC OUTCOME 1

Check all band saw machine factors which affect the correct performance of wide band saw blade.

SPECIFIC OUTCOME 2

Set up a wide band saw blade(s) on a band saw machine use in the lumber mill according to company's procedures.

SPECIFIC OUTCOME 3

Set up the log carriage traverse components of a wide blade band saw machine.

SPECIFIC OUTCOME 4

Set up the log mounting components of a wide blade band saw machine.

SPECIFIC OUTCOME 5

Set up the sawn dimension set works of a wide blade band saw machine.

SPECIFIC OUTCOME 6

Monitor the performance of serviced saw wide band blades in production in the lumber mill.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Maintain and set up narrow band saw blade(s) used on bandsaws in lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263774	Maintain and set up narrow band saw blade(s) used on bandsaws in lumber mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	2

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

SPECIFIC OUTCOME 1

Inspect a narrow band saw blade after use in the Lumber Mill.

SPECIFIC OUTCOME 2

Spring set the teeth on a narrow band saw blade.

SPECIFIC OUTCOME 3

Sharpen a narrow band saw blade after setting the teeth.

SPECIFIC OUTCOME 4

Check the band saw machine components, which affect the performance of the narrow band saw blade during production.

SPECIFIC OUTCOME 5

Set up a narrow band saw blade on a band saw machine used in the Lumber Mill.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

***Control basic maintenance and lubrication programme in relevant workplace in
lumber mill***

SAQA US ID	UNIT STANDARD TITLE		
263837	Control basic maintenance and lubrication programme in relevant workplace in lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	15

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
13554	Control basic maintenance and lubrication programme in relevant workplace in lumber mill	Level 3	15	Will occur as soon as 263837 is registered

SPECIFIC OUTCOME 1

Demonstrate understanding of purpose and how to control basic maintenance & lubrication programme.

SPECIFIC OUTCOME 2

Demonstrate understanding of functions, purpose & methods of application of the basic maintenance.

SPECIFIC OUTCOME 3

Control storage facilities, keep inventory of basic maintenance, lubrication equipment & materials.

SPECIFIC OUTCOME 4

Oversee the basic maintenance and lubrication of the equipment in the relevant workplace.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate understanding of influence of wood structure and properties, and certain production factors on wood quality

SAQA US ID	UNIT STANDARD TITLE		
263839	Demonstrate understanding of influence of wood structure and properties, and certain production factors on wood quality		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	15

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
13580	Demonstrate understanding of influence of wood structure and properties, and certain production factors on wood quality	Level 4	15	Will occur as soon as 263839 is registered

SPECIFIC OUTCOME 1

Explain the wood quality requirements generally specified by the main users of wood products.

SPECIFIC OUTCOME 2

Describe the effect of wood growth properties on these quality requirements.

SPECIFIC OUTCOME 3

Describe the effect of machined wood properties on these quality requirements.

SPECIFIC OUTCOME 4

Describe the effect of the drying out process of wood on these quality requirements.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:*Further Education and Training Certificate: Lumber Milling*

SAQA QUAL ID	QUALIFICATION TITLE		
66289	Further Education and Training Certificate: Lumber Milling		
ORIGINATOR		PROVIDER	
SGB Forestry			
QUALIFICATION TYPE	FIELD	SUBFIELD	
Further Ed and Training Cert	1 - Agriculture and Nature Conservation	Forestry and Wood Technology	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	120	Level 4	Regular-Unit Stds Based

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

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

Learners who wish to practice as managers in the field of Lumber Milling Industry can enrol in this qualification. It seeks to harness the management potential required to ensure that the level and quality of productivity is realised. It is assumed that learners are already competent at a NQF Level 3 Lumber Milling Qualification or an equivalent and have completed any of the specialised areas covered in the NQF Level 3 Qualification. The specialisation areas are: Dry Lumber, Lumber Drying Processing, Green Timber Processing and Saw Doctoring. At this level, learners will be exposed to contextual application of management principles as outlined in the below paragraph.

The Qualification provides the qualifying learner with the following skills:

- > Describe and apply the management functions of an organisation.
- > Apply the budget function in a business unit.
- > Participate in production and quality improvement programmes.
- > Apply technical knowledge and skills to align business unit performance to business goals.
- > Use a word processing package to produce business documents.
- > Formulate and implement an action plan to improve productivity within an organisational unit.
- > Demonstrate knowledge and application of the OHAS Act and the responsibilities of management in terms of the Act.
- > Demonstrate basic understanding of the primary labour legislation that impacts on a business.

Rationale:

There are certain regulatory requirements prescribed by bodies such as South African National Standards (SANS).

The Lumber Milling Industry is required to conform to regulatory standards. The products produced within the Lumber Milling Industry are audited by SANS. It is therefore imperative for organisations within the Lumber Milling Industry to conform to such standards.

Requirements includes among others: handling of certain chemicals, handling and operation of machinery to name but a few. In order to meet the set standards, both employers and employees should know and apply these regulatory requirements.

This Qualification is intended to familiarise and equip learners with knowledge and skills required to apply management principles in the Lumber Milling context whilst the following roles are not compromised:

- > Safe operation of Machinery is performed to avoid death and injuries.
- > To ensure that used chemical do not spill and cause environmental hazards.

The health and safety of employees is not endangered:

- > Qualifying learners will assist their respective employers/organizations with skills required to:
 - > Run an organisation in a professional manner.
 - > Draw up departmental budget.
 - > Add value towards the productivity of an organisation.
 - > Assist in aligning business unit performance with business goals.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED IN PLACE

Recognition of Prior Learning:

This qualification may be achieved in part or wholly through Recognition of Prior Learning (RPL) processes.

The provision that the qualification may be obtained through the recognition of prior learning facilitates access to an education, training and career path in engineering and thus accelerates the redress of past unfair discrimination in education, training and employment opportunities.

Evidence of prior learning must be assessed through formal RPL processes through recognized methods. Any other evidence of prior learning should be assessed through formal RPL processes to recognize achievement thereof.

