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GOVERNMENT NOTICES

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

No. 899 **5 July 2002**

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

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

Generic Management

Registered by NSB 03, Business, Commerce and Management Studies, publishes the following unit standards for public comment.

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

Comment on the unit standards should reach SAQA at the address ***below and no later than 5 August 2002.*** All correspondence should be marked **Standards Setting – SGB Generic Management** and addressed to

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

SAMUEL B.A. ISAACS
EXECUTIVE OFFICER

TITLE: Measure, assess and relate the factors that influence capital productivity

RANGE STATEMENT: This unit standard pertains to the efficient and effective use and utilisation of fixed assess such as machinery, plant, land, buildings and vehicles in the production and the rendering of services

LEVEL: 5

CREDIT: 12

FIELD: Business, Commerce and Management Studies

Sub-Field: Generic Management

ISSUE DATE:

REVIEW DATE:

PURPOSE:

This unit standard would be of use for persons who have responsibility for measuring, reporting and improving organisational productivity.

People credited with this standard will be able to:

- Design a framework to collate data in an organisation related to factors influencing capital productivity.
- Measure efficiency and utilisation of capital.
- Assess the other operational factors that influence capital productivity.
- Assess the relative influence of each factor on capital productivity.
- Assess the relative effectiveness of capital.

LEARNING ASSUMED TO BE IN PLACE

It is assumed that learners commencing this unit standard are already competent in terms of the following outcomes or areas of learning :

- Recording and reporting at NQF Level 4
- Mathematical skills at NQF level 4
- Applying statistical techniques at NQF Level 4
- Applying financial management and accounting principles and techniques (including analysis of capital in tangible and intangible forms) at NQF level 4
- Applying basic business economic concepts and principles at NQF level 4
- The unit standard entitled, "**Measure, assess and relate the factors that influence labour productivity**"

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

Specific outcome 1: **Design a framework to collate data in an organisation related to factors influencing capital productivity**

Assessment criteria

1.1 The measurable factors that influence capital productivity are correctly identified

Range: Measurable factors include, but are not limited to, efficiency and utilisation.

1.2 Operational factors that influence capital productivity are correctly identified.

Range: Operational factors include, but are not limited to, purchasing, maintenance, position in depreciation cycle, design quality of capital assets, level of technology of capital assets and capital-related operational policies.

1.3 The sources of data related to material productivity within the organisation are correctly identified.

1.4 The framework facilitates the efficient and effective capture and interpretation of data and enables comparable measurements to improve decision-making.

Specific outcome 2: **Measure efficiency and utilisation of capital.**

Assessment criteria

2.1 Efficiency of capital is measured correctly.

2.2 Utilisation of capital is measured correctly.

Specific outcome 3: **Assess the other identified operational factors that influence capital productivity.**

Assessment criteria

3.1 The magnitude of each identified operational factor is correctly identified.

3.2 The assessment identifies the importance of the factors relative to each other and identifies the critical factors influencing capital productivity.

Specific outcome 4: **Assess the relative influence of each factor on capital productivity**

Assessment criteria

4.1 The assessment facilitates an agreed comparison of the impact of the different factors on capital productivity.

4.2 The assessment facilitates an agreed identification of the critical factors based on the comparison agreed upon.

Specific outcome 5: **Assess the effectiveness of capital**

Assessment criteria

5.1 Capital requirements are identified and interpreted.

5.2 The assessment establishes the extent of alignment of processes and systems with identified requirements.

5.3 The assessment establishes the extent of alignment of the capital requirements against end user requirements.

ACCREDITATION AND MODERATION;

1. Anyone assessing a learner against this unit standard must be registered as an assessor with the ETQA Productivity or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.
2. Any institution offering learning that will enable achievement of this unit standard or will assess this unit standard must be accredited as a provider with the ETQA for Productivity.
3. Moderation of assessment will be overseen by the ETQA for Productivity according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.
4. Therefore anyone wishing to be assessed against this unit standard may apply to be assessed by any assessment agency, assessor or provider institution which is accredited by the ETQA for Productivity.

NOTES:

CRITICAL CROSS-FIELD OUTCOMES:

The following examples illustrate some of the ways in which this unit standard supports critical cross-field outcomes:

1. Identify and solve problems by using critical and creative thinking by e.g. assessing the effectiveness of capital according to assessment criteria set for specific outcome 5.
2. Collect, analyse, organise and critically evaluate information by e.g. designing a framework to collate data in an organisation related to factors influencing capital productivity according to assessment criteria set for specific outcome 1.
3. Use science and technology effectively and critically by e.g. measuring efficiency and utilisation of capital according to assessment criteria set for specific outcome 2.
4. Demonstrate an understanding of the world as a set of related systems by e.g. designing a framework to collate data in an organisation related to factors influencing capital productivity according to assessment criteria set for specific outcome 1.

EMBEDDED KNOWLEDGE:

Knowledge considered to be critical evidence of competence is included in the assessment criteria explicitly, or can be inferred by performance. This includes:

- Basic industrial engineering (principles of factory layout, depreciation cycles, alternative applications of capital assets, line balancing)
- Models to measure efficiency, utilisation and effectiveness of capital
- Models that link and measure efficiency, utilisation and effectiveness of capital
- Factors influencing capital productivity.

TITLE: Measure, assess and relate the factors that influence material productivity

LEVEL: 5

CREDITS: 19

FIELD: Business, Commerce and Management Studies

Sub-Field: Generic Management

ISSUE DATE:

REVIEW DATE:

PURPOSE:

This unit standard would be of use for persons who have responsibility for measuring, reporting and improving organisational productivity.

People credited with this standard will be able to:

- Design a framework to collate data in an organisation related to factors influencing material productivity.
- Measure efficiency and utilisation of material.
- Assess the other operational factors that influence material productivity.
- Assess the relative influence of each factor on material productivity.
- Assess the relative effectiveness of material.

LEARNING ASSUMED TO BE IN PLACE:

It is assumed that learners commencing this unit standard are already competent in terms of the following outcomes or areas of learning:

- Recording and reporting at NQF Level 4
- Mathematical skills at NQF level 4
- Applying statistical techniques at NQF Level 4
- Applying financial management and accounting principles and techniques (including analysis of material in tangible and intangible forms) at NQF level 4
- Applying basic business economic concepts and principles at NQF level 4

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

Specific outcome 1: Design a framework to collate data in an organisation related to factors influencing material productivity

Assessment criteria

1.1 The quantifiable factors that influence material productivity are correctly identified.

Range: Quantifiable factors include efficiency, utilisation, on-site storage, materials handling, materials requirements planning, waste and supplier performance.

1.2 The qualitative operational factors that influence material productivity are correctly identified.

Range: *Qualitative operational factors include, but are not limited to, design specifications of material in relation to intended purpose, purchasing management (including supplier selection, compliance with material specifications and record keeping) and stock control (receiving, warehousing, issuing).*

1.3 The sources of data related to material productivity within the organisation are correctly identified.

1.4 The framework facilitates the efficient and effective capture and interpretation of data.

Specific outcome 2: Measure the quantifiable factors that influence material productivity

Assessment criteria

2.1 Efficiency of material is measured correctly.

Range: *Material efficiency comprises three aspects: correct material for correct intended use, production of scrap, correct use of material for what it was not intended.*

2.2 Utilisation of material is measured correctly.

Specific outcome 3: Assess the qualitative operational factors that influence material productivity.

Assessment criteria

3.1 The assessment correctly establishes the magnitude of each qualitative operational factor.

3.2 The assessment identifies the importance of the factors relative to each other and identifies the critical factors influencing material productivity.

Specific outcome 4: Assess the relative influence of each factor on material productivity

Assessment criteria

4.1 The assessment facilitates an agreed comparison of the impact of the different factors on material productivity

4.2 The assessment facilitates an agreed identification of the critical factors based on the comparison agreed upon.

Specific outcome 5: Assess the effectiveness of material

Assessment criteria

5.1 Material requirements are correctly identified and interpreted.

5.2 The assessment establishes the extent of alignment of processes and systems with identified requirements.

5.3 The assessment establishes the extent of alignment of the material requirements against end user requirements.

ACCREDITATION OPTIONS:

1. Anyone assessing a learner against this unit standard must be registered as an assessor with the ETQA for Productivity or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.
2. Any institution offering learning that will enable achievement of this unit standard or will assess this unit standard must be accredited as a provider with the ETQA for Productivity.

3. Moderation of assessment will be overseen by the ETQA for Productivity according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.
4. Therefore anyone wishing to be assessed against this unit standard may apply to be assessed by any assessment agency, assessor or provider institution which is accredited by the ETQA for Productivity.

