



# Government Gazette Staatskoerant

REPUBLIC OF SOUTH AFRICA  
REPUBLIEK VAN SUID-AFRIKA

Vol. 434 Pretoria, 14 August 2001 No. 22572  
Augustus



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

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## GOVERNMENT NOTICES

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### SOUTH AFRICAN QUALIFICATIONS AUTHORITY

No. 751

14 August 2001

The South African Qualifications Authority in terms of the National Standards Bodies Regulations (Government Gazette No. 18787) published on 28 March 1998, hereby publishes the names of persons nominated to serve as members of the following National Standards Bodies (NSB 06 & 12) and their national stakeholder bodies. SAQA invites comment with respect to the acceptability of the nominees and the representatives of the national bodies with key interests in the field.

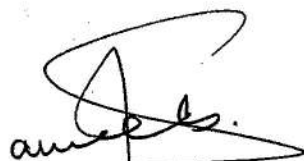
Kindly forward any comment not later than **14 September 2001** to:

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

**Attention:** Mr Joe Samuels  
Director : Standards Setting and Development

**Telephone:** (012) 482 0807

**Fax:** (012) 482 0907



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

**NATIONAL STANDARDS BODY 6 : MANUFACTURING, ENGINEERING AND TECHNOLOGY**

STAKEHOLDER CATEGORY:	NOMINATION	NOMINATED BY	WORKPLACE
<b>STATE:</b> Department of Education	Mr A P Staak	Department of Education	Department of Education
Department of Labour	Mr T Mokoena	Department of Labour	Department of Labour
<b>BUSINESS:</b>			
BSA	Mr A Vermeulen	BSA	Spoornet
	Mr W Matthiae	BSA	
	Mr D Kok	BSA	Eskom
BSA	Ms Stella Carthy	BSA	Chamber of Mines
BSA	Ms Marilet Swart	BSA	Harmony Gold Mine
BSA	Ms Claudia Baker	BSA	De Beers – Finsch Mine
<b>LABOUR:</b> The Federation of Unions of South Africa (FEDUSA)	Mr N Butler	The Federation of Unions of South Africa (FEDUSA)	The Federation of Unions of South Africa (FEDUSA)
COSATU	Mr S Dolley	COSATU	NUMSA
	Mr E Kodisang		CEPPWAWU
	Mr L. Chiloane		CWU
<b>PROVIDERS:</b> College Sector Coalition/ Alliance of Private Providers for ETD	Mr B Botha	College Sector Coalition/ Alliance of Private Providers for ETD	College Sector Coalition/ Alliance of Private Providers for ETD
Association of Further Education & Training Institutions of SA	Mr L Beech	Association of Further Education & Training Institutions of SA	Athlone Technical College
South African Universities Vice Chancellors' Association (SAUVCA)	Prof H D Schreiner	SAUVCA	Natal University
Committee of Technikon Principals (CTP)	Dr D G Hattingh	CTP	Port Elizabeth Technikon



<b>CRITICAL INTEREST GROUP:</b>			
Engineering Council of South Africa	Ms L Kirsten	Engineering Council of South Africa	
Institute of Professional Engineering Technologists (IPET)	Mr W J du T de Beer	IPET	Technikon Pretoria
Sector Education and Training Authority (SETA)	Mr S Kader	Sector Education and Training Authority (SETA)	FOODBEV+
<b>COMMUNITY/ LEARNERS:</b>			
Disabled People South Africa	Mr S C de Plessis	Disabled People South Africa	Unemployed
National Youth Commission	Mr B Dibetso	National Youth Commission	
Community Representatives	Ms P Sigodi	Community Representative	Self-employed
Community Representatives	Ms A Holdstock	Community Representative	Abeeda and Associates
SA Consumer Union	Mr J Hopwood	SA Consumer Union	
	Ms S Willard	SAQA	Mining Qualification Authority
	Ms N P Mafune	SAQA	Sentech
	Ms A Verster	SAQA	
	Ms Trudie Pearse	SAQA	Impala Platinum

**NATIONAL STANDARDS BODY 12 : PHYSICAL PLANNING AND CONSTRUCTION**

<b>STAKEHOLDER CATEGORY:</b>	<b>NOMINATION</b>	<b>NOMINATED BY</b>	<b>WORKPLACE</b>
<b>STATE:</b> Department of Labour (DoL)	Mr D Behrens	DoL	DoL
Department of Education (DoE)	Dr Z Mbanguta	DoE	DoE
Department of Minerals & Energy (DME)	Mr G N Mojapelo	DME	DME
<b>BUSINESS:</b> BSA	Mr A Meyer	BSA	Construction Industry Education and Training Services
	Mr A Stelzer	BSA	Basil Read
<b>LABOUR:</b> The Federation of Unions of South Africa (FEDUSA)	Mr J Henning	FEDUSA	USASA
Builders Workers Union	Mr R C Damon	Builders Workers Union	Builders Workers Union
SA Woodworkers Union	Mr J P Pretorius	S A Woodworkers Union	S A Woodworkers Union
NUMSA	Mr S Monde	NUMSA	Continental Tyres
<b>PROVIDERS:</b> College Sector Coalition/ Alliance of Private Providers for ETD	Ms R Fester	College Sector Coalition/ Alliance of Private Providers for ETD	UASA
Association of Further Education & Training Institutions of SA	Mr L van Niekerk	Association of Further Education & Training Institutions of SA	Western Province Technical College
South African Universities Vice Chancellors' Association (SAUVCA)	Prof P H Omara-Ojunga	South African Universities Vice Chancellors' Association (SAUVCA)	University of Venda
Committee of Technical Principals	Ms S Fullard	Committee of Technical Principals	Cape Technikon