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

The structure of this unit standard based qualification makes the RPL possible, if the learner is able to demonstrate competence in the knowledge, skills, values and attitudes implicit in this qualification.

Learners who already work in the Lumber Milling industry who believe they possess competencies to enable them to meet some or all of the ELOs listed in the qualification will be able to present themselves for assessment against those of their choice.

Access to the Qualification:

Access to this qualification is open, however it is assumed that a learner, who wishes to register for this qualification will have demonstrated competence in:

- > Communication and Mathematical Literacy at NQF Level 3 or equivalent.

QUALIFICATION RULES

The Qualification consists of Fundamental, Core and Elective Unit Standards. A minimum of 120 credits is required to achieve this Qualification. The credits are allocated as follows:

Fundamental Component:

All fundamental Unit Standards are compulsory (56 credits).

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

- > Unit standards at NQF Level 4, totalling 16 credits in Mathematical Literacy.
- > Unit standards at NQF Level 4, totalling 20 credits in Communication in a First South African Language.
- > Unit standards at NQF Level 3, totalling 20 credits in Communication in a Second South African Language.

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

Core Component:

The core component consists of 7 Unit Standards and 48 credits. All the Unit Standards are compulsory for all the learners.

Elective Component:

The elective component consists of 11 elective Units Standards with 73 credits. The qualifying learner must choose a minimum of 16 credits in order to meet the Qualification requirements.

EXIT LEVEL OUTCOMES

1. Describe and apply the management functions of an organisation.
2. Manage Expenditure against budget.
3. Participate in productivity and quality improvement programmes.
4. Apply technical knowledge and skill to align business unit performance to business goals.
5. Formulate and implement an action plan to improve productivity within an organisational unit.
6. Demonstrate knowledge and application of the OHAS Act, 85 of 1993 (OHSA) (as amended) and the responsibilities of management in terms of the Act.

Critical Cross-Field Outcomes:

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

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

- > Identifying variables that affect productivity.
- > Identifying budget needs of a business.
- > Identifying main core functions of a business.
- > Optimising productivity within the business.

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

- > Communicating with customers, employees and other managers.
- > to members of a team within the department.
- > Presenting reports to managers.
- > Reprimanding employees within the department.

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

- > Analysing budget needs of a business.
- > Determining production efficiency.
- > Making projections.

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

- > Writing reports on departmental performance.
- > Filling in record keeping templates.
- > Carrying out calculations.
- > Interpreting and recording correct client contact details.

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

- > Issuing clear verbal instructions to team members, other colleagues and clients.
- > Communicating with Maintenance/Engineering Department.
- > Actively listening to feedback received from team members, other colleagues and clients.
- > Evaluating and reporting problem situations to team members, other colleagues and clients.

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

- > Use Computer Aided Programmes to carry out Lumber Milling related operations.
- > Using Total Quality Management Systems.

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

- > Applying the inter-relatedness of the Lumber Milling industry as a set of related systems.
- > Recognizing the inter-relationship between the various business units within the Lumber Milling Industry.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

- > Management functions are described in terms of roles and responsibilities specific to area of specialisation.
- > Level of accountability is explained in order to have an insight on how far one goes in dealing with certain aspects relating to one's responsibilities.
- > Protocol is followed in resolving issues pertaining to one's area of responsibility.
- > Structure of the organisation is illustrated and understood.
- > Main business core functions are identified.
- > Planning of staff activities is explained with examples specific to shifts and leave.

Associated Assessment Criteria for Exit Level Outcome 2:

- > The concept of budgeting in a business unit is explained.
- > The budget needs of a business unit are analysed.
- > A proposed budget for a business unit is presented and justified.
- > Actual expenses and revenue against projected expenses and revenue are monitored and controlled.

Associated Assessment Criteria for Exit Level Outcome 3:

- > The variables that affect productivity are identified and explained in terms of the total Lumber Milling Operation.
- > Production efficiency is determined in terms of machine throughput, utilisation, downtime, production yields/waste, conformance to plans.
- > Basic productivity improvement options are assessed.
- > Quality improvement objective is demonstrated in accordance with specified requirements.

Associated Assessment Criteria for Exit Level Outcome 4:

- > A performance management programme for a business unit is developed.
- > Different performance management systems are compared in terms of their underlying principles and how they measure performance.
- > Performance is monitored in terms of a performance agreement.
- > Ways of addressing under-performance issues are investigated.

Associated Assessment Criteria for Exit Level Outcome 5:

- > Productivity measures are selected to identify single factor productivity in the organisational unit.
- > An activity plan to improve productivity within the organisational unit is formulated.
- > Productivity within the organisational unit is optimised.

Associated Assessment Criteria for Exit Level Outcome 6:

- > The basic principles of the Act and the accompanying Regulations are explained.
- > The requirements for minimum compliance stipulated in the Act are explained.
- > The management controls required to achieve compliance is interpreted.
- > The obligations of managers in terms of communication and training are explained.

Integrated Assessment:

Integrated assessment evaluates the learner's ability to combine actions and ideas across a range of activities and knowledge areas. The integrated assessment must specifically assess the learner's ability to:

- > Demonstrate competence by means of the practical application of the embedded knowledge in a manner that meets the required performance standards required.
- > Illustrate a clear understanding of the concepts, theory and principles that underpin the practical action taken.

The assessment will require assessment methods which measure and evaluate evidence generated during learning and on-the-job activities. Because assessment practices must be open and transparent, fair, valid and reliable, ensuring that no learner is disadvantaged in any way whatsoever, an integrated assessment approach is incorporated into the Qualification.

A variety of methods must be used in assessment tools and activities must be appropriate to the context in which the learner is working or will work. Where it is not possible to assess the learner at the workplace, simulations, case studies role plays and other similar techniques should be used to provide a context appropriate to the assessment.