NOTES:

Critical Cross-Field Outcomes:

The following examples illustrate some of the ways in which this unit standard supports critical cross-field outcomes:

1. Identify and solve problems by using critical and creative thinking by e.g. assessing the effectiveness of material according to assessment criteria set for specific outcome 5.
2. Collect, analyse, organise and critically evaluate information by e.g. designing a framework to collate data in an organisation related to factors influencing material productivity according to assessment criteria set for specific outcome 1.
3. Use science and technology effectively and critically by e.g. measuring efficiency and utilisation of material according to assessment criteria set for specific outcome 2.
4. Demonstrate an understanding of the world as a set of related systems by e.g. designing a framework to collate data in an organisation related to factors influencing material productivity according to assessment criteria set for specific outcome 1.

Embedded Knowledge:

Knowledge considered to be critical evidence of competence is included in the assessment criteria explicitly, or can be inferred by performance. This includes:

- Basic material management principles
- Models to measure efficiency, utilisation and effectiveness of material
- Models that link and measure efficiency, utilisation and effectiveness of material
- Factors influencing material productivity.

TITLE: Co-ordinate the improvement of productivity within a function

LEVEL: 4

CREDITS: 13

FIELD: Business, Commerce and Management Studies

Sub-Field: Generic Management

ISSUE DATE:

REVIEW DATE:

PURPOSE:

This unit standard is intended for all persons who are directly involved in the co-ordination of productivity reports and continuous improvement of productivity.

People credited with this standard will be able to:

- Analyse the measurable and non-measurable factors influencing productivity to identify the root causes of low productivity in a functional unit.
- Identify the interventions and develop plans to remove the identified root causes.
- Co-ordinate the implementation of interventions of various organisational units within the functional unit.
- Review the implementation of the interventions and set new targets on a on-going basis.

LEARNING ASSUMED TO BE IN PLACE:

It is assumed that learners commencing this unit standards are already competent in terms of:

- Communicate at NQF level 3
- Unit Standards entitled:
  - **Implement individual productivity improvement plan**
  - **Frame and implement an action plan to improve productivity within an organisational unit.**

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

Specific Outcome 1: Analyse the measurable and non-measurable factors influencing productivity to identify the root causes of low productivity in a functional unit.

Range: Measurable and non-measurable factors include wastage, efficiency, utilisation, absenteeism and labour turnover

Assessment criteria

1.1 Appropriate methods are selected to analyse the relationship between productivity measurements and factors influencing productivity.

Range: Methods include, but are not limited to, trend analysis, value analysis, Pareto analysis and cause and effect analysis.

1.2 Selected methods are correctly applied to interpret the relationship between productivity measurements and both measurable and non-measurable factors influencing productivity in order to identify the root causes of changes in productivity levels.
1.3 Root causes are correctly identified and classified as either controllable or not by the unit.

Range: Root causes include, but are not limited, to process-related factors, people factors, systems factors, workplace related problems, organisational policy, managerial factors and, external factors. Identify the interventions and develop plans to remove the identified root causes.

Specific outcome 2: Identify the interventions and develop plans to remove the identified root causes

Assessment criteria

2.1 Root causes outside the control of the unit, but within the control of the organisation are referred to the appropriate unit.
2.2 Appropriate interventions to remove identified controllable root causes are identified and plans are developed to remove the root causes in compliance with organisational policies and strategies.
2.3 Plans make provision for linkages with plans developed within other organisational units in order to promote local optima.

Specific outcome 3: Co-ordinate the implementation of interventions of various organisational units within the functional unit.

Range: Co-ordination is at first level management and contributes to the organisational productivity improvement strategy.

Assessment criteria

3.1 Objectives and standards to improve productivity are communicated to supervisors and team leaders within the functional unit in order to gain support
3.2 Specific responsibilities, objectives and milestones to improve productivity are allocated according to the plan.
3.3 Achievement of objectives is monitored according to the planned milestones.
3.4 Appropriate actions to maintain and motivate improved performance are taken on an ongoing basis.

Specific outcome 4: Review the implementation of the interventions and set new targets on an on-going basis.

Assessment criteria

4.1 Actual performance for each objective is evaluated against the set standards and appropriate changes to interventions are implemented.
4.2 Achievements by individuals and teams are acknowledged and appropriate incentives are administered.
4.3 Targets set are achievable and represent improved productivity.

ACCREDITATION AND MODERATION

1. Anyone assessing a learner against this unit standard must be registered as an assessor with the ETQA for Productivity or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

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NOTES:

Critical Cross-Field Outcomes:

The following examples illustrate some of the ways in which this unit standard supports critical cross-field outcomes:

1. Identify and solve problems by using critical and creative thinking by, e.g. identifying and planning necessary interventions to remove identified root causes
2. Work effectively with others as a member of a team by, e.g. co-ordinating the activities related to the removal of the identified root causes
3. Organise and manage oneself and one's activities responsibly and effectively by, e.g. planning necessary interventions to remove identified root causes.
4. Collect, analyse, organise and critically evaluate information by, e.g. analysing the measurable factors influencing productivity to identify the root causes of low productivity in an organisational unit
5. Communicate effectively by, e.g. communicating objectives and standards for the specific activities to improve productivity to members of the unit in order to gain support

Embedded Knowledge:

Knowledge considered to be critical evidence of competence is included in the assessment criteria explicitly, or can be inferred by performance. This includes:

- methods to analyse relationships between productivity measures and the measurement of the factors that influence productivity and their application
- methods to determine root causes of productivity changes and their application
- design of productivity improvement projects
- management of productivity improvement projects, including:
  - setting productivity objectives and milestones
  - productivity communication skills (productivity language)
  - characteristics of a productivity champion
- motivational and reinforcement models and their situational application.

TITLE:	**Develop holistic productivity improvement strategy and plans**
RANGE STATEMENT:	"Holistic" refers to all resources, processes and systems that affect the performance of the organisation
LEVEL:	6
CREDITS:	16
FIELD:	Business, Commerce and Management Studies
Sub-Field:	Generic Management
ISSUE DATE:	
REVIEW DATE:	

PURPOSE:

People credited with this standard will be able to develop a holistic strategy and plans for improving productivity of the organisation on a sustainable basis in order to enhance the organisation's competitiveness, nationally and globally.

In particular people will be able to:

- Identify the root causes for unacceptable levels of productivity within the organisation
- Identify priority areas for productivity improvement
- Develop a productivity improvement strategy
- Develop plans for implementing and evaluating the strategy in the identified priority areas.

LEARNING ASSUMED TO BE IN PLACE:

It is assumed that people starting to learn towards this standard have:

- Financial and productivity analyses skills at NQF level 5
- Facilitation skills at NQF level 5
- Communication skills at NQF level 4.

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

Specific outcome 1: **Identify the causes for unacceptable levels of productivity within the organisation.**

Assessment criteria

1.1 Information acquired is accurate, valid and relevant to productivity factors.

Range: Relevant information includes, but is not limited to, information on all systems, resources, processes and procedures within the organisation.

1.2 Input from relevant stakeholders is obtained.

1.3 Appropriate analysis techniques are applied to the information to identify the root causes for productivity levels correctly.

Range: Techniques include, but are not limited to, value-added analysis, cost-benefit analysis and Pareto analysis.

1.4 Findings are based on the analysis and validated with stakeholders.

1.5 Findings are documented clearly.
1.6 Duration and cost of analysis are within agreed organisational limits.

Specific outcome 2: **Identify priority areas for productivity improvement**

Assessment criteria

2.1 Priority areas are determined on the basis of cost-benefit and value-added analyses.
2.2 Priority areas identified are actionable within the organisation.

Specific outcome 3: **Develop a productivity improvement strategy.**

Assessment criteria

3.1 Input from relevant stakeholders is obtained.
3.2 The strategy adequately addresses the identified root causes of unacceptable productivity levels.
3.3 Specific and achievable objectives are identified and defined in measurable terms.
3.4 The potential impact of the strategy is defined.
3.5 The strategy is clearly documented according to organisational practices.
3.6 Approval of the strategy is obtained from appropriate authority.

Specific outcome 4: **Develop plans for implementing the strategy in the identified priority areas.**

Assessment criteria

4.1 Appropriate input from relevant stakeholders is obtained.
4.2 Implementation plans for achieving identified objectives are drawn up according to good project management practices.
4.3 Plans are clearly documented, agreed to and communicated to relevant role-players.

ACCREDITATION AND MODERATION:

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NOTES:

CRITICAL CROSS-FIELD OUTCOMES:

The following examples illustrate some of the ways in which this unit standard supports critical cross-field outcomes:

1. Identify and solve problems by using critical and creative thinking by e.g. identifying the causes for unacceptable levels of productivity within the organisation according to assessment criteria set for specific outcome 1.
2. Work effectively with others by e.g. obtaining input from relevant stakeholders according to assessment criteria 1.2 and 3.1.
3. Collect, analyse, organise and critically evaluate information by e.g. collecting and analysing information to identify the causes for unacceptable levels of productivity within the organisation according to assessment criteria set for specific outcome 1
4. Communicate effectively by e.g. according to assessment criterion 4.1 and 4.3.
5. Demonstrate an understanding of the world as a set of related systems by e.g. according to assessment 1.2,1.3 and 3.2.