<b>CRITICAL INTEREST GROUP:</b> National Professional Teachers' Organisation of South Africa (NAPTOSA)	Mr C Brink	NAPTOSA	Bellville Technical College
	Prof E Horak	The South African Institution of Civil Engineering	University of Pretoria
	Mr D P Lange	IPET	Tehcnikon Witwatersrand
	Mr G Fanourakis	Engineering Council of South Africa	Witwatersrand Technikon
	Prof J J P Verster	Council of South African Quantity Surveyors	Council for South African Quantity Surveyors
	Ms S G Lincoln	South African Council for Town and Regional Planners	M L Sultan Technikon
	Mr P Swanepoel	SETA	Construction Education and Training Authority
	Mr D W J Weston	SAQA	Human Resource and Development Strategies
	Prof G le Roux	SAQA	EduTech
	Ms J Muruge	SAQA	Mavhoi Technical College
<b>COMMUNITY/ LEARNERS:</b> Disabled People South Africa	Ms N Damoi	SAQA	Dhliwayo Ravhura & Associates
	Ms E L MacNair	South African Council for Professional and Technical Surveyors	Office of the Chief Surveyor-General Pretoria
	Mr S Segalo	Disabled People South Africa	Matjhabeng Municipality Council
	Mr G Fulton	South Africa Consumer Union	Voluntary Worker
	Ms P Paliso	Youth Commission	
	Ms N K Radzilani	SAQA	Technical College of Venda
	Ms M E Reyneke	SAQA	M R Plans

No. 752

14 August 2001

**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

**Hospitality, Tourism, Travel, Leisure and Gaming**

Registered by NSB 11, Services, publishes the following unit standards-based public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and the titles and specific outcomes of the unit standards. The unit standards can be accessed via the SAQA web-site at [www.saqa.org.za](http://www.saqa.org.za). Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Pienaar Street, Brooklyn, Pretoria.

Comment on the qualifications and unit standards should reach SAQA at the address below and no later than 14 September 2001. All correspondence should be marked **Standards Setting – SGB for Hospitality, Tourism, Travel, Leisure and Gaming** 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



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

**PUBLIC NOTICE BY NSB 10,  
PHYSICAL, MATHEMATICAL, COMPUTER AND LIFE SCIENCES, TO RECOGNISE  
A STANDARDS GENERATING BODY FOR AEROSPACE OPERATIONS AT NQF  
LEVELS 3 TO 8**

National Standards Body (NSB) 10 – Physical, Mathematical, Computer and Life Sciences – wishes to recognise an Aerospace Operations SGB in the sub-field at NQF levels 3 – 8.

The SGB will develop appropriate and specific standard qualifications for Aerospace Operations with regard to the following: pilots, flight engineers, navigators, air traffic controllers, air traffic control engineers, flight attendants, flight operations officers, performance engineers, flight dispatchers, flight safety officers, air freight handlers, passenger handling staff, aerospace facilitators and instructors.

The range of fields covered would include flying, navigation, flight engineer services, cabin services, flight safety, flight planning, flight dispatch services, flight performance engineering services, flight operations control, flight crew training, facilitation, aviation communications, aviation management, air traffic control, air traffic management services, aero information services, flight procedures survey, air traffic and navigation services, meteorology, air traffic mission control, passenger services, air freight handling, ramp operations, airport management and general management in the respective fields. This list indicates the range but is by no means exhaustive.

**PROPOSED BRIEF OF THE SGB**

1. Review existing qualifications that have been developed in the sub-field to identify the core competencies embedded within them [*Regulation 24(1)(a)*].
2. Design learning pathways for the roles and specialisation described above within Aerospace Operations field [*Regulation 24(1)(e)*].
3. Generate the following qualifications for Aerospace Operations at Levels 3 – 8 with reference to the roles and specialisation described above in accordance with the Authority requirements [*Regulation 24(1)(a)*]:
  - National Certificate in Aerospace Operations at levels 3 to 5
  - National Certificate in Aerospace Operations Support at levels 3 to 5
  - National Diploma in Professional Piloting at level 5
  - National Diploma in Flight Operations at level 5
  - National Diploma in Air Traffic Management at level 5
  - National Diploma in Air Freight Handling at level 5
  - National Diploma in Passenger Servicing at level 5
  - National Diploma in Airport Operations at level 5
  - National Degree in Professional Piloting at level 6
  - National Degree in Flight Operations at level 6
  - National Degree in Air Traffic Management at level 6
  - National Degree in Air Freight Handling at level 6
  - National Degree in Passenger Servicing at level 6
  - National Degree in Airport Operations at level 6

- Professional Degree in Test Piloting at level 7
  - Post Graduate Certificate in Aviation Management at level 7
4. Recommend the standards and qualifications under 3 above to the National Standards Body [Regulation 24(1)(d)].
  5. Recommend criteria for the registration of assessors and moderators or moderating bodies [Regulation 24(1)(d)].
  6. Perform such other tasks as may from time to time be assigned by the NSB [Regulation 24(1)(e)].
  7. The SGB will operate in field 10 and would liaise closely with other relevant SGBs in the field as well as in other organising fields.