The term integrated assessment implies that theoretical and practical components should be assessed together. Whenever possible, the assessment of knowledge, skills, attitudes and values shown in the Unit Standards should be integrated and, during integrated assessment, the assessor should make use of a range of formative and summative assessment tools and methods. Combinations of practical, applied, foundational and reflective competencies should be assessed. Assessment should further ensure that all specific outcomes, embedded knowledge and critical cross field outcomes are evaluated in an integrated way.

Assessors must assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience as the assessment process is capable of being applied to RPL, subject to the rules and criteria of the relevant ETQA.

INTERNATIONAL COMPARABILITY

Countries listed below were selected for their renowned excellence in the field of Wood processing:

- > New Zealand.
- > Canada.
- > USA.

In addition, a scan of SADC countries was also carried out to compare practices.

New Zealand:

National Diploma in Wood Manufacturing (Level 5), with 125 credits.

In this qualification, focus is on optimisation of business and operational processes used in the wood manufacturing industries using techniques that are new to the industry in New Zealand.

Topics Covered:

- > Demonstrate knowledge of productivity and work study techniques.
- > Explain and apply work study and design methodologies.
- > Write an analytical report.
- > Calculate costs in wood manufacturing operations.
- > Develop and evaluate quality management techniques applied in wood manufacturing.
- > Explain procedures to add value to wood products.
- > Relate operations management principles to wood manufacturing operations.
- > Analyse business management structures and processes applied in the wood manufacturing industry.
- > Develop personal leadership and coaching strategies for effective wood manufacturing teams.
- > Analyse wood manufacturing material flows and make recommendations for improved process efficiency.
- > Develop a maintenance plan for an item of plant in a wood manufacturing operation.
- > Develop optimisation procedures for a wood manufacturing operation.

This qualification is similar to the proposed model in South Africa in that both qualifications, qualifying learners are expected to demonstrate knowledge of productivity, write an analytical report, apply quality control measures and analyse business management structures.

The difference with the proposed model is that this qualification at Level 5, the SA Qualification is at NQF Level 4. In the South African NQF Level 4 Qualification, the focus is more on some management skills as opposed to technical skills.

The National Certificate in Saw Doctoring (Level 4).

Emphasis is on the skills and knowledge required for the development, care and maintenance of saws in the solid wood manufacturing industry.

The qualification has a large compulsory section to ensure that qualification holders have the required knowledge and skills to bench and tension circular and bandsaws, sharpen, swage, tip, and set saws. The elective section allows the development of knowledge of sawmill operations, environmental issues, or the nature of wood as a raw material.

Topics:

- > Weld wide bandsaws.
- > Bench bandsaws and frame saws.
- > Bench circular saws.
- > Swage and shape a saw.
- > Tip circular saw teeth and profile circular saw tips.
- > Tip saw teeth with stellite or high speed steel.
- > Sharpen bandsaws.
- > Sharpen circular saws.
- > Demonstrate knowledge of the alignment of bandsaw and circular rip saw centres.
- > Demonstrate knowledge of the grinding of bandwheels.
- > Apply advanced calculations for saw doctoring.
- > Maintain a wood chipping machine.
- > Maintain and align frame saw centre.
- > Maintain and align bandsaw centre.
- > Maintain and align circular saw centre.
- > Grind bandwheels.

Electives:

- > Demonstrate knowledge of environmental issues in wood manufacturing industries.
- > Demonstrate knowledge of the principles of saw milling.
- > Demonstrate knowledge of tree growth and physical characteristics of wood.

The difference between this model and the South African one is that Saw Doctoring is a qualification on its own whereas in the South African Level 4 Qualification, Saw Doctoring is a stream on its own with emphasis on only two areas of competency. These being:

- > Design and make tooth profile templates for saws and cutters used in machines in lumber mill.
- > Maintain wide blade handsaw wheel faces on ban saws.

A number of competencies covered in the New Zealand Level 4 Saw Doctoring, have been covered in South African Level 3 Lumber Milling (Saw Doctoring Specialisation Area).

Saw Doctoring is a specialization area in the Further Education and Training Certificate: Lumber Milling, NQF Level 4 Certificate, with only two unit standards. National Certificate in Solid Wood Manufacturing (Advanced) with strands in Laminated Veneer Lumber (LVL) and Plywood Manufacturing, Sawmilling, Timber Drying, Timber Grading and Timber Treatment.

The unit standards below are at level 4.

Green Timber Processing:

- > Break down logs using manual or semi-automated systems and a log carriage.
- > Break down logs using automatic systems with manual over-ride and centre line log feed system.
- > Break down logs using fully automatic systems and centre line log feed system.

Lumber Drying:

- > Kiln dry timber.
- > Explain production planning and control procedures used in a wood manufacturing operation.
- > Demonstrate knowledge of fundamentals of process controls used in wood manufacturing industries.
- > Audit timber grading operations.
- > Grade timber using customer specific grading rules.

Generic Management:

- > Analyse customers' complaints and take corrective actions in wood manufacturing.

Generic technical skills:

- > Explain production planning and control procedures used in a wood manufacturing operation.
- > Demonstrate knowledge of fundamentals of process controls used in wood manufacturing industries.

Lumber dry processing:

- > Treat wood with light organic solvent preservative.
- > Pressure treat wood using waterborne preservatives.

Timber Grading:

- > Operate a mechanical stress grading machine to grade timber.
- > Grade timber to AS 2858-2004: Structural rules.
- > Grade lumber to United States of America grading rules.
- > Audit timber grading operations.
- > Grade timber using customer specific grading rules.

The difference between this model as opposed to South Africa is the NQF Level 4 Further Education and Training Certificate: Lumber Milling Qualification (SA):

- > Does not have 'Operation of Energy and Chemical Plant' as a competency.
- > There is very little emphasis on the technical competencies.
- > Emphasis is on the managerial skills.

Conclusion:

Findings have revealed that in the South African NQF Level 4 Lumber Milling Qualification, emphasis is slightly on generic management skills, whereas the two qualifications offered in New Zealand, a level 4 qualification has more technical competencies than generic management.