EMBEDDED KNOWLEDGE:

- Knowledge and explanation of the development of strategy for an organisation.
- Knowledge and explanation is informed by the macro productivity measures.

TITLE: Measure, assess and relate the factors that influence labour productivity

LEVEL: 5

CREDIT: 34

FIELD: Business, Commerce and Management Studies

Sub-Field: Generic Management

ISSUE DATE:

REVIEW DATE:

PURPOSE:

This unit standard would be of use for persons who have responsibility for measuring, reporting and improving organisational productivity.
People credited with this standard will be able to:

- Design a framework to collate data in an organisation related to factors influencing labour productivity
- Measure efficiency, utilisation, absenteeism and labour retention
- Assess the other operational factors that influence labour productivity
- Assess the relative influence of each factor on labour productivity
- Assess the relative effectiveness of labour.

LEARNING ASSUMED TO BE IN PLACE:

It is assumed that learners commencing this unit standard are already competent in terms of the following outcomes or areas of learning:

- Recording and reporting at NQF Level 4
- Mathematical skills at NQF level 4
- Applying statistical techniques at NQF Level 4
- Applying financial accounting principles and techniques at NQF level 4
- Apply basic business economic concepts and principles at NQF level 4
- Understanding market principles
- Understanding elements of organisational effectiveness
- Understanding people behaviour in organisations

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

Specific outcome 1: Design a framework to collate data in an organisation related to identified factors influencing labour productivity

Assessment criteria

1.1 The measurable factors that influence labour productivity are correctly identified

Range: Measurable factors include, but are not limited to, efficiency, utilisation, absenteeism and , labour turnover.

1.2 Operational factors that influence labour productivity are correctly identified.

Range: Operational factors include, but are not limited to, training, staff competencies, communication, motivation, systems and procedures, grievances, work organisation, quality of management, interpersonal relations, provision of data and information.

1.3 The sources of data related to labour productivity within the organisation are correctly identified.

1.4 The framework facilitates the efficient and effective capture and interpretation of data and enables comparable measurements to improve decision making.

Specific outcome 2: Measure the measurable factors that influence labour productivity

Assessment criteria

2.1 Efficiency of labour is measured correctly

2.2 Utilisation of labour is measured correctly

2.3 Absenteeism is measured correctly

2.4 Labour retention is measured correctly.

Specific outcome 3: Assess the other identified operational factors that influence labour productivity.

Assessment criteria

3.1 The magnitude of each identified operational factor is correctly identified.

3.2 The assessment identifies the importance of the factors relative to each other and identifies the critical factors influencing labour productivity.

Specific outcome 4: Assess the relative influence of each factor on labour productivity

Assessment criteria

4.1 The assessment facilitates an agreed comparison of the impact of the different factors on labour productivity

4.2 The assessment facilitates an agreed identification of the critical factors based on the comparison agreed upon.

Specific outcome 5: Assess the internal effectiveness of labour

Assessment criteria

5.1 Internal requirements are identified and interpreted.

5.2 The assessment establishes the extent of alignment of processes and systems with identified requirements.

5.3 The assessment establishes the extent of alignment of the internal requirements against end user requirements.

ACCREDITATION AND MODERATION

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2. Any institution offering learning that will enable achievement of this unit standard or will assess this unit standard must be accredited as a provider with the ETQA for Productivity.
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NOTES:

Critical Cross-Field Outcomes:

The following examples illustrate some of the ways in which this unit standard supports critical cross-field outcomes:

1. Identify and solve problems by using critical and creative thinking by e.g. assessing the effectiveness of labour according to assessment criteria set for specific outcome 5.
2. Collect, analyse, organise and critically evaluate information by e.g. designing a framework to collate data in an organisation related to factors influencing labour productivity according to assessment criteria set for specific outcome 1.
3. Use science and technology effectively and critically by e.g. measuring efficiency and utilisation of labour according to assessment criteria set for specific outcome 2.
4. Demonstrate an understanding of the world as a set of related systems by e.g. designing a framework to collate data in an organisation related to factors influencing labour productivity according to assessment criteria set for specific outcome 1.

Embedded Knowledge:

Knowledge considered to be critical evidence of competence is included in the assessment criteria explicitly, or can be inferred by performance. This includes:

- Theory of work measurement, strategic resource allocation and throughput accounting
- Models to measure efficiency, utilisation and effectiveness of labour
- Models that link and measure efficiency, utilisation and effectiveness of labour
- Factors influencing labour productivity.

TITLE: Promote productivity improvement strategy.

LEVEL: 6

CREDITS: 15

FIELD: Business, Commerce and Management Studies

Sub-Field: Generic Management

ISSUE DATE:

REVIEW DATE:

PURPOSE:

This unit standard is intended for persons who are, or seek to be, responsible for promoting productivity in an organisation.

People credited with this standard will be able to:

- Promote productivity improvement as a long-term competitive strategy of the organisation.
- Nurture pro-active participation in the implementation of the organisational productivity improvement strategy and objectives.
- Monitor, evaluate and improve impact of the organisational promotion strategy.

LEARNING ASSUMED TO BE IN PLACE:

It is assumed that learners commencing this uni t standard are already competent in terms of the following outcomes or areas of learning:

- Communication at NQF level 5
- Applying principles of promotion strategies
- Applying facilitation skills at NQF level 5
- Developing productivity improvement strategy
- Making presentations to groups
- Explaining business economic concepts
- Unit Standards entitled:
  - **Co-ordinate the improvement of productivity within a function**
  - **"Measure value-added, multi factor and total factor productivity within an organisation.**

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

Specific outcome 1: **Promote productivity improvement as a competitive strategy of the organisation.**

Assessment criteria

1.1 The promotion strategy is aligned to the identified target group profiles and the organisation's competitive strategy.

1.2 The promotion strategy is developed in consultation with key stakeholders.

1.3 The promotion strategy provides for explanations of productivity concepts, general symptoms of insufficient productivity performance in the organisation and general steps.

1.4 Implementation of promotion strategy is planned according to best planning practice.

1.5 The promotion strategy is implemented according to plan.

1.6 Appropriate steps are taken to address concerns about productivity concepts.

Specific outcome 2: **Nurture pro-active participation in the implementation of the organisational productivity improvement strategy and objectives.**

Assessment criteria

2.1 Appropriate steps are taken to clarify departmental and individual responsibilities for productivity improvement.

2.2 Appropriate steps are taken to address concerns of individuals towards responsibilities.

Range: Concerns include, but are not limited to, emotional and conceptual concerns.

2.3 Appropriate participative structures are established.

2.4 Appropriate nurturing processes are planned, implemented and evaluated.

Range: Nurturing processes include, but are not limited to, information meetings, electronic communication, newsletters, posters, focus groups, induction, benchmarking, audio-visual presentations, award ceremonies and suggestion schemes.

Specific outcome 3: **Monitor, evaluate and improve impact of the organisational promotion strategy.**

Assessment criteria

3.1. Constructive steps are taken to ensure that information relevant to the promotion strategy is understood by organisational members.

3.2 Reactions to the promotion strategy are collected, analysed and evaluated in terms of the intended impact of the promotion plan.

3.3 The promotion strategy is adapted according to evaluation findings to achieve the intended impact.

ACCREDITATION AND MODERATION:

1. Anyone assessing a learner against this unit standard must be registered as an assessor with the ETQA for Productivity.
2. Any institution offering learning that will enable achievement of this unit standard or will assess this unit standard must be accredited as a provider with the ETQA for Productivity.
3. Moderation of assessment will be overseen by the ETQA for Productivity according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.
4. Therefore anyone wishing to be assessed against this unit standard may apply to be assessed by any assessment agency, assessor or provider institution which is accredited by the ETQA for Productivity.

NOTES:

CRITICAL CROSS-FIELD OUTCOMES:

The following examples illustrate some of the ways in which this unit standard supports critical cross-field outcomes:

1. Identify and solve problems by using critical and creative thinking by e.g. taking appropriate steps to address concerns about productivity concepts and responsibilities according to assessment criterion 1.7 and 2.2.
2. Work effectively with others as a member of a team by e.g. developing promotion strategy in consultation with key stakeholders according to assessment criterion 1.3.
3. Organise and manage oneself and one's activities responsibly and effectively by e.g. implementing promotion strategy according to plan (assessment criterion 1.6).
4. Demonstrate an understanding of the world as a set of related systems by e.g. aligning productivity improvement strategy with the organisation's competitive strategy (assessment criterion 1.2).