#### PROPOSED COMPOSITION OF THE SGB

Nominee	Nominated by	Workplace	Experience and Qualification in the Field
Cele, Ms L	Civil Aviation Authority	Civil Aviation Authority	Cabin Safety Inspector Diploma in Human Resources Diploma in Public Relations Secondary Teachers Diploma
Claassen, J E	Civil Aviation Authority	Civil Aviation Authority	Flight Operations Inspector Air force Navigator. Air force Safety Officer. Accident Investigator B Mil (Aeronautics)
Coleman, J	South African Airways	South African Airways	Manager Standards Flight Operations Manager Project Manager Deputy Manager Operations Control
De Beer, Captain J P	Airline Line Pilots Association - SA	South African Airways	Senior Training Captain Airline Transport Pilot Air force Pilot Flying Instructor
Gibbs, Ms V L	SALSTAFF (AIWU)	South African Airways	Senior Cabin Crew Member Diploma in Psychology
Goodrick, S	43 Air School (Pty) Ltd	43 Air School (Pty) Ltd	Director Training and Marketing Airline Transport Pilot Licence Flying Instructor
Jansen van Rensburg, G	Denel Aviation	Denel Aviation	Group Leader Technical Support B Engineering B Engineering(Hons) Pr. Engineer



Keet, R	AviMenco (Pty) Ltd	Corporate Renaissance Group (Pty) Ltd	Managing Director BCom. BCom(Hons). MBA Air force Pilot, Flight Instructor
Khan, E	Denel Aviation	Denel Aviation	Aircraft Artisan
Knott, A	Committee of Technikon Principals	Technikon Witwatersrand	Lecturer National Higher Diploma Mechanical Engineering
Mabitsela, D	Airports Company South Africa	Airports Company South Africa	Manager Safety National Diploma in Safety Management. BTech Degree Safety Management
Mathiesen, B	ATNS Company Limited	ATNS Company Limited	Manager Technical Support National Diploma for Technicians T5. Engineering Technician
Meyer, F	SAA and AUSA	South African Airways	Aircraft Performance Analyst. Facilitator N4. N5. Flight Engineer
Millar, Ms Y	Aviation Industry Workers Union	South African Airways	Supervisor – Voyager SAA Chairperson Ground Handling standards group. AIWU spokesperson
Muuren, M A	Quality Training Technologies	Quality Training Technologies	Research and Development Air Traffic Control BA Psychology. BA(Hons)HRD
Myburgh, T	SAFAIR (Pty) Ltd	SAFAIR (Pty) Ltd	Manager Loss Control Standards Generating Course Freight Handling Standards Generation
O'Conner, D	Aeronav Academy (Pty) Ltd	Fosroc Stratabolt (Pty) Ltd	Managing Director Lecturer and Author Flying Instructor BSc, BSc(Hons), MBA
Oopthuysen, Colonel N G	SA Air Force Director Education	South African Air Force	Senior Staff Officer - Basic Flying Training Air force Pilot. Air force Flying Instructor. Air force Command and Staff courses. Joint Command and Staff course
Partridge, C	ATNS Company Limited	ATNS Company Limited	Manager Standards Assurance – ATNS Company Limited B Com and B Com (Hons)
Thompson, B	Airports Company SA	Airports company SA	Johannesburg International Airports Company Manager Air force Pilot. Air Traffic Control
Vermeulen, Prof L	University of Pretoria	University of Pretoria	Professor – Department of Human Resource Management, University of Pretoria BA, BA(Hons), MA, D Phil.

Viljoen, D	Aerospace Chamber	Aviation Academy for Southern Africa	Managing Director National Higher Diplomat Aircraft Engineering, AMO Licence
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No. 753

14 August 2001

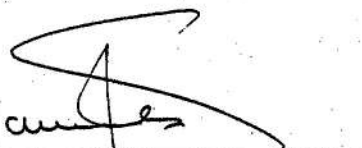
**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

In order to proceed with the registration of standards and NSB 11, Services, publishes the following (ABET) Tourism unit standards-based qualifications for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and the titles and specific outcomes of the unit standards. The unit standards can be accessed via the SAQA web-site at [www.saqa.org.za](http://www.saqa.org.za). Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Pienaar Street, Brooklyn, Pretoria.

Comment on the qualifications and unit standards should reach SAQA at the address below and no later than 14 September 2001. All correspondence should be marked **Standards Setting – ABET Tourism** 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**

## **UNIT STANDARDS**

**Field: Services**

**Sub-field: Tourism**

### **Purpose of unit standards**

The purpose of these unit standards is to:

- Introduce learners to the major sectors of the tourism industry,
- Encourage learners to gain experience of the tourism industry, with a view to a possible career in this industry.