ARTICULATION OPTIONS

This Qualification articulates horizontally to:

- > ID 48659: Further Education and Training Certificate: Grain Milling, NQF Level 4.
- > ID 58063: Further Education and Training Certificate: Pulp and Paper, NQF Level 4.

Vertical articulation could not be established.

MODERATION OPTIONS

- > Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with a relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.
- > Any institution offering learning that will enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA or with an ETQA that has a Memorandum of Understanding with relevant ETQA.
- > Moderation of assessment will be overseen by the relevant ETQA or by an ETQA that has a Memorandum of Understanding with the relevant ETQA, according to the relevant ETQA's policies and guidelines for assessment and moderation.
- > A learner wishing to be assessed for this qualification can only be assessed through an accredited assessment provider/centre.
- > 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 in the Exit Level Outcomes described in the Qualification.
- > The Moderator for this qualification must have a similar qualification or that is at least one level higher than this qualification.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

- > Anyone assessing a learner against this qualification must be registered with the relevant ETQA as an assessor.
- > Any institution offering learning that will enable the achievement this qualification must be accredited as a provider with the relevant ETQA. Assessment will be overseen by the relevant ETQA according to the policies and guidelines for assessment of that ETQA, in terms of agreements reached around assessment and between various ETQA's (including professional bodies).
- > Anyone wishing to be assessed against this qualification may apply to be assessed any assessment agency, assessor or provider institution that is accredited by the relevant ETQA.
- > The options as listed above provide the opportunity to ensure that assessment and moderation can be transparent, affordable, valid reliable and non-discriminatory.
- > For an applicant to register as an assessor or moderator of this qualification, the applicant needs:
 - > To be registered as an assessor with the relevant ETQA.
 - > To be in possession of the relevant qualification.
 - > To have sufficient relevant experience.
 - > To have the appropriate qualification to assess communication and mathematical literacy.

NOTES

N/A

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	5
Fundamental	119457	Interpret and use information from texts	Level 3	5
Fundamental	119467	Use language and communication in occupational learning programmes	Level 3	5
Fundamental	119465	Write/present/sign texts for a range of communicative contexts	Level 3	5
Fundamental	9015	Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems	Level 4	6
Fundamental	119462	Engage in sustained oral/signed communication and evaluate spoken/signed texts	Level 4	5
Fundamental	119469	Read/view, analyse and respond to a variety of texts	Level 4	5
Fundamental	9016	Represent analyse and calculate shape and motion in 2- and 3-dimensional space in different contexts	Level 4	4
Fundamental	119471	Use language and communication in occupational learning programmes	Level 4	5
Fundamental	7468	Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues	Level 4	6
Fundamental	119459	Write/present/sign for a wide range of contexts	Level 4	5
Core	114978	Use a word processing package to produce business documents	Level 3	3
Core	13949	Apply technical knowledge and skill to align business unit performance to business goals	Level 4	5
Core	242668	Demonstrate knowledge and application of the Occupational Health and Safety Act, 85 of 1993 (OHSA) (as amended) and the responsibilities of management in terms of the Act	Level 4	4
Core	14667	Describe and apply the management functions of an organization	Level 4	10
Core	114877	Formulate and implement an action plan to improve productivity within an organisational unit	Level 4	8
Core	242810	Manage Expenditure against a budget	Level 4	6
Core	246622	Participate in productivity and quality improvement programmes	Level 4	12
Elective	116714	Lead a team, plan, allocate and assess their work	Level 3	4
Elective	117171	Manage time effectively to enhance productivity and enable a balanced lifestyle	Level 3	2
Elective	9530	Manage work time effectively	Level 3	3
Elective	13254	Contribute to the implementation and maintenance of business processes	Level 4	10
Elective	13952	Demonstrate basic understanding of the Primary labour legislation that impacts on a business unit	Level 4	8
Elective	117235	Demonstrate knowledge and understanding of the influence of wood structure, its properties and production factors on quality in a wood products environment	Level 4	15
Elective	263717	Design and make tooth profile templates for saws and cutters used in machines in lumber mill.	Level 4	4
Elective	263694	Maintain wide blade bandsaw wheel faces on bandsaws machines used in Lumber Mill	Level 4	2
Elective	263680	Manage maintenance of all machines, tools and equipment used for Saw and cutter maintenance in Lumber Mill	Level 4	5
Elective	263688	Optimize machine productivity in Lumber Mill	Level 4	5
Elective	255514	Conduct a disciplinary hearing	Level 5	15

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Manage maintenance of all machines, tools and equipment used for Saw and cutter maintenance in Lumber Mill

SAQA US ID	UNIT STANDARD TITLE		
263680	Manage maintenance of all machines, tools and equipment used for Saw and cutter maintenance in Lumber Mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	5

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

SPECIFIC OUTCOME 1

Develop a maintenance programme for all saw and cutter maintenance facilities in the Lumber Mill.

SPECIFIC OUTCOME 2

Control the implementation of the saw and cutter maintenance facilities' maintenance programme.

SPECIFIC OUTCOME 3

Maintain prescribed Saw Doctor Shop asset registers.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66289	Further Education and Training Certificate: Lumber Milling	Level 4



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Optimize machine productivity in Lumber Mill*

SAQA US ID		UNIT STANDARD TITLE	
263688		Optimize machine productivity in Lumber Mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	5

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

SPECIFIC OUTCOME 1

Carry out technical evaluations of all lumber processing machines in the Lumber Mill.

SPECIFIC OUTCOME 2

Identify saw and cutter problems.

SPECIFIC OUTCOME 3

Monitor productivity of all (log and lumber) processing machines in the Lumber Mill.

SPECIFIC OUTCOME 4

Improve saw and cutter machine productivity in the Lumber Mill.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66289	Further Education and Training Certificate: Lumber Milling	Level 4



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Maintain wide blade bandsaw wheel faces on bandsaws machines used in Lumber Mill

SAQA US ID	UNIT STANDARD TITLE		
263694	Maintain wide blade bandsaw wheel faces on bandsaws machines used in Lumber Mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	2

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

SPECIFIC OUTCOME 1

Prepare a wide blade band saw headrig for wheel face maintenance in the Lumber Mill.