EMBEDDED Knowledge:

Knowledge considered to be critical evidence of competence is included in the assessment criteria explicitly, or can be inferred by performance. This includes:

- Knowledge and application of persuasion principles and processes to promoting productivity including the relationship between productivity and other economic indices (e.g. competitiveness, standard of living, CPI, PPI, GDP, etc.)
- Knowledge and explanation of the target group segmentation (e.g. demographics, individual and organisational culture, value systems, human behaviour, etc.)
- Knowledge and explanation of the participation principles and techniques.

TITLE: Measure and improve single factor productivity of all resources at a workstation

Range statement: Single factor productivity indicates the separate measures of labour, capital and material productivity.

LEVEL: 1

CREDITS: 12

FIELD: Business, Commerce and Management Studies

Sub-Field: Generic Management

ISSUE DATE:

REVIEW DATE:

PURPOSE:

This unit standard would be of use for persons who are in direct contact with resources and have a responsibility for measuring and improving the productivity of all resources at her/his workstation within an organisational unit.

People credited with this unit standard are able to:

- Measure single factor productivity
- Assess causes of the current levels of single factor productivity
- Plan the actions required to improve single factor productivity in conjunction with others
- Implement and evaluate the effectiveness of actions to improve single factor productivity

LEARNING ASSUMED TO BE IN PLACE:

It is assumed that people starting to learn towards this standard are able to:

- Communicate at ABET 3
- Apply mathematical skills at ABET 3

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

Specific Outcome 1: Measure single factor productivity and assess and identify causes of the current levels of single factor productivity

Assessment Criteria:

1.1 Single factor productivity is measured through a correct application of the output-input ratio.

Range: Where required outputs or inputs are converted to Rand value to facilitate the adding of various outputs or inputs.

1.2 The assessment identifies causes of unacceptable labour productivity in terms of factors such as absenteeism, non-availability of material and equipment, knowledge and skills.

1.3 The assessment identifies causes of unacceptable material productivity in terms of factors such as quality of material, material wastage, availability of material and optimal usage of material.

1.4 The assessment identifies causes of unacceptable capital productivity in terms of factors such as machine breakages, idling and feeding rate.

Range: Capital productivity refers to and is limited to machine productivity and the optimal use of other equipment.

Specific outcome 2: Plan the actions required to improve single factor productivity in conjunction with others

Range: The plan involves low-level decisions in a familiar environment involving repetitive tasks.

Assessment Criteria:

2.1 The plan outlines the causes and effects of unacceptable labour, material and capital productivity levels.
2.2 The plan defines the actions required to improve the productivity of all resources in conjunction with relevant co-workers.
2.3 The plan defines the roles and responsibilities of personnel.
2.4 The plan can be implemented and has the potential to remove the localised causes of unacceptable single factor productivity.

Specific outcome 3: Implement plans and evaluate the effectiveness of actions to improve single factor productivity

Assessment Criteria:

3.1 Actions are carried out in line with the plan. Contingencies are dealt with in a manner that contributes to improved productivity of all resources.
3.2 Actual improvements in productivity are established and compared to set targets. Actions are adjusted to ensure targets are achieved.

ACCREDITATION AND MODERATION:

1. Anyone assessing a learner against this unit standard must be registered as an assessor with the ETQA for Productivity or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.
2. Any institution offering learning that will enable achievement of this unit standard or will assess this unit standard must be accredited as a provider with the ETQA for Productivity.
3. Moderation of assessment will be overseen by the ETQA for Productivity according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.
4. Therefore anyone wishing to be assessed against this unit standard may apply to be assessed by any assessment agency, assessor or provider institution which is accredited by the ETQA for Productivity or by an ETQA that has a Memorandum of Understanding with the relevant ETQA.

NOTES:

Critical Cross-Field Outcomes:

The following examples illustrate some of the ways in which this unit standard supports critical cross-field outcomes:

1. Organise and manage oneself and one's activities responsibly and effectively by, e.g. applying selected models to measure productivity
2. Collect, analyse, organise and critically evaluate information by, e.g. identifying and selecting models to measure productivity
3. Communicate effectively by, e.g. explaining and motivating the selection of models to measure productivity
4. Use science and technology effectively and critically by, e.g. applying selected models to measure productivity.

Embedded Knowledge:

The following essential embedded knowledge will be assessed through assessment of the specific outcomes in terms of the stipulated assessment criteria:

- The concept of single factor productivity.
- Means of measuring single factor productivity.
- The knowledge and explanation of the output-input ratio regarding single factor productivity.
- Knowledge of factors that influence labour-, material- and capital productivity and an explanation of the relationship between the factors and the single factor productivity measures.
- Knowledge of planning and sequencing of activities.

Title:	**Frame and implement a team action plan to improve productivity within a section and team**
LEVEL:	2
CREDIT:	8
FIELD:	Business, Commerce and Management Studies
Sub-Field:	Generic Management
ISSUE DATE:	
REVIEW DATE:	

PURPOSE:

This unit standard is intended for persons working on a level equivalent to a team leader of a section within a section and team at an operational level.

People credited with this unit standard will be able to:

- Measure the factors that influence productivity within the section and team.
- Frame an activity plan to improve the factors that influence productivity within the section and team.
- Implement the action plans and evaluate the outcomes, to optimise productivity within the section and team.

LEARNING ASSUMED TO BE IN PLACE:

It is assumed that learners commencing with this Unit Standard will be competent in:

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

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

Specific outcome 1: Measure the factors that influence productivity within the section and team within the context of organisational unit plans.

Assessment criteria

1.1 Organisational unit plans are used to establish the current section and team productivity performance.

1.2 Measurable factors that influence productivity are measured correctly.

Range: Measurable factors are limited to the basic formulae of calculation and the causes thereof are found within the section and team

Specific outcome 2: Frame an activity plan to improve the factors that influence productivity within the section and team.

Assessment criteria:

2.1 The plan is based on an analysis of the causes and effects of unacceptable levels of the measurable factors that influence productivity.
2.2 Team members are involved to draw up a section/team plan.
2.3 Priorities are set to improve the measurable factors that influence productivity of all three resources.
2.4 The plan can be implemented and has the potential to remove the causes of unacceptable productivity levels within the section and team.

Specific outcome 3: Optimise productivity within the section and team by coordinating the implementation of the action plans and evaluating the outcomes

Assessment criteria:

3.1 The coordination of the plan is efficient and effective.
3.2 Tasks are allocated to team members as per the plan.
3.3 Actual improvements in productivity are established and compared to set targets.
3.4 Actions are adjusted to ensure targets are achieved.

ACCREDITATION AND MODERATION:

1. Anyone assessing a learner against this unit standard must be registered as an assessor with the ETQA for Productivity or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.
2. Any institution offering learning that will enable achievement of this unit standard or will assess this unit standard must be accredited as a provider with the ETQA for Productivity.
3. Moderation of assessment will be overseen by the ETQA for Productivity according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.
4. Anyone wishing to be assessed against this unit standard may apply to be assessed by any assessment agency, assessor or provider institution, which is accredited by the ETQA for Productivity.

NOTES:

Critical Cross-Field Outcomes:

The following examples illustrate some of the ways in which this unit standard supports critical cross-field outcomes:

1. Identify and solve problems by using critical and creative thinking (Specific Outcome 2)
2. Organise and manage oneself and one's activities responsibly and effectively (Specific Outcome 3
3. Collect, analyse, organise and critically evaluate information (Specific Outcome 2)
4. Communicate effectively (Specific Outcome 3)

Embedded Knowledge:

Knowledge considered to be critical evidence of competence is included in the assessment criteria explicitly, or can be inferred by performance. This includes:

- Knowledge and explanation of basic productivity concepts and applications.
- Explanation of benefits of improved productivity.
- Knowledge and explanation of the measurable factors that influence productivity within the section/team.
- Knowledge of team problem solving techniques.
- Understand the influence of the measurable factors on section and team productivity
- Understand the influence of the individuals on the measurable factors that influence productivity.
- Knowledge and explanation of planning techniques on the operational level of a section/team.

TITLE: Frame and implement an action plan to improve productivity within an organisational unit

LEVEL: 3

CREDITS: 10

FIELD: Business, Commerce and Management Studies

Sub-Field: Generic Management

ISSUE DATE:

REVIEW DATE:

PURPOSE:

This unit standard is intended for all persons working as a supervisor in an organisational unit with the responsibility of measuring, improving and reporting on the productivity of that organisational unit.

People credited with this unit standard will be able to:

- Measure current levels of Single Factor Productivity and the factors that influence productivity within the organisational unit.
- Frame an activity plan to improve productivity within the organisational unit.
- Implement the action plan and evaluate the outcomes and effects of the action plan, to optimise productivity within the organisational unit.

