

No. 282

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**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

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

Engineering

registered by Organising Field 10, Physical, Mathematical, Computer and Life Sciences, publishes the following Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purposes of the Unit Standards. The full Unit Standards can be accessed via the SAQA web-site at www.saga.org.za. Copies may also be obtained from the Directorate for Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Unit Standards should reach SAQA at the address ***below and no later than 14 April 2009***. All correspondence should be marked **Standards Setting – Engineering** 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@saga.org.za


D. MPHUTHING**ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT**



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Perform gravimetric and volumetric measurements to calibrate volumetric devices

SAQA US ID	UNIT STANDARD TITLE		
263104	Perform gravimetric and volumetric measurements to calibrate volumetric devices		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	12

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

SPECIFIC OUTCOME 1

Maintain Balances and volumetric reference standards.

SPECIFIC OUTCOME 2

Perform gravimetric and volumetric measurements to calibrate volumetric measuring devices.

SPECIFIC OUTCOME 3

Record, evaluate and report results.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Calibrate Angle measuring standards and instruments

SAQA US ID	UNIT STANDARD TITLE		
263124	Calibrate Angle measuring standards and instruments		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	18

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

SPECIFIC OUTCOME 1

Understand the fundamentals of Angle measurement.

SPECIFIC OUTCOME 2

Maintain Angle reference standards.

SPECIFIC OUTCOME 3

Calibrate angle measuring standards and instruments.

SPECIFIC OUTCOME 4

Record, evaluate and report results.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Calibrate the dimensional form of artefacts using form measuring equipment*

SAQA US ID		UNIT STANDARD TITLE	
263125		Calibrate the dimensional form of artefacts using form measuring equipment	
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	12

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

SPECIFIC OUTCOME 1

Understand the fundamentals of Form measurement.

SPECIFIC OUTCOME 2

Maintain Form reference standards.

SPECIFIC OUTCOME 3

Calibrate Form using a Form measuring instrument/system.

SPECIFIC OUTCOME 4

Record, evaluate and report results.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Measure atmospheric pressure using secondary pressure standards***

SAQA US ID		UNIT STANDARD TITLE	
263144		Measure atmospheric pressure using secondary pressure standards	
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	4

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

SPECIFIC OUTCOME 1

Understand the fundamentals of Pressure measurement.

SPECIFIC OUTCOME 2

Measure Atmospheric Pressure.

SPECIFIC OUTCOME 3

Record and evaluate results.

SPECIFIC OUTCOME 4

Apply corrections for Atmospheric Pressure to metrological quantities measured.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Perform dimensional measurements to calibrate dimensional hand instruments*

SAQA US ID		UNIT STANDARD TITLE	
263164		Perform dimensional measurements to calibrate dimensional hand instruments	
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	8

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

SPECIFIC OUTCOME 1

Maintain dimensional reference standards.

SPECIFIC OUTCOME 2

Perform dimensional measurements to calibrate hand instruments.

SPECIFIC OUTCOME 3

Record, evaluate and report results.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Measure density of liquids and solids using secondary standards

SAQA US ID	UNIT STANDARD TITLE		
263184	Measure density of liquids and solids using secondary standards		
ORIGINATOR	PROVIDER		
SGB Engineering			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	8

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

SPECIFIC OUTCOME 1

Understand the fundamentals of Density.

SPECIFIC OUTCOME 2

Measure Density of liquids and solids using secondary standard.

SPECIFIC OUTCOME 3

Record and evaluate results.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Measure mass using digital self indicating weighing instruments and weights as secondary standard

SAQA US ID	UNIT STANDARD TITLE		
263185	Measure mass using digital self indicating weighing instruments and weights as secondary standard		
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	12

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

SPECIFIC OUTCOME 1

Understand the fundamentals of mass measurement.

SPECIFIC OUTCOME 2

Measure Mass using a set of Weights and/or a Digital self indicating weighing instrument.

SPECIFIC OUTCOME 3

Record and evaluate results.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Measure volume using secondary standards

SAQA US ID		UNIT STANDARD TITLE	
263206		Measure volume using secondary standards	
ORIGINATOR		PROVIDER	
SGB Engineering			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	8

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

SPECIFIC OUTCOME 1

Understand the fundamentals of Volume.

SPECIFIC OUTCOME 2

Measure Volume.

SPECIFIC OUTCOME 3

Record and evaluate results.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None