Together with units taken from other learning fields, the learner will be able to obtain a qualification in the tourism industry. This qualification is aimed at providing benefits through the development of the community and to provide the learner with the fundamental knowledge and skills for entry-level employment in the tourism industry.

### **Unit Standards at NQF Level 1**

1. Title: Understanding the tourism industry.
2. Title: Know the role-players in the tourism industry and their functions and select a career path for him/herself.
3. Title: Demonstrate an applied knowledge of the relationship between tourism and the community.
4. Title: Understand tourist product knowledge and apply the knowledge to facilitate tourist activities.

### **Unit standards titles and specific outcomes at NQF level 1**

#### **1. Title: Understanding the tourism industry**

Specific Outcome 1: Give an integrated definition of tourism and describe the different dimensions and the way it impacts on society.

Specific Outcome 2: Demonstrate a practical knowledge of the three sectors of the tourism industry and the links between the sectors of the tourism industry and the links between the sectors.

Specific Outcome 3: Categorise the types of tourists and their motivation for travel.

Specific Outcome 4: Identify access and use different sources of information to service the tourist.

#### **2. Title: Know the roleplayers in the tourism industry and their functions and select a career path for him/herself**

Specific Outcome 1: Identify the national roleplayers in the tourism industry and their functions with reference to the world of work.

Specific Outcome 2: Identify the provincial role-players in the tourism industry and their functions with reference to the world of work.

Specific Outcome 3: Identify the local role-player in the tourism industry and their functions with reference to the world of work.

Specific Outcome 4: List and select career opportunities within the local environment and/or tourist ventures.

**3. Title: Demonstrate an applied knowledge of the relationship between tourism and the community**

Specific Outcome 1: Discuss the ways in which tourism impacts on the community.

Specific Outcome 2: Discuss the ways in which a community can promote and hinder/impede/discourage tourism development.

Specific Outcome 3: Discuss the legal and ethical issues relating to tourism.

Specific Outcome 4: Demonstrate the ability to interact appropriately with a range of tourists.

**4. Title: Understand tourist product knowledge and apply the knowledge to facilitate tourist activities**

Specific Outcome 1: Identify and describe areas of visitors' destinations, attractions and events in the local, provincial and national contexts.

Specific Outcome 2: Show the ability to match destinations, attractions and event with a tourist profile.

Specific Outcome 3: Demonstrate an ability to locate oneself geographically within local, provincial, national and global context.

Specific Outcome 4: Demonstrate an ability to use a range of maps effectively to facilitate tourism activities.

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY****NATIONAL DIPLOMA IN EVENTS CO-ORDINATION****Field:** Services**Sub-field:** Hospitality, Tourism, Travel, Leisure and Gaming**NQF level:** 5**Credits:** 240**Purpose of the Qualification:**

In the context of the event industry, this qualification will enable creative co-ordination of professional, feasible, innovative and exciting events. A qualifying learner will be able to demonstrate knowledge of the events industry that brings about a level of professionalism expected at national level. A learner will also demonstrate knowledge of the correct terminology of event co-ordination. A learner will be able to maintain the high level of quality in the process of event co-ordination. The learner will contribute positively towards supporting the events industry as a part of Southern Africa's tourism sector.

A learner who has achieved this qualification will be capable of combining a range of self-organisation and life-long learning skills with a working knowledge of South African tourism issues, and integrating these within a context to produce a professional practice, which adheres to the high quality standards, expected by the industry.

In addition, learners will be positioned to further their learning, practice and career within the events industry - either at further levels or in other areas of practice. Expansion into other sub-sectors of tourism is also possible.



**National Diploma in Events Co-ordination (NQF5)**  
**245 credits**

245 Credits									
Fundamental	Level 2		Level 4		Level 5		Level 6		Total
	1. Operate a personal Computer 2. Organise oneself in the workplace	6 3			1. Plan and conduct a research project 2. Apply communication skills in the workplace 3. Examine social issues as pertaining to the workplace 4. Lead a team 5. Analyse and communicate workplace data 6. Demonstrate an understanding of professional values and ethics 7. Analyse external factors influencing people who have special needs	6 10 4 4 5 4 4			46
CORE	Level 2		Level 4		Level 5		Level 6		Total
			1. Introduce South Africa to tourists 2. Introduce South African heritage to tourists 3. Contribute to sustainable tourism in South Africa 4. Operate in a business 5. Oversee arrival and departure of customers 6. Care for customers 7. Understand the inter-relatedness of event elements 8. Operate in the national and international event industry	7 7 4 4 3 3 10 3	1. Monitor and maintain occupational health and safety 2. Implement policies regarding HIV/AIDS in the workplace 3. Research an event 4. Design an event 5. Plan an event 6. Co-ordinate an event 7. Evaluate an event to ensure sustainable events 8. Perform successful event administration 9. Conduct an integrative project in the workplace	4 4 4 10 10 12 3 8 40			136
Elective	Level 2		Level 4		Level 5		Level 6		Total
					1. Produce a safe and successful event within a specific event sub-field 2. Conduct on the job coaching 3. Prepare and maintain financial records and statements	35 5 12	1. Monitor staff performance 2. Manage quality in the organisation	5 6	63
Total		9		41		184		11	245

No. 754

14 August 2001

**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

**Mathematical Literacy**

Registered by NSB 10, Physical, Mathematical, Computer and Life Sciences, publishes the following unit standards-based public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and the titles and specific outcomes of the unit standards. The unit standards can be accessed via the SAQA web-site at [www.saqa.org.za](http://www.saqa.org.za). Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Pienaar Street, Brooklyn, Pretoria.