LEARNING ASSUMED TO BE IN PLACE

It is assumed that learners starting to learn towards this unit standard are already competent in:

- The Unit Standard entitled, "**Frame and implement a team action plan to improve productivity within an organisational unit**"
- Communication skills on NQF 2
- Mathematical skills on NQF 2.

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

Specific outcome 1: Measure current levels of Single Factor Productivity and the factors that influence productivity within the organisational unit.

Assessment criteria

1.1 The functional plan is related to the single factor productivity levels of the organisational unit.

1.2 Measurable factors that influence productivity are measured correctly.

Range: Measurable factors are limited to the basic formulae of calculation and the causes thereof are found within the organisation

Specific outcome 2: Frame an activity plan to improve productivity within the organisational unit

Assessment criteria:

2.1 The plan is based on an analysis of the causes and effects of unacceptable labour, material and capital productivity.
2.2 Team leaders are involved to draw up a plan and set priorities to improve the productivity of all three resources
2.3 Priorities are set to improve the measurable factors that influences productivity of all three resources.
2.4 The plan can be implemented and has the potential to remove the causes of unacceptable productivity levels within the operational unit.

Specific outcome 3: Optimise productivity within the organisational unit by coordinating the implementation of the action plans and evaluating the outcomes

Assessment criteria:

3.1 The coordination of the plan is efficient and effective across the various sections within the organisational unit.
3.2 Tasks are allocated to team members as per the plan.
3.3 Actual improvements in productivity are established and compared to set targets.
3.4 Actions are adjusted to ensure targets are achieved.

ACCREDITATION AND MODERATION:

1. Anyone assessing a learner against this unit standard must be registered as an assessor with the ETQA for Productivity or an ETQA with a Memorandum of Understanding with the relevant ETQA.
2. Any institution offering learning that will enable achievement of this unit standard or will assess this unit standard must be accredited as a provider with the ETQA for Productivity.
3. Moderation of assessment will be overseen by the ETQA for Productivity according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.
4. Therefore, anyone wishing to be assessed against this unit standard may apply to be assessed by any assessment agency, assessor or provider institution, which is accredited by the ETQA for Productivity or with an ETQA which has a Memorandum of Agreement with the ETQA for Productivity.

NOTES

Critical Cross-Field Outcomes:

The following examples illustrate some of the ways in which this unit standard supports critical cross-field outcomes:

1. Identify and solve problems by using critical and creative thinking (Specific outcome 2)
2. Work effectively with others as a member of a team (Specific outcome 3)
3. Organise and manage oneself and one's activities responsibly and effectively (Specific outcome 3)
4. Collect, analyse, organise and critically evaluate information (Specific outcome 1)
5. Communicate effectively (Specific outcome 3

Embedded Knowledge:

Knowledge considered to be critical evidence of competence is included in the assessment criteria explicitly, or can be inferred by performance. This includes:

- Knowledge and explanation of basic productivity concepts and applications.
- Explanation of benefits of improved productivity.
- Knowledge and explanation of the measurable factors that influence productivity.
- Knowledge and explanation of cause and effect analysis.
- Understand the influence of the various sections, in terms of single factor productivity and measurable factors on organisational unit productivity.
- Knowledge and explanation elementary planning techniques.

TITLE: Prepare and communicate a productivity improvement plan for a function.

RANGE STATEMENT: Functional unit comprises a 'full function' such as marketing, operations of a small, medium or micro enterprise.

LEVEL: 5

CREDITS: 26

FIELD: Business, Commerce and Management Studies

Sub-Field: Generic Management

ISSUE DATE:

REVIEW DATE:

PURPOSE:

This unit standard is intended for managers of functional units.

People credited with this standard will be able to:

- analyse the productivity performance of all resources to identify productivity improvement constraints and opportunities within the functional unit in the context of the organisational productivity improvement strategy;.
- formulate productivity improvement plans for the functional unit.
- communicate outcomes of the productivity analysis and identified improvement opportunities to all stakeholders within the functional unit.

LEARNING ASSUMED TO BE IN PLACE:

It is assumed that learners commencing this unit standard are already competent in terms of the following outcomes or areas of learning :

- Applying systems thinking to the organisation
- Applying causal analysis
- Communication at NQF level 5
- Applying facilitation skills at NQF level 5
- Applying project planning principles.
- Unit standards entitled:
  - **Measure, assess and relate the factors that influence material productivity**
  - **Measure, assess and relate the factors that influence capital productivity**
  - **Measure value-added, multi factor and total factor productivity within an organisation**
  - **Co-ordinate the improvement of productivity within a function**

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

Specific outcome 1: **Analyse the productivity performance of all resources to identify productivity improvement constraints and opportunities within the functional unit**

Range: in the context of the organisational productivity improvement strategy

Assessment criteria

1.1 All stakeholders are identified and involved in the analysis and identification of opportunities for improvement.
1.2 Reliable measurements of productivity of all resources are obtained and analysed.
1.3 The gap between productivity objectives in the organisational productivity improvement strategy and current productivity performance is clearly defined.
1.4 Constraints on the functional unit's current productivity performance are correctly identified and clearly defined.
1.5 Productivity improvement opportunities are evaluated in terms of their alignment with the organisational productivity improvement strategy.
1.6

Specific outcome 2: **Formulate productivity improvement plans for the functional unit.**

Assessment criteria

2.1 Productivity improvement objectives are clear and achievable.
2.2 Indicators for achieving objectives are identified and measurable.
2.3 Activities are clearly defined within a specified time frame, and responsibilities are assigned in line with key skill areas.
2.4 Required resources and support systems are identified and budgeted for.
2.5 The plan is flexible to accommodate contingencies.
2.6 Constructive steps are followed to secure agreements to the plan from stakeholders.
2.7 The plan is submitted to the relevant person for approval and authorisation.
2.8 Review measures are planned for the evaluation of the productivity improvement plan.

Specific outcome 3: **Communicate outcomes of the productivity analysis and identified improvement opportunities to all stakeholders within the functional unit.**

Assessment criteria

3.1 All the results of the analysis are communicated to all identified stakeholders.
3.2 The manner of communication contributes to understanding and commitment to improvement.
3.3 Measures are put in place to analyse the reaction of stakeholders and adjustments are made.

ACCREDITATION AND MODERATION:

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4. Therefore anyone wishing to be assessed against this unit standard may apply to be assessed by any assessment agency, assessor or provider institution, which is accredited by the ETQA for Productivity.

NOTES

CRITICAL CROSS-FIELD OUTCOMES:

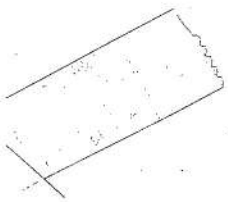
The following examples illustrate some of the ways in which this unit standard supports critical cross-field outcomes:

1. Identify and solve problems by using critical and creative thinking by e.g. formulating productivity improvement plan according to assessment criteria set for specific outcome 1.
2. Work effectively with others as a member of a team by e.g. promoting commitment to improvement according to assessment criterion 2.6
3. Organise and manage oneself and one's activities responsibly and effectively by e.g. formulating productivity improvement plan according to assessment criteria set for specific outcome 2.
4. Collect, analyse, organise and critically evaluate information by e.g. analysing the productivity performance of all resources according to assessment criteria set for specific outcome 1.
5. Communicate effectively by e.g. communicating outcomes of the productivity analysis according to assessment criteria set for specific outcome 3.
6. Demonstrate an understanding of the world as a set of related systems by e.g. formulating productivity improvement plan according to assessment criteria set for specific outcome 2.

EMBEDDED KNOWLEDGE:

Knowledge considered to be critical evidence of competence is included in the assessment criteria explicitly, or can be inferred by performance. This includes:

- Understand, analyse and explain the interpretation of productivity measurements
- Understand, analyse and explain the productivity gap
- Understand, analyse and explain the constraints on productivity
- Apply productivity improvement though the identification of opportunities and developing a productivity unit improvement plan in line the strategic plan of the organisation.



TITLE: Measure value-added, multi factor and total factor productivity within an organisation

LEVEL: 5

CREDITS: 23

FIELD: Business, Commerce and Management Studies

Sub-Field: Generic Management

ISSUE DATE:

REVIEW DATE:

PURPOSE:

This unit standard would be of use for persons who have responsibility for measuring, reporting and improving organisational productivity.

People credited with this standard will be able to measure value added, multi-factor and total factor productivity in an organisation.