SPECIFIC OUTCOME 2

Explain the use of a Barnhardt wheel face grinder used on a wide blade band saw machine used in the Lumber Mill.

SPECIFIC OUTCOME 3

Grind the wheel faces of a wide blade band saw machine used in the Lumber Mill.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66289	Further Education and Training Certificate: Lumber Milling	Level 4



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Design and make tooth profile templates for saws and cutters used in machines in lumber mill.

SAQA US ID	UNIT STANDARD TITLE		
263717	Design and make tooth profile templates for saws and cutters used in machines in lumber mill.		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	4

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

SPECIFIC OUTCOME 1

Give reasons for designing and making tooth profile templates for saws and cutters used in machines in the Lumber Mill.

SPECIFIC OUTCOME 2

Design saw and cutter tooth profile templates for saws and cutters used in the Lumber Mill.

SPECIFIC OUTCOME 3

Make saw and cutter tooth profile templates.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66289	Further Education and Training Certificate: Lumber Milling	Level 4

No. 252

5 March 2009

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Task Team for

New Venture Creation

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

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

Comment on the Qualification and Unit Standards should reach SAQA at the address below and **no later than 6 April 2009**. All correspondence should be marked **Standards Setting – Task Team for New Venture Creation** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. E. Brown

Postnet Suite 248


Private Bag X06

Waterkloof

0145

or faxed to 012 – 431-5144

e-mail: ebrown@saqa.org.za


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



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
Further Education and Training Certificate: New Venture Creation

SAQA QUAL ID	QUALIFICATION TITLE		
66249	Further Education and Training Certificate: New Venture Creation		
ORIGINATOR	PROVIDER		
Task Team - New Venture Creation			
QUALIFICATION TYPE	FIELD	SUBFIELD	
Further Ed and Training Cert	3 - Business, Commerce and Management Studies	Generic Management	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	144	Level 4	Regular-Unit Stds Based

This qualification replaces:

Qual ID	Qualification Title	NQF Level	Min Credits	Replacement Status
23953	Further Education and Training Certificate: New Venture Creation (SMME)	Level 4	162	Will occur as soon as 66249 is registered

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

This Qualifications purpose is to develop the appropriate skills and knowledge required by a person for the establishment and development of a small to medium business venture, and address the economic, administrative and behavioural (psycho-social) barriers that contribute to success in starting and sustaining the venture.

This the qualification is intended for persons who wish to start, operate, manage and grow a new small to medium business venture. Learners attempting this qualification will be equipped with a variety of technical, business managerial and personal skills and strategies to help them succeed in the creation and sustenance of a business. The successful learner will develop a sound foundation for the application of these skills and knowledge to explore a diverse range of entrepreneurial opportunities.

Recipients of this qualification will be able to:

- > Demonstrate an ability to identify and create a new venture.
- > Demonstrate knowledge of interpersonal skills required in a business environment.
- > Demonstrate an understanding of basic economics within an market economy.
- > Manage a new venture by applying business principles and techniques.
- > Demonstrate an understanding of the role of leadership and management.

Rationale:

This Qualification will meet the needs of the formal and in-formal Small, Micro and Medium Enterprise Sector by providing training standards against which entrepreneurs can be trained. This Qualification meets the needs of society by, primarily, providing persons who are able to apply the fairly complex knowledge and skills required to be an entrepreneur and thus contribute

to the economic upliftment of themselves, their community and thereby the nation as a whole. Alternatively this Qualification is also attractive to persons who have not received formal training in this Sector but who are already managing and/or are working as employees within an established Small, Micro and Medium Enterprise business.

This Qualification contributes to an integrated National Qualifications Framework; provides for access, mobility and progression within the Small, Micro and Medium Enterprise Sector; enhances the quality of training for entrepreneurs; allows for the redress of past and contributes to the development of the learner entrepreneurs.

The majority of the learners attempting this qualification are likely to be unemployed persons who, via a learnership, have been identified and selected as having the potential to create a new business venture. With this Qualification and the established of a Small, Micro and Medium Enterprise provides the learner access to further learning opportunities at NQF Level 5 in Business Consulting Practice and Business Advising.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED IN PLACE

It is assumed that the learner has the following knowledge and skills:

- > Communication at NQF Level 3.
- > Mathematical Literacy at NQF Level 3.

Recognition of Prior Learning:

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

This Recognition of Prior Learning may allow:

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

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

Access to the Qualification:

There is an open access to this qualification, keeping in mind the "Learning Assumed to be in Place".

QUALIFICATION RULES

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

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

Fundamental Component:

The Fundamental Component consists of Unit Standards in:

- > Mathematical Literacy at NQF Level 4 to the value of 16 credits.
- > Communication at NQF Level 4 in a First South African Language to the value of 20 credits.
- > Communication in a Second South African Language at NQF Level 3 to the value of 20 credits.

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

All Unit Standards in the Fundamental Component are compulsory.

Core Component:

The Core Component consists of Unit Standards to the value of 77 credits all of which are compulsory.

Elective Component:

The Elective Component consists of individual unit standards from which the learner must choose unit standards totalling a minimum of 11 credits.

EXIT LEVEL OUTCOMES

1. Demonstrate an ability to identify and create a new venture.
2. Demonstrate knowledge of interpersonal skills required in a business environment.
3. Demonstrate an understanding of basic economics within a market economy.
4. Manage a new venture by applying business principles and techniques.
5. Demonstrate an understanding of the role of leadership and management.

Critical Cross-Field Outcomes:

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

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

- > Demonstrating an ability to identify and create a new venture.
- > Demonstrating knowledge of interpersonal skills required in a business environment.
- > Managing a new venture by applying business principles and techniques.
- > Demonstrating an understanding of the role of leadership and management.

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

- > The identification and creation of a new venture.
- > The management of a new venture.

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

- > Demonstrating an ability to identify and create a new venture.
- > Managing a new venture.