Comment on the qualifications and unit standards should reach SAQA at the address below and no later than 14 September 2001. All correspondence should be marked **Standards Setting – SGB for Mathematical Literacy** and addressed to

The Director: Standards Setting and Development  
SAQA

Attention: Mr. D Mphuthing

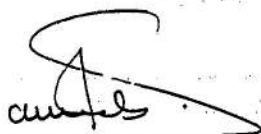
Postnet Suite 248

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0145

or faxed to 012-482-0907



PP SAMUEL B.A. ISAACS  
EXECUTIVE OFFICER

**FUNDAMENTAL UNIT STANDARDS AT NQF LEVELS 2, 3 AND 4****Field:** Physical, Mathematical, Computer and Life Sciences**Sub-field:** Mathematical Literacy**Unit standards at NQF levels 2**

Title	Credits
1. Demonstrate understanding of rational and irrational numbers and number systems	3
2. Use mathematics to investigate and monitor the financial aspects of personal and community life	2
3. Work with a wide range of patterns and basic functions and solve related problems	2
4. Use mathematical models to represent and deal with problems that arise in real life contexts	2
5. Identify, describe, compare, classify, calculate shape and motion in 2 and 3-dimensional shapes in different contexts	3
6. Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems	4
<b>Total credits</b>	<b>16</b>

**Unit standards at NQF level 3**

Title	Credits
1. Demonstrate understanding of numbers and relationships among numbers and number systems, and represent numbers in different ways	2
2. Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	2
3. Work with a wide range of patterns and basic functions and solve related problems	3
4. Describe, apply, analyse and calculate shape and motion in 2- and 3-dimensional space in different contexts	4
5. Apply the knowledge of statistics and probability to inform the collection and use of data and procedures in order to investigate life related problems and interpret the findings	5
<b>Total credits</b>	<b>16</b>

**Unit standards at NQF level 4**

Title	Credits
1. Apply knowledge of sequences and series to interpret and solve problems in real and simulated situations	2
2. Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues	2
3. Work with a wide range of patterns and transformations of functions and solve related problems	3
4. Construct, analyse and calculate shape and motion in 2- and 3-dimensional space in different contexts	4
5. Apply knowledge of statistics and probability to evaluate and communicate findings on life-related problems	5
<b>Total credits</b>	<b>16</b>

**UNIT STANDARD TITLES AND SPECIFIC OUTCOMES AT NQF LEVEL 2****1. Title: Demonstrate understanding of rational and irrational numbers and number systems**

Specific Outcome 1.1: Demonstrate understanding of rational and irrational numbers

Specific Outcome 1.2: Know and understand the relationships among numbers and number systems, and represent numbers in different ways

Specific Outcome 1.3: Apply base 10 number systems on technology to demonstrate understanding of scientific notation and rounding off numbers

**2. Title: Use mathematics to investigate and monitor the financial aspects of personal and community life**

Specific Outcome 2.1: Use mathematics to plan and control personal and/or household budgets and income and expenditure

Specific Outcome 2.2: Use simple and compound interest to make sense of and define a variety of situations

Specific Outcome 2.3: Investigate various aspects of financial transactions

**3. Title: Work with a wide range of patterns and basic functions and solve related problems**

Specific Outcome 3.1: Express and justify mathematical generalisations of situations

Specific Outcome 3.2: Express mathematical functions and relationships between variables in terms of numerical, graphical, verbal and symbolic approaches

Specific Outcome 3.3: Analyse and represent mathematical situations and structures using symbolic forms

**4. Title: Use mathematical models to represent and deal with problems that arise in real life contexts**

Specific Outcome 4.1: Translate contextual problems using mathematical language

Specific Outcome 4.2: Analyse and manipulate representations to arrive at results

Specific Outcome 4.3: Interpret solutions in terms of the problem context

**5. Title: Identify, describe, compare, classify, calculate shape and motion in 2 and 3-dimensional shapes in different contexts**

Specific Outcome 5.1: Identify, describe, compare and classify geometric figures

Specific Outcome 5.2: Explore transformations of geometric shapes

Specific Outcome 5.3: Calculate the area and perimeter of geometric figures in different contexts by means of measurement and estimation

**6. Title: Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life-related problems**

Specific Outcome 6.1: Apply various techniques to data in order to establish statistical models for specific purposes

Specific Outcome 6.2: Use equally likely events to explore probability models, make predictions and study problems

Specific Outcome 6.3: Use probability and statistical concepts in solving routine problems from real-world situations and draw conclusions

**UNIT STANDARD TITLES AND SPECIFIC OUTCOMES AT NQF LEVEL 3****1. Title: Demonstrate understanding of numbers and relationships among numbers and number systems, and represent numbers in different ways**