LEARNING ASSUMED TO BE IN PLACE:

It is assumed that learners commencing this unit standard are already competent in terms of the following outcomes or areas of learning:

- Unit standard entitled, **"Co-ordinate the improvement of productivity within a function"**
- Mmathematical skills at NQF level 4
- Applying statistical techniques at NQF Level 4
- Applying financial accounting principles and techniques at NQF level 4
- Applying basic business economic concepts and principles at NQF level 4

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

Specific outcome 1: Measure value-added productivity

Range: Value added includes, but is not limited to, value added per employee, per Rand of capital, labour cost competitiveness, capital per employee, sales per employee, profitability, profit per Rand of sales and profit to value added ratio.

Assessment criteria

1.1 Different methods of measuring value-added productivity are identified and explained in terms of the various types, approaches and applications.

Range: Methods include, but are not limited to, addition and subtraction methods.

1.2 Motivations are provided for the selection of a specific model in terms of the characteristics of the organisation.

1.3 Measurement is carried out through a correct application of the chosen value added models.

Specific outcome 2: **Measure multi-factor productivity**

Assessment criteria

2.1 A method of measuring multi-factor productivity is identified and explained in terms of the process and the various factors that influence it.

Range: Various factors include, but are not limited to, factors such as quality of inputs, technical progress, improvements in the workforce, improvements in management practices, economies of scale, variations in capacity utilisation and short to medium term factors such as weather.

2.2 Motivations are provided for the selection of a specific method in terms of the characteristics of the organisation.

2.3 Measurement is carried out through a correct application of the chosen multi-factor productivity method.

Specific outcome 3: **Measure total factor productivity.**

Assessment criteria

3.1 Different methods of measuring total-factor productivity are identified and explained in terms of the various types, approaches and applications.

Range: Various types and approaches include, but are not limited to, value added and , output –input ratio.

3.2 Motivations are provided for the selection of a specific method in terms of the characteristics of the organisation.

3.3 Measurement is carried out through a correct application of the chosen total factor productivity method.

ACCREDITATION AND MODERATION:

1. Anyone assessing a learner against this unit standard must be registered as an assessor with the ETQA for Productivity or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.
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4. Therefore anyone wishing to be assessed against this unit standard may apply to be assessed by any assessment agency, assessor or provider institution, which is accredited by the ETQA for Productivity.

NOTES:

CRITICAL CROSS-FIELD OUTCOMES:

The following examples illustrate some of the ways in which this unit standard supports critical cross-field outcomes:

1. Organise and manage oneself and one's activities responsibly and effectively by e.g. applying selected models to measure productivity according to assessment criteria 1.3-1.6, 2.2 and 3.3.
2. Collect, analyse, organise and critically evaluate information by e.g. identifying and selecting models to measure productivity according to assessment criteria 1.1, 1.2, 2.1, 3.1 and 3.2.

3. Communicate effectively by e.g. explaining and motivating my selection of models to measure productivity according to assessment criteria 1.1, 1.2, 2.1, 3.1 and 3.2.
4. Use science and technology effectively and critically by e.g. applying selected models to measure productivity according to assessment criteria 1.3 - 1.6, 2.2 and 3.3.

EMBEDDED KNOWLEDGE:

Knowledge considered to be critical evidence of competence is included in the assessment criteria explicitly, or can be inferred by performance. This includes:

- Theories and methods to measure value added
- Theory and methods to measure multi-factor productivity
- Theories and methods to measure total factor productivity
- Relation between purpose for the measure and the method selected.

No. 900 **5 July 2002**

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

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

Manufacturing and Assembly

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

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

Comment on the unit standards should reach SAQA at the address ***below and no later than 5 August 2002.*** All correspondence should be marked **Standards Setting – SGB for Manufacturing and Assembly** and addressed to

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

pp **SAMUEL B.A. ISAACS**
EXECUTIVE OFFICER

National Certificate in Food and Beverage Manufacturing Technology: Yeast Manufacturing Technologist NQF 3

Field: Manufacturing, Engineering and Technology - NSB 06
Sub-field: Manufacturing and Assembly
Level: 3
Credit: 130
Issue date:
Review date:

Purpose of the qualification

A person acquiring this qualification will be able to manufacture safe, quality assured wet or dry yeast by operating, controlling and maintaining a yeast manufacturing line, from the raw materials until the final product is packed.
This qualification will contribute to the full development of the learner within the food and beverage processing environment by providing recognition, further mobility and transportability within the field of manufacturing and assembly. The skills, knowledge and understanding demonstrated within this qualification are essential for social and economic transformation and contribute to the upliftment and economic growth within the food and beverage processing and manufacturing environment.

Access to the qualification

Open access.

Learning assumed to be in place

A knowledge, comprehension and application of language, mathematics, natural science and technology principles at NQF levels 1 and 2.

Exit level outcomes

Qualifying learners can:

Exit level 1: Maintain food safety, good manufacturing practices and quality assurance practices in a food manufacturing environment.

Associated assessment criteria

- Apply knowledge and comprehension of occupational health, safety and environmental legislation relevant to the food manufacturing industry according to standard health and safety principles.
- Apply knowledge and comprehension of safety practices and procedures during food manufacturing according to standard safety principles.
- Apply knowledge and comprehension of microbiological principles in a food manufacturing environment.
- Monitor and control quality assurance practices in a food manufacturing environment according to standard operating procedures.

Exit level 2: Manufacture and pack wet yeast.

Associated assessment criteria

- Mix or blend food raw materials for processing by using automated equipment according to standard operating procedures.
- Clarify a liquid food product by centrifugal force according to standard operating procedures.
- Sterilise or pasteurise a liquid food product by means of direct steam injection technology according to standard operating procedures.
- Inoculate and ferment a liquid food product with a yeast culture and control the process according to standard operating procedures.
- Separate a liquid food product in a centrifugal separator according to standard operating procedures.
- Operate and control the rotary vacuum filtering or filter pressing of a liquid food product according to standard operating procedures.
- Operate and control the forming and wrapping of brick or cube shaped food products according to standard operating procedures.

Exit level 3: Manufacture and pack dry yeast.

Associated assessment criteria

- Mix or blend food raw materials for processing by using automated equipment according to standard operating procedures.
- Clarify a liquid food product by centrifugal force according to standard operating procedures.
- Sterilise or pasteurise a liquid food product by means of direct steam injection technology according to standard operating procedures.
- Inoculate and ferment a liquid food product with a yeast culture and control the process according to standard operating procedures.
- Separate a liquid food product in a centrifugal separator according to standard operating procedures.
- Operate and control the rotary vacuum filtering or filter pressing of a liquid food product according to standard operating procedures.
- Dry a liquid food product by means of fluidised bed or in-drum drying according to standard operating procedures.
- Operate and control the forming, filling and sealing of plastic sachets for dry yeast under modified atmosphere conditions according to standard operating procedures, or pack dry yeast under vacuum according to standard operating procedures.

Critical cross-field outcomes

Critical cross-field outcomes have been addressed by the exit level outcomes as follows:

Critical cross-field outcomes	Evident in exit level outcome
During the manufacturing of yeast, qualifying learners can:	
1. Identify and solve problems in which response displays that responsible decisions, using critical and creative thinking, have been made by:	
• Applying knowledge and comprehension of health and safety practices,	1
• Monitoring and controlling quality assurance practices,	1
• Identifying and solving problems during processing and manufacturing.	2, 3
2. Work effectively with others as a member of a team, group, organisation or community by:	
• Applying team-work to monitor and control quality assurance practices,	1
• Co-ordinating one's work with that of others in the direct surrounding area.	2, 3
3. Organise and manage oneself and one's activities responsibly and effectively by:	
• Planning one's activities.	2, 3
4. Collect, analyse, organise and critically evaluate information by:	
• Monitoring and controlling quality assurance practices,	1
• Taking samples and evaluating the results in order to determine the efficiency of certain processing steps, as well as to monitor the process.	2, 3
5. Communicate effectively by using mathematical and/or language skills in the modes of oral and/or written presentations by:	
• Keeping records and noting results.	2, 3
6. Use science and technology effectively and critically, showing responsibility towards the environment and health of others by:	
• Working according to health and safety regulations,	1
• Working with technologically advanced food processing equipment according to SOP.	2, 3
7. Demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation by:	
• Monitoring and controlling quality assurance practices,	1
• Identifying and solving problems during processing and manufacturing.	2, 3
8. Contribute to the full personal development of each learner and the social and economic development of the society at large by:	
• Maintaining food safety, good manufacturing practices and quality assurance practices in a food manufacturing environment,	1
• Manufacturing and packaging wet yeast according to SOP,	2
• Manufacturing and packaging dry yeast according to SOP.	3

International comparability

Benchmarking was done against the NVQ from Britain, SVQ from Scotland as well as Australian and New Zealand qualifications. International comparability could be found for a qualification on this level. On the New Zealand Qualifications Authority Framework a National Certificate in Food and Related Processing level 3 could be found to support this qualification.