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

- > Demonstrating an ability to identify and create a new venture.
- > Demonstrating knowledge of interpersonal skills required in a business environment.
- > Managing a new venture by applying business principles and techniques.

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

- > An understanding of basic economics within an market economy.
- > An understanding of the role of leadership and management.

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

- > Demonstrating an ability to identify and create a new venture.
- > Demonstrating an understanding of basic economics within an market economy.
- > Managing a new venture by applying business principles and techniques.

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

- > Demonstrating an understanding of basic economics within an market economy.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

- 1.1 An understanding is demonstrated of the importance of a paradigm shift from a job-seeking attitude to a business opportunity seeking attitude.
- 1.2 Business opportunities are identified and evaluated in terms of its potential viability.
- 1.3 Problems-solving techniques and principles are applied within a business start-up and operation context.

Associated Assessment Criteria for Exit Level Outcome 2:

- 2.1 An understanding is demonstrated of the concept of group dynamics.
- 2.2 An understanding is demonstrated of the characteristics of effective team work.
- 2.3 An understanding is demonstrated of various networking principles and techniques.
- 2.4 Potential personal limitations, abilities and expectations are identified for self developmental purposes.

Associated Assessment Criteria for Exit Level Outcome 3:

- 3.1 An understanding is demonstrated of new venture financing sources and opportunities.
 - 3.2 An understanding is demonstrated of the principles of micro and macro economics.
 - 3.3 Potential threats and opportunities within the economic environment are identified for future business decision making.
 - 3.4 An understanding is demonstrated of business competitiveness.
- > Range: Business competitiveness includes but is not limited to factors such as inflation, exchange rates, interest rates, economic indicators and competition.

Associated Assessment Criteria for Exit Level Outcome 4:

- 4.1 A business plan for a new venture is developed using strategic planning principles and techniques.
- 4.2 Guidelines for the implementation and monitoring the strategic action plan are formulated in terms of milestones and timeframes.
- 4.3 Financial management planning principles and techniques are applied in order to manage the business in an efficient and effective manner.
- 4.4 Production and/or operations management is applied in a chosen business opportunity.
- 4.5 Sound human resources management techniques are applied in order to set up a productive and motivated workforce for a business.
- 4.6 Administrative principles and procedures are applied for sound administration and record-keeping.

Associated Assessment Criteria for Exit Level Outcome 5:

- 5.1 Knowledge is demonstrated of how management and leadership principles are applied to improve business effectiveness and efficiency.
- 5.2 Knowledge is demonstrated of the differences between leadership and management in terms of managing a business.
- 5.3 Knowledge is demonstrated of leadership and management styles in relation to their impact on business performance.
- 5.4 Leadership and management principles and techniques are applied in order to enhance business performance.

Integrated Assessment:

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

Assessment of the communication, language, literacy and numeracy should be conducted in conjunction with other aspects and should use authentic new venture creation contexts wherever possible.

A variety of methods must be used in assessment and tools and activities must be appropriate to the context in which the learner is working. Where it is not possible to assess the learner in the workplace or on-the-job, simulations, case studies, role-plays and other similar techniques should be used to provide a context appropriate to the assessment.

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

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

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

INTERNATIONAL COMPARABILITY

Best Practice:

The following countries were selected for the International Comparability due to the fact that their programmes, like the Further Education and Training Certificate: New Venture Creation, are programmes that are mostly presented by organisations responsible for new business development, new venture creation or entrepreneur development. These countries are Seychelles, Bulgaria, Slovenia, India, Thailand and Uganda.

Seychelles:

The Seychelles Industrial Development Corporation has within it the Small and Medium Business Bureau which primarily looks after the interests of Small and Medium Business as well as providing training opportunities for entrepreneurs. The basic entrepreneur programme consists of the following modules:

- > Tax and Finances.
- > Insurance and Risk.
- > General Business Issues: Business Structure, Superannuation, Debt Recovery/Unpaid Invoices.
- > Self Promotion/Marketing.

Findings:

The Further Education and Training Certificate: New Venture Creation compares favourably to the training opportunity presented by the Small and Medium Business Bureau except that the Further Education and Training Certificate: New Venture Creation offers empowerment in a lot more of the softer skills such as management and leadership.

Bulgaria:

In Bulgaria the Bulgarian Association for Management Development and Entrepreneurship has as one of its core functions the unifying of the best training institutions in Bulgaria and the promotion of certified training programmes of its members. Among one of the certified training programmes is the programme for New Business Developers. This programme deals with the following aspects:

- > Marketing.
- > Finance.
- > Operations.
- > Human resources.
- > Selling.
- > Pricing.
- > Planning.
- > Strategy development.
- > Purchasing.
- > Producing.
- > Record-keeping.
- > Business administration.
- > Risk-taking.
- > Decision-making.
- > Coping with uncertainty.
- > Problem-solving.
- > Communication.
- > Negotiation.
- > Leadership.

Findings:

The Further Education and Training Certificate: New Venture Creation compares very favourably to the Bulgarian Association for Management Development and Entrepreneurship New Business Developers programme in terms of content.

Slovinia:

The International Center for Promotion of Enterprises (ICPE) is an international intergovernmental organisation with Slovenia and India as its leading members and is mandated to promote and support enterprise development in the developing and transitional economies with a view to fostering their economic development in the regional and global context. The Center presents a programme in small enterprise development for the entrepreneur which is based on the following aspects:

- > Business and legal requirements.
- > Financial planning and management.
- > Promoting of your business.
- > Managing people.

Findings:

The Further Education and Training Certificate: New Venture Creation compares favourably to the Slovenian International Center for Promotion of Enterprises programme in small enterprise development for the entrepreneur.

India:

The Entrepreneurship Development Institute of India is an organisation committed to promoting entrepreneurship through education, development and training. It offers a basic programme for entrepreneurs which contains the following aspects:

- > Skills and behavioural training: Entrepreneurial motivation and competencies, problem-solving, counselling and communication.
- > Resource building: Procedures and formalities in setting up new enterprises, incentives and benefits for entrepreneurs.
- > Business opportunity identification.
- > Business profile preparation, business plan formulation and assessing the viability of a business plan.
- > Small business management.
- > Business crisis.