Specific Outcome 1.1: Express rational numbers in decimal notations

Specific Outcome 1.2: Measure and perform error calculations

Specific Outcome 1.3: Convert from decimal number system to binary number system

**2. Title: Use mathematics to investigate and monitor the financial aspects of personal, business and national issues**

Specific Outcome 2.1: Use mathematics to investigate and analyse, regional and/or national budgets and income and expenditure

Specific Outcome 2.2: Use compound interests to make sense of and define a variety of situations

Specific Outcome 2.3: Use mathematics to debate aspects of national economy

**3. Title: Work with a wide range of patterns and basic functions and solve related problems**

Specific Outcome 3.1: Express and justify mathematical generalisations of situations

Specific Outcome 3.2: Express mathematical functions and relationships between variables in terms of numerical, graphical, verbal and symbolic approaches

Specific Outcome 3.3: Analyse and represent mathematical situations and structures using symbolic forms

**4. Title: Describe, apply, analyse and calculate shape and motion in 2 and 3-dimensional space in different contexts**

Specific Outcome 4.1: Describe the conditions that make two geometric shapes congruent and similar

Specific Outcome 4.2: Apply and analyse different transformations of geometric shapes

Specific Outcome 4.3: Calculate areas and perimeter of geometric shapes in different contexts



**5. Title: Apply the knowledge of statistics and probability to inform the collection and use of data and procedures in order to investigate life-related problems and interpret the findings**

Specific Outcome 5.1: Collect and work with data using various techniques to investigate life-related problems

Specific Outcome 5.2: Use experiments, simulations and equally likely events to explore probability models, make predictions and study problems

Specific Outcome 5.3: Use probability and statistical concepts in problem solving and decision making in real-world situations

**UNIT STANDARD TITLES AND SPECIFIC OUTCOMES AT NQF LEVEL 4**

**1. Title: Apply knowledge of sequences and series to interpret and solve problems in real and simulated situations**

Specific Outcome 1.1: Demonstrate understanding of infinite and finite sequences and series

Specific Outcome 1.2: Identify and interpret patterns of divergent and convergent sequences and series

Specific Outcome 1.3: Apply knowledge of sequences and series to perform calculations on saving and interest rates

**2. Title: Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues**

Specific Outcome 2.1: Use mathematics to plan and manage financial instruments

Specific Outcome 2.2: Use simple and compound interest to make sense of and define a variety of situations

Specific Outcome 2.3: Use mathematics to debate aspects of the national and global economy

**3. Title: Work with a wide range of patterns and transformations of functions and solve related problems**

Specific Outcome 3.1: Express and justify mathematical generalisations of situations

Specific Outcome 3.2: Express mathematical functions and relationships between variables in terms of numerical, graphical, verbal and symbolic approaches

**Specific Outcome 3.3:** Analyse and represent mathematical situations and structures using symbolic forms

**Specific Outcome 3.4:** Use mathematical models to represent and deal with problems that arise in real and abstract contexts

**4. Title: Construct, analyse and calculate shape and motion in 2 and 3-dimensional space in different contexts**

**Specific Outcome 4.1:** Construct 2- and 3-dimensional shapes in terms of given criteria

**Specific Outcome 4.2:** Create and analyse designs that include translated, rotational and reflected 2 dimensional images

**Specific Outcome 4.3:** Calculate surface areas and volumes of geometric shapes in different contexts

**5. Title: Apply knowledge of statistics and probability to evaluate and communicate findings on life-related problems**

**Specific Outcome 5.1:** Investigate statistical reports and critique their findings

**Specific Outcome 5.2:** Investigate probability distributions and critique and explore models and predictions

**Specific Outcome 5.3:** Critically interrogate probability and statistical models using distributions in problem solving and decision making in real-world situations

No. 755

14 August 2001

## UNIT STANDARDS FOR EVENTS CO-ORDINATION

### Unit Standards at NQF Level 2

- \* Title: Organise oneself in the workplace (ID 8618)
- \* Title: Operate a personal computer system (ID 7547)

### Unit Standards at NQF Level 4

- \* Title: Introduce South Africa to tourists (ID 8480)
- \* Title: Introduce South African heritage to tourists (ID 8598)
- \* Title: Contribute to sustainable tourism in South Africa (ID 8598)
- \* Title: Operate in a business (ID 8553)
- \* Title: Oversee arrival and departure of customers (ID 8551)
- \* Title: Care for customers (ID 8600)
- \* Title: Understand the inter-relatedness of event elements (ID 8609)
- \* Title: Operate in the national and international events industry (ID 8608)