Integrated assessment

The applied competence (practical, foundational and reflexive competencies) of this qualification will be achieved if the learner is able to manufacture safe, quality assured wet or dry yeast by operating, controlling and maintaining a yeast manufacturing line, from the raw materials until the final product is packed.

The identifying and solving of problems, team work, organising one-self, the using of applied science, the implication of actions and reactions in the world as a set of related systems must be assessed during any combination of practical, foundational and reflexive competencies assessment methods and tools to determine the whole person development and integration of applied knowledge and skills.

Applicable assessment tool(s) must be used to establish the foundational, reflexive and embedded knowledge to problem solving and application of the world as a set of related systems within the processing environment.
A detailed portfolio of evidence is required to proof the practical, applied and foundational competencies of the learner.
Assessors and moderators should develop and conduct their own integrated assessment by making 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.
Unit standards in the qualification must be used to assess specific and critical cross-field outcomes. During integrated assessments the assessor should make use of formative and summative assessment methods and should assess combinations of practical, applied, foundational and reflexive competencies.

Recognition of prior learning

This qualification may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience.

Articulation possibilities

This qualification will enable the qualifying learner to progress to learning for other national certificates in food and beverage processing on NQF 3 since the exit level outcome "Maintain food safety, good manufacturing practices and quality assurance practices in a food manufacturing environment", as well as the unit standards on supply chain management, business principles and first line maintenance are part of all the current national certificates in food and beverage processing on NQF 3.

This qualification provides entry into qualifications in food and beverage manufacturing supervision, food and beverage quality control and assurance, food and beverage manufacturing management and food and beverage process artisan.

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 ETQA.
- Any institution offering learning that will enable the achievement of this qualification must be accredited as a provider with the relevant ETQA.
- Assessment and moderation of assessment will be overseen by the relevant ETQA according to the ETQA 's policies and guidelines for assessment and moderation; in terms of agreements reached around assessment and moderation between ETQAs (including professional bodies); and in terms of the moderation guideline detailed immediately below.
- Moderation must include both internal and external moderation of assessments at exit points of the qualification, unless ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described both in individual unit standards, exit level outcomes as well as the integrated competence described in the qualification.

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

Criteria for registration of assessors

For an applicant to register as an assessor, the following are essential:

- The applicant needs well-developed interpersonal skills, as well as subject matter and assessment experience.
- The applicant needs to be competent in the planning and conducting of assessment of learning outcomes as described in the unit standard "Plan and conduct assessment of learning outcomes" at NQF level 5. The subject matter experience must be well developed within the field of wet and dry yeast manufacturing.
- The applicant should have a similar qualification than this one, with a minimum of 12 months field experience after he/she has completed the qualification or,
- A food science and technology qualification on NQF level 6 or higher, with a minimum of 12 months field experience after he/she has completed the qualification.
- The subject matter experience of the applicant can be established by recognition of prior learning.
- The assessor needs to be registered with the appropriate Education and Training Quality Assurance Body.
- Detailed documentary proof of educational qualification, practical training undergone, and experience gained by the applicant must be provided (portfolio of evidence).

National Certificate in Food and Beverage Manufacturing Technology: Yeast Manufacturing Technologist NQF 3 — 130 credits

Fundamental	NLRD No	Level	Credits	Core	NLRD No	Level	Credits
Field of Communication and Language				Demonstrate an understanding of occupational health, safety and environmental legislation relevant to the food or beverage environment.	8762	2	4
Accommodate audience and context needs in oral communication.		3	5	Mix or blend food raw materials for processing using automated equipment.	8766	2	4
Interpret and use information from texts.		3	5	Clarify or bactofuge a liquid food product by centrifugal force.	9150	3	5
Write texts for a range of communicative context.	8964	3	5	Demonstrate an understanding of food or beverage safety practices and procedures in a food or beverage manufacturing environment.	9042	3	7
Use language and communication in an occupational learning programmes.	8973	3	5	Sterilise or pasteurise a liquid food product using direct steam injection technology.		3	8
Field of Physical, Mathematical, Computer and Life Sciences				Apply and control yeast fermentation of a liquid food product.		3	6
Demonstrate understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations.		3	2	Separate liquids using a centrifugal separator.		3	5
Use mathematics to investigate and monitor the financial aspects of personal and business issues.	8983	3	5	Operate and control a rotary vacuum filter or filter press operation for liquid food products.		3	7
Investigate life and work related problems using data and probabilities.		3	5	Apply microbiological principles in a food or beverage environment.	9147	3	6
Measure, estimate and calculate physical quantities and explore, describe and represent, interpret and justify geometrical relationships in two and three-dimensional space relevant to the life or workplace of the community.	9008	3	4	Monitor and control quality assurance practices in a food or beverage manufacturing environment.	8902	3	4
Demonstrate knowledge of introductory principles of chemistry and physics.	9122	2	4	Apply first line maintenance on food or beverage processing equipment.		3	10
				Demonstrate an understanding of supply chain management.		3	3
				Demonstrate an understanding of introductory business principles.		3	4
Total available credits			**40**	**Total available credits**			**73**

Electives (Choose a minimum of 17 credits)	NLRD no	Level	Credits
Pack a food product under vacuum.	9111	1	1
Operate and control the forming and wrapping of a brick or cube shaped food product.	9132	2	10
Collate and shrink-wrap packaged products using automated wrapping equipment.	9136	2	4
Store and route food materials and products.	8804	3	8
Freeze or chill a food product.	8807	3	8
Dehydrate food products.	8825	3	10
Operate and control the forming, filling and sealing of plastic sachets or bags for food or beverage products under modified atmosphere conditions.	9056	3	15
Demonstrate an understanding of the relationship between micro-organisms and food spoilage.	8870	4	8

UNIT STANDARDS IN NATIONAL CERTIFICATE IN FOOD AND BEVERAGE MANUFACTURING TECHNOLOGY: YEAST MANUFACTURING TECHNOLOGIST NQF 3

UNIT STANDARDS ON NQF LEVEL 1

Title 1: Pack a food product under vacuum (Registered, Dairy SGB).

UNIT STANDARDS ON NQF LEVEL 2

Title 1: Demonstrate an understanding of occupational health, safety and environmental legislation relevant to the food or beverage environment (Registered, Food SGB).

Title 2: Mix or blend food raw materials for processing using automated equipment (Registered, Food SGB).

Title 3: Operate and control the forming and wrapping of a brick or cube shaped food product (Registered, Dairy SGB).

Title 4: Collate and shrink-wrap packaged products using automated wrapping equipment (Registered, Dairy SGB).

Title 5: Demonstrate knowledge of introductory principles of chemistry and physics (Registered, Dairy SGB).

UNIT STANDARDS AT NQF LEVEL 3

Title 1: Clarify or bactofuge a liquid food product by centrifugal force (Registered, Dairy SGB).
Title 2: Demonstrate an understanding of food or beverage safety practices and procedures in a food or beverage manufacturing environment (Registered, Food SGB).
Title 3: Sterilise or pasteurise a liquid food product using direct steam injection technology (To be submitted for registration).
Title 4: Apply and control yeast fermentation of a liquid food product (To be submitted for registration).
Title 5: Separate liquids using a centrifugal separator (Registered, Dairy SGB).
Title 6: Operate and control a rotary vacuum filter or filter press operation for liquid food products (To be submitted for registration).
Title 7: Apply microbiological principles in a food or beverage environment (Registered, Dairy SGB).
Title 8: Monitor and control quality assurance practices in a food or beverage manufacturing environment (Registered, Food SGB).
Title 9: Apply first line maintenance on food or beverage processing equipment (To be sourced from NSB 06).
Title 10: Demonstrate an understanding of supply chain management (To be sourced from NSB 11).
Title 11: Demonstrate an understanding of introductory business principles (To be sourced from NSB 03).
Title 12: Store and route food materials and products (Registered, Food SGB).
Title 13: Freeze or chill a food product (Registered, Food SGB).
Title 14: Dehydrate food products (Registered, Food SGB).
Title 15: Operate and control the forming, filling and sealing of plastic sachets or bags for food or beverage products under modified atmosphere conditions (To be submitted for registration).
Title 16: Accommodate audience and context needs in oral communication (Registered, NSB 04).
Title 17: Interpret and use information from texts (Registered, NSB 04).
Title 18: Write texts for a range of communicative context (Registered, NSB 04).
Title 19: Use language and communication in an occupational learning programme (Registered, NSB 04).
Title 20: Demonstrate understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations (Registered, NSB 10).
Title 21: Use mathematics to investigate and monitor the financial aspects of personal and business issues (Registered, NSB 10).
Title 22: Investigate life and work related problems using data and probabilities (Registered, NSB 10).
Title 23: Measure, estimate and calculate physical quantities and explore, describe and represent, interpret and justify geometrical relationships in two and three-dimensional space relevant to the life or workplace of the community (Registered, NSB 10).