Findings:

The Further Education and Training Certificate: New Venture Creation compares favourably to the Entrepreneurship Development Institute of India's programme for entrepreneurs.

Thailand:

Thailand's Institute for Small to Medium Enterprise Development courses are focused on direct target groups to facilitate and match the requirement of Small to Medium Enterprises. Small to Medium Enterprises entrepreneurs can select to attend the proper training course which fit their need, either a short, intermediate, or a longer training modules. Training courses are provided in various modules. These models are:

- > General management - marketing, production, finance, human resource, accounts and taxation.
- > Small business management.
- > Specific business knowledge.
- > Business instruments- business plan, art of communication, etc.
- > New entrepreneurs creation.

Findings:

The Further Education and Training Certificate: New Venture Creation compares favourably to the sum of Thailand's Institute for Small to Medium Enterprise Development models for Small to Medium Enterprises Development.

Uganda:

In Uganda the Management Training and Advisory Centre in Kampala was established to among other things promote industrial and enterprise development. The Center offers training for entrepreneurs which includes subjects such as:

- > Establishing business & legal requirements.
- > Undertaking financial planning.
- > Promoting the business.
- > Undertaking business planning.
- > Managing finances.
- > Managing a small team.
- > Establishing business networks.
- > Customer service.
- > Monitoring a safe workplace.
- > Maintaining financial records.

Findings:

The Further Education and Training Certificate: New Venture Creation compares favourably to the Ugandan Management Training and Advisory Centre training programme for entrepreneurs.

Summary:

Of the above programmes and courses all of them compare very favorably to the Further Education and Training Certificate: New Venture Creation, especially in terms of content. It would appear that all these programmes and courses approach is to empower persons in order to start, operate, manage and grow small to medium new business ventures.

ARTICULATION OPTIONS

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

Horizontal articulation is possible with the following Qualifications:

- > ID 48883: Further Education and Training Certificate: Small Business Advising (Information Support), NQF Level 4.
- > ID 57714: Further Education and Training Certificate: Generic Management, NQF Level 4.

Vertical articulation is possible with the following qualifications:

- > ID 48886: National Certificate: Business Advising, NQF Level 5.

- > ID 48874: National Certificate: Business Consulting Practice (Enterprise Resource Planning), NQF Level 5.
- > ID 59201: National Certificate: Generic Management, NQF Level 5.

MODERATION OPTIONS

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

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

CRITERIA FOR THE REGISTRATION OF ASSESSORS

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

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

NOTES

This qualification replaces qualification 23953, "Further Education and Training Certificate: New Venture Creation (SMME)", Level 4, 162 credits.

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	5
Fundamental	119457	Interpret and use information from texts	Level 3	5
Fundamental	119467	Use language and communication in occupational learning programmes	Level 3	5
Fundamental	119465	Write/present/sign texts for a range of communicative contexts	Level 3	5
Fundamental	9015	Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems	Level 4	6
Fundamental	119462	Engage in sustained oral/signed communication and evaluate spoken/signed texts	Level 4	5
Fundamental	119469	Read/view, analyse and respond to a variety of texts	Level 4	5
Fundamental	9016	Represent analyse and calculate shape and motion in 2- and 3-dimensional space in different contexts	Level 4	4
Fundamental	119471	Use language and communication in occupational learning programmes	Level 4	5
Fundamental	7468	Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues	Level 4	6
Fundamental	119459	Write/present/sign for a wide range of contexts	Level 4	5

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Core	114600	Apply innovative thinking to the development of a small business	Level 4	4
Core	263455	Apply the principles of costing and pricing to a business venture	Level 4	6
Core	263356	Demonstrate an understanding of an entrepreneurial profile	Level 4	5
Core	263514	Demonstrate an understanding of the function of the market mechanisms in a new venture	Level 4	5
Core	120389	Explain and apply the concept, principles and theories of motivation in a leadership context	Level 4	6
Core	114584	Finance a new venture	Level 4	5
Core	263534	Implement an action plan for a new venture	Level 4	4
Core	263474	Manage finances of a new venture	Level 4	6
Core	114805	Manage general administration	Level 4	4
Core	263434	Plan and manage production/operations in a new venture	Level 4	6
Core	263456	Plan strategically to improve new venture performance	Level 4	4
Core	114592	Produce business plans for a new venture	Level 4	8
Core	114596	Research the viability of new venture ideas/opportunities	Level 4	5
Core	116394	Implement and manage human resource and labour relations policies and acts	Level 5	9
Elective	119671	Administer contracts for a selected new venture	Level 3	10
Elective	113836	Apply basic computer technology	Level 3	11
Elective	123258	Foster and maintain customer relations	Level 3	10
Elective	120392	Apply the concept and principles of knowledge management to leadership	Level 4	8
Elective	242872	Conduct international market research	Level 4	6
Elective	13952	Demonstrate basic understanding of the Primary labour legislation that impacts on a business unit	Level 4	8
Elective	242655	Demonstrate knowledge and application of ethical conduct in a business environment	Level 4	4
Elective	13945	Describe and apply the management of stock and fixed assets in a business unit	Level 4	2
Elective	117156	Interpret basic financial statements	Level 4	4
Elective	242819	Motivate and Build a Team	Level 4	10
Elective	13948	Negotiate an agreement or deal in an authentic work situation	Level 4	5
Elective	114593	Tender to secure business for a new venture	Level 4	5
Elective	115857	Explain marketing for SMMEs	Level 5	6

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Demonstrate an understanding of an entrepreneurial profile*

SAQA US ID	UNIT STANDARD TITLE		
263356	Demonstrate an understanding of an entrepreneurial profile		
ORIGINATOR	PROVIDER		
Task Team - New Venture Creation			
FIELD	SUBFIELD		
3 - Business, Commerce and Management Studies	Generic Management		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	5

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
114598	Demonstrate an understanding of an entrepreneurial profile	Level 4	5	Will occur as soon as 263356 is registered

SPECIFIC OUTCOME 1

Describe entrepreneurship.