### Unit Standards at NQF Level 5

1. Title: Analyse external factors influencing people who have special needs
  2. Title: Monitor and maintain occupational health and safety
  3. Title: Implement policies regarding HIV/AIDS in the workplace
  4. Title: Co-ordinate an event
  5. Title: Design an event
  6. Title: Perform successful event administration
  7. Title: Plan an event
  8. Title: Research an event
  9. Title: Evaluate an event to ensure sustainable events
  10. Title: Produce a safe and successful event within a specific event sub-field
  11. Title: Conduct an integrative project in the workplace
- \* Title: Plan and conduct a research project (ID 8559)
  - \* Title: Apply communication skills in the workplace (ID 8647)
  - \* Title: Examine social issues as pertaining to the workplace (ID 8664)
  - \* Title: Lead a team (ID 8665)
  - \* Title: Analyse and communicate workplace data ((ID 8662)
  - \* Title: Demonstrate an understanding of professional values and ethics (ID 8648)
  - \* Title: Conduct on-the-job coaching (ID 7818)
  - \* Title: Prepare and maintain financial records and statements (ID 7878)

### Unit Standards at NQF Level 6

- \* Title: Monitor staff performance (ID 7888)
- \* Title: Manage quality in the organisation (7889)

## **Unit standards titles and specific outcomes at NQF level 5**

### **1. Title: Analyse external factors influencing people who have special needs**

**Specific Outcome 1:** A wide spectrum of physical and intellectual disabilities prevalent in South Africa are identified.

(Range: Definition includes naming the disabilities; definition includes outlining the physical/intellectual, social, psychological and professional implications for people with disability.)

**Specific Outcome 2:** Describe the causes of the physical and intellectual disability.

(Range: Causes include the social and economic factors contributing to the prevalence of the disability in South Africa.)

**Specific Outcome 3:** Identify the philosophy underpinning South African policy and legislation relating to people who have a disability.

(Range: The philosophy refers to the underlying values and principles.)

**Specific Outcome 4:** Reflect on typical practices in South African workplaces and identify the underlying values relating to people who have a disability.

(Range: Practices in the workplace are described; the challenges presented by working with workers who have special needs are identified; own values and beliefs in relation to these challenges are outlined.)

**Specific Outcome 5:** Describe the implications for management and supervision for dealing with workplaces in which people who have a disability work.

(Range: Possible issues and choices are reviewed, adaptations to management and supervision practices are explained.)

### **2. Title: Monitor and maintain occupational health and safety**

**Specific Outcome 1:** Establish and maintain the framework for the occupational health and safety system in the area of managerial responsibility.

(Range: Develop occupational health and safety policies which clearly express the organisation's commitment with respect to occupational health and safety within the area of managerial responsibility and how relevant occupational health and safety legislation will be implemented, consistent with overall organisational policies. Clearly define, allocate and include in job descriptions and duty statements, for all relevant positions, occupational health and safety responsibilities and duties which will allow implementation and integration of the occupational health and safety system. Identify, seek and/or provide in a timely and consistent manner financial and human resources for the operation of the occupational health and safety system. Provide and explain, in a form which is readily accessible to

employees, information on the occupational health and safety system and procedures.)

**Specific Outcome 2:** Establish and maintain participative arrangements for the management of occupational health and safety.  
(Range: Establish and maintain appropriate consultative processes in consultation with employees and their representatives in accordance with relevant occupational health and safety legislation and consistent with the organisation's overall process for consultation. Deal with and resolve promptly and effectively issues raised through participation and consultation in accordance with procedures for issue resolution, providing information about the outcomes of participation and consultation in a manner accessible to employees.)

**Specific Outcome 3:** Establish and maintain procedures for identifying hazards.  
(Range: Existing and potential hazards within the area of managerial responsibility are correctly identified and identification confirmed in accordance with occupational health and safety legislation, codes of practice and trends identified from the occupational health and safety records system. Procedure for ongoing identification of hazards is developed and integrated within systems of work and procedures. Activities are appropriately monitored to ensure that this procedure is adopted effectively throughout the area of managerial responsibility. Hazard identification is addressed at the planning, design and evaluation stages of any change in the workplace to ensure that new hazards are not created.)

**Specific Outcome 4:** Establish and maintain procedures for assessing risks.  
(Range: Risks presented by identified hazards are correctly assessed in accordance with occupational health and safety legislation and codes of practice. Procedure for ongoing assessment of risks is developed and integrated within systems of work and procedures. Activities are monitored to ensure that this procedure is adopted effectively throughout the area of managerial responsibility. Risk assessment is addressed at the planning, design and evaluation stages of any change within the area of managerial responsibility to ensure that the risk from hazards is not increased. Inadequacies in existing risk control measures are identified in accordance with the hierarchy of control, and resources enabling implementation of new measures are sought and/or provided according to appropriate procedures.)

**Specific Outcome 5:** Establish and maintain procedures for controlling risks  
(Range: Potential hazardous events are correctly identified. Procedures which would control the risks associated with hazardous events and meet any legislative requirements as a minimum are developed in consultation with appropriate emergency services. Appropriate information and training is provided to all employees to enable implementation of the correct procedures in all relevant circumstances.)

**Specific Outcome 6:** Establish and maintain an occupational health and safety



training program.

(Range : An occupational health and safety training program is developed and implemented to identify and fulfil employees' occupational health and safety training needs as part of the organisation's general training program.)

**Specific Outcome 7:** Establish and maintain a system for occupational health and safety records.

(Range: A system for keeping occupational health and safety records is established and monitored to allow identification of patterns of occupational injury and disease within the area of managerial responsibility.)