UNIT STANDARDS AT NQF LEVEL 4

Title 1: Demonstrate an understanding of the relationship between micro-organisms and food spoilage (Registered, Food SGB).

UNIT STANDARDS AND SPECIFIC OUTCOMES IN NATIONAL CERTIFICATE IN FOOD AND BEVERAGE MANUFACTURING TECHNOLOGY: YEAST MANUFACTURING TECHNOLOGIST NQF 3

UNIT STANDARDS AT NQF LEVEL 3

1. TITLE:	**Sterilise or pasteurise a liquid food product using direct steam injection technology.**
Specific outcome 1.1:	Demonstrate knowledge of direct steam sterilisation or pasteurisation of liquid food products.
Specific outcome 1.2:	Prepare for direct steam sterilisation or pasteurisation of a liquid food product.
Specific outcome 1.3:	Sterilise or pasteurise a liquid food product using direct steam injection.
Specific outcome 1.4:	Perform shut down procedures.
2. TITLE:	**Apply and control yeast fermentation of a liquid food product.**
Specific outcome 2.1:	Demonstrate knowledge of yeast fermentation of liquid food products.
Specific outcome 2.2:	Prepare to inoculate and ferment a liquid food product by using yeast.
Specific outcome 2.3:	Inoculate and ferment a liquid food product by using yeast.
Specific outcome 2.4:	Perform end of fermentation procedures.
3. TITLE:	**Operate and control a rotary vacuum filter or filter press operation for liquid food products.**
Specific outcome 3.1:	Demonstrate knowledge of rotary vacuum filter or filter press operations for liquid food products.
Specific outcome 3.2:	Prepare for filtration of a liquid food product using a rotary vacuum filter or filter press.
Specific outcome 3.3:	Filter a liquid food product using a rotary vacuum filter or filter press.
Specific outcome 3.4:	Perform end of rotary vacuum filtering or filter pressing procedures.
4. TITLE:	**Operate and control the forming, filling and sealing of plastic sachets or bags for food or beverage products under modified atmosphere conditions.**
Specific outcome 4.1:	Demonstrate knowledge of modified atmosphere packaging (MAP) of food or beverage products in plastic sachets or bags.
Specific outcome 4.2:	Prepare to pack a food or beverage product under modified atmosphere conditions in plastic sachets or bags.
Specific outcome 4.3:	Pack a food or beverage product under modified atmosphere conditions in plastic sachets or bags.
Specific outcome 4.4:	Perform end of packaging procedures.

No. 901 **5 July 2002**

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In order to proceed with the recognition of Standards Generating Bodies in terms of Government Regulations 19(1)(c) and 22(2) of 28 March 1998, National Standards Body 08, Law, Military Science and Security, invites public comment with respect to *the acceptability of the nominees and the representativeness of the key education and training stakeholder interest groups* listed as SGB applicants below.

In addition, the NSB invite submissions from interested parties wishing to serve on such an SGB. Interested parties should take note of the section on SGB Information below.

All nominations/ applications should be accompanied by curricula vitae.

More information regarding this application may be obtained on the SAQA website or from the SAQA offices.

Comment should reach the NSB at the address below ***by not later than 5 August 2002.*** All correspondence should be marked ***SGB Formation – NSB 08, Special Combat Capabilities*** and be addressed to:

The Director: Standards Setting and
Development
SAQA
Attention: Mr. D Mphuthing
Postnet Suite 248
Private Bag X06
Waterkloof
0145
or faxed to 012 - 482 0992

SGB INFORMATION

As a necessary step in the development and implementation of the National Qualifications Framework, The National Standards Bodies are briefed [regulation 19(1)(c) of 28 March 1998] to recognise or establish Standards Generating Bodies (SGBs).
SGBs shall:

a. generate standards and qualifications in accordance with the Authority requirements in identified sub-fields and levels;
b. update and review standards;
c. recommend standards and qualifications to National Standards Bodies;
d. recommend criteria for the registration of assessors and moderators or moderating bodies; and
e. perform such other functions as may from time-to-time be delegated by their National Standards Body.

Any bodies wishing to nominate representatives, make application to serve on, or make any other submission with regard to the above SGB should note the following information.

SGBs should be composed of organisations, which shall be key education and training stakeholder interest groups and experts in the sub-field. The NSB, when making its final decisions will have due regard for, among other things, *'the need for representativeness and equity, redress and relevant expertise in terms of the work of the SGBs.'*

Organisations proposing to nominate persons to SGBs should be sensitive to the need for ***equity*** and ***redress***, and shall nominate persons who-

(a) will be able to consider issues of productivity, fairness, public interest and international comparability as related to education and training in the sub-field;
(b) enjoy credibility in the sub-field in question, who enjoy respect; have the necessary expertise and experience in the sub-field and have the support or backing of the nominating body;
(c) are able to advocate and mediate the needs and interests of all levels within the sub-field covered by the Standards Generating Body;
(d) are able to exercise critical judgement at a high level; and
(e) are committed to a communication process between the Standards Generating Body, the National Standards Body and the Constituency.

PUBLIC NOTICE BY NSB 08, LAW, MILITARY SCIENCE AND SECURITY 0F THE INTENTION TO ESTABLISH AND REGISTER A STANDARDS GENERATING BODY (SGB) FOR SPECIAL COMBAT CAPABILITIES

PROPOSED BRIEF OF THE SGB

The National Standards Body (NSB) 08 intends to establish and register an SGB for Special Combat Capabilities in the sub-field of the Sovereignty of the State from NQF levels 1 to 6, in order to:

1. Identify transformation, development, access and equity issues relevant to Special Combat Capabilities and develop mechanism to include these issues within the standards and qualifications as envisaged in (3) below *[Regulation 24(1)(e)]*.

2. Develop learning and career pathways for potential standards and qualifications in special combat capabilities from NQF level 1 through to level 6 *[Regulation 24(1)(e)]*.

3. Generate the following qualifications and unit standards in accordance with SAQA requirements *[Regulation 24(1)(a)]*.

    - National Certificate Special Forces Operations (NQF level 4)
    - National Diploma Special Forces Operations (NQF level 5)
    - First Degree in Special Forces Operations (NQF level 6)

4. Recommend the qualifications and standards generated in paragraph 3, above, to NSB *[Regulation 24(1)(c)]*.

5. Recommend criteria for the registration of assessors and moderators or moderating bodies *[Regulation 24(1)(d)]*.

6. Review these qualifications and unit standards and effect the necessary changes *[Regulation 24(1)(b)]*.

7. Perform such other functions as may from time to time be delegated by NSB 08 (Law, Military Science and Security) *[Regulation 24(1)(e)]*.

PROPOSED COMPOSITION OF THE SGB

Name of Nominee	Workplace	Nominating Body	Qualifications/Experience
Blignaut; JPV	Department of Defence	Department of Defence	Grade 12 Special Forces Qualified Operator Junior Command and Staff Duties Qualification ETD level 1 Practitioner 13yrs Infantry training Parachute instructor all disciplines in the SANDF General Training Commando Commander
Burt, RB	Department of Defence	Department of Defence	Grade 10 NPC 1-3 Special Forces Operator for 20yrs Instructor Diving
Jay, R	Department of Defence	Department of Defence	Grade 12 Certificate Programme in Total Quality Management ETD level 1 Practitioner Compilation of Learnerships Skills Development Facilitator 11yrs experience in Infantry subjects
Mashego, HD	Department of Defence	Department of Defence	Grade 12 ETD level 1 Practitioner 16yrs experience as a Special Forces Operator Instructor in special Forces Disciplines
McIntyre, JF	Department of Defence	Department of Defence	Grade 12 Special Forces Operator ETD Level 1 Practitioner
Monareng, PW	Department of Defence	Department of Defence	Grade 10 ETD level 1 Practitioner 16yrs experience as a Special Forces Operator Instructor in special Forces Disciplines
Seloane, RS	Department of Defence	Department of Defence	Grade 12 ETD level 1 Practitioner 14yrs experience as a Special Forces Operator Instructor in special Forces Learnership Disciplines

Van der Spuy, M	Department of Defence	Department of Defence	BA Cur- Nursing Education and Community Health, B Cur Hons – Nursing Management, Adv Nursing Education and Research MA Information Science-Multimedia 15 years experience in ETD at the SANDF 12yrs ETD Management Certificate in Skills Development Facilitation Senior Manager Quality Assurance and Accreditation.
Vorster, AL	Department of Defence	Department of Defence	Grade 12 Special Forces Bde Operator 25yrs; Commander Special Forces Amphibian School 3yrs Research and Development Staff Officer 3yrs Staff Officer Preparation Force Preparation Special Forces Brigade Senior Commander and Staff Qualified Instructor

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