SPECIFIC OUTCOME 2

Describe the characteristics of a successful entrepreneur.

SPECIFIC OUTCOME 3

Develop individual entrepreneurial characteristics.

SPECIFIC OUTCOME 4

Explain methods to enhance an entrepreneurial profile.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66249	Further Education and Training Certificate: New Venture Creation	Level 4



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Plan and manage production/operations in a new venture*

SAQA US ID	UNIT STANDARD TITLE		
263434	Plan and manage production/operations in a new venture		
ORIGINATOR		PROVIDER	
Task Team - New Venture Creation			
FIELD	SUBFIELD		
3 - Business, Commerce and Management Studies	Generic Management		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	6

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
114588	Develop, implement and monitor a quality policy for a new venture	Level 4	4	Will occur as soon as 263434 is registered
114618	Monitor productivity in a business venture	Level 4	5	Will occur as soon as 263434 is registered

SPECIFIC OUTCOME 1

Design a production/operations layout for a new venture.

SPECIFIC OUTCOME 2

Apply effective production/operations scheduling.

SPECIFIC OUTCOME 3

Apply resource management within a new venture.

SPECIFIC OUTCOME 4

Apply quality management within a new venture.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66249	Further Education and Training Certificate: New Venture Creation	Level 4



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Apply the principles of costing and pricing to a business venture*

SAQA US ID	UNIT STANDARD TITLE		
263455	Apply the principles of costing and pricing to a business venture		
ORIGINATOR	PROVIDER		
Task Team - New Venture Creation			
FIELD	SUBFIELD		
3 - Business, Commerce and Management Studies	Generic Management		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	6

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
114594	Apply the principles of costing and pricing to a business venture	Level 4	6	Will occur as soon as 263455 is registered

SPECIFIC OUTCOME 1

Explain the criteria of a price setting policy for a new venture.

SPECIFIC OUTCOME 2

Analyse internal and external factors that impact upon pricing decisions.

SPECIFIC OUTCOME 3

Demonstrate an understanding of the relationship between costs, revenue and profits.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66249	Further Education and Training Certificate: New Venture Creation	Level 4



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Plan strategically to improve new venture performance

SAQA US ID	UNIT STANDARD TITLE		
263456	Plan strategically to improve new venture performance		
ORIGINATOR		PROVIDER	
Task Team - New Venture Creation			
FIELD	SUBFIELD		
3 - Business, Commerce and Management Studies	Generic Management		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	4

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
114585	Plan strategically to improve business performance	Level 4	4	Will occur as soon as 263456 is registered

SPECIFIC OUTCOME 1

Describe the concept of strategic planning in managing business performance.

SPECIFIC OUTCOME 2

Explain the role of the various functional strategies in business performance.

SPECIFIC OUTCOME 3

Apply business performance supervision and monitoring.

SPECIFIC OUTCOME 4

Monitor, measure and report on business performance.

SPECIFIC OUTCOME 5

Identify and rectify performance problems occurring in business.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66249	Further Education and Training Certificate: New Venture Creation	Level 4



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Manage finances of a new venture***

SAQA US ID		UNIT STANDARD TITLE		
263474		Manage finances of a new venture		
ORIGINATOR		PROVIDER		
Task Team - New Venture Creation				
FIELD		SUBFIELD		
3 - Business, Commerce and Management Studies		Generic Management		
ABET BAND		UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined		Regular	Level 4	6

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
114586	Manage finances of a new venture	Level 4	5	Will occur as soon as 263474 is registered

SPECIFIC OUTCOME 1

Explain financial aspects involved in running new venture.

SPECIFIC OUTCOME 2

Apply cash flow management in the running of a new venture.

SPECIFIC OUTCOME 3

Apply an accounting system to manage a new venture.

SPECIFIC OUTCOME 4

Analyse an income and expenditure statement.

SPECIFIC OUTCOME 5

Analyse a balance sheet.

SPECIFIC OUTCOME 6

Make a financial decision based on financial statements.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66249	Further Education and Training Certificate: New Venture Creation	Level 4



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate an understanding of the function of the market mechanisms in a new venture

SAQA US ID	UNIT STANDARD TITLE		
263514	Demonstrate an understanding of the function of the market mechanisms in a new venture		
ORIGINATOR		PROVIDER	
Task Team - New Venture Creation			
FIELD		SUBFIELD	
3 - Business, Commerce and Management Studies		Generic Management	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	5

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
114595	Demonstrate an understanding of the function of the market mechanisms in a new venture	Level 4	5	Will occur as soon as 263514 is registered

SPECIFIC OUTCOME 1

Explain the free market system in terms of perfect and imperfect competitive markets.

SPECIFIC OUTCOME 2

Analyse the interaction of demand and supply in price determination.

SPECIFIC OUTCOME 3

Analyse the factors that influence economic activity.

SPECIFIC OUTCOME 4

Describe the development and significance of markets.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66249	Further Education and Training Certificate: New Venture Creation	Level 4



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Implement an action plan for a new venture

SAQA US ID	UNIT STANDARD TITLE		
263534	Implement an action plan for a new venture		
ORIGINATOR	PROVIDER		
Task Team - New Venture Creation			
FIELD	SUBFIELD		
3 - Business, Commerce and Management Studies	Generic Management		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	4

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
114591	Implement an action plan for business operations	Level 4	4	Will occur as soon as 263534 is registered

SPECIFIC OUTCOME 1

Design an action plan for a new venture.

SPECIFIC OUTCOME 2

Set up business premises and operational systems.

SPECIFIC OUTCOME 3

Implement business financial systems.

SPECIFIC OUTCOME 4

Identify the risks associated with the new venture.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66249	Further Education and Training Certificate: New Venture Creation	Level 4