**Specific Outcome 8:** Evaluate the organisation's occupational health and safety system and related policies, procedures and programs.

(Range: The effectiveness of the occupational health and safety system and related policies, procedures and programs is assessed according to the organisation's aims with respect to occupational health and safety. Improvements to the occupational health and safety system are developed and implemented to ensure more effective achievement of the organisation's aims with respect to occupational health and safety. Compliance with occupational health and safety legislation and codes of practice is assessed to ensure that legal occupational health and safety standards are maintained as a minimum.)

### **3. Title: Implement policies regarding HIV/AIDS in the workplace**

**Specific Outcome 1:** Describe legislation and national policies relating to HIV/AIDS in the workplace.

**Specific Outcome 2:** Describe and analyse implicit or explicit organisational policies around HIV and AIDS in the workplace.

(Range: From a given example of organisational policy.)

**Specific Outcome 3:** Develop appropriate HIV/AIDS policy for workplace consistent with national requirements.

(Range: Appropriately select and adapt elements of a given example.)

### **4. Title: Co-ordinate an event**

**Specific Outcome 1:** Execute an event planning schedule as well as a logistics and operational plan.

(Range: Implement timelines and production schedules

- Sequence event activities properly
- Comply with legal requirements.)

**Specific Outcome 2:** Control an event budget.

(Range: Apply sound financial principles.)

**Specific Outcome 3:** Co-ordinate the registration, admission and seating procedures

(Range: Audiences/spectators, crowd control.)



Specific Outcome 4: Oversee human resources.

(Range: Role-players, staff performance, funding such as donors and sponsorships, service providers.)

Specific Outcome 5: Conduct mid-event evaluations.

(Range: Entrance and reception areas, access and exit, function areas.)

## **5. Title: Design an event**

Specific Outcome 1: Decide on an appropriate theme by using techniques to stimulate creative and innovative ideas.

(Range: Match ideas with needs and expectations of clients.)

Specific Outcome 2: Consider elements appropriate to theme and develop an element plan.

(Range: Taking into account issues such as: site limitations, sound scaping and visual appeal.)

Specific Outcome 3: Identify key event stakeholders and design a plan to involve them.

(Range: Sponsors, media partners, participants: athletes, speakers, presenters, spectators/audience.)

Specific Outcome 4: Design strategies to manage volunteers.

(Range: Recruiting, training, recognising.)

Specific Outcome 5: Design the site set-up.

(Range: Entrance and reception areas, access and exit, function areas.)

## **6. Title: Perform successful event administration**

Specific Outcome 1: Adhere to specifications of proposals, contracts and agreements.

(Range: Include specifications of contracts and agreements into event documentation such as plans and schedules.)

Specific Outcome 2: Develop a budget for an event.

(Range: Comply with established organisational accounting procedures, follow a contingency plan.)

Specific Outcome 3: Analyse, plan and implement professional registration, admission and seating procedures.

(Range: Sport events, delegate and speaker management.)

Specific Outcome 4: Maintain systems to ensure effective event administration

(Range: Policies and procedures i.e. staffing, volunteers, work within job descriptions specific to the event, ensure integrity of records of delegates, manage delegates, fees, accommodation.)

Specific Outcome 5: Conduct a post-event review.

(Range: Evaluate event outcomes against event plans,

schedules.)

## **7. Title: Plan an event**

**Specific Outcome 1: Conduct pre-event planning.**

(Range: Structure an event planning schedule, event goals and objectives, organisational chart, a timeline and production schedule, staff and volunteer duties and responsibilities, progress evaluations against objectives.)

**Specific Outcome 2: Identify potential challenges which might influence the success of an event.**

(Range: Appropriate solutions, potential challenges, use time/space/tempo laws to utilise resources.)

**Specific Outcome 3: Develop a site plan and site diagrams.**

(Range: Conduct an on-site inspection, present site plans and diagrams in a user friendly format.)

**Specific Outcome 4: Construct a contingency plan.**

(Range: Potential risks to an event, safeguards, risk assessment.)

**Specific Outcome 5: Select the desired team members.**

(Range: Allocate roles and responsibilities.)

## **8. Title: Research an event**

**Specific Outcome 1: Plan the research of an event.**

(Range: Identify research objectives according to brief and/or contract, outline research framework according to research objectives.)

**Specific Outcome 2: Conduct a needs assessment using various assessment tools.**

(Range: Information on client profiles, needs and expectations according to the assessment checklist.)

**Specific Outcome 3: Conduct a feasibility study using a range of techniques.**

(Range: Financial and human resources, political influences, make decisions and recommendations on feasibility to clients.)

**Specific Outcome 4: Determine whether the event is viable.**

(Range: Technically, financially.)

**Specific Outcome 5: Conduct limited market research.**

(Range: Needs, wants, desires and expectations of the target market, expected service levels of the client.)

**Specific Outcome 6: Interpret and communicate research findings.**

(Range: Make recommendations regarding event, size, elements, theme, entertainment, present findings in a user friendly format using graphs and tables.)

**9. Title: Evaluate an event to ensure sustainable events**

**Specific Outcome 1:** Conduct effective evaluations to measure successful operations.  
(Range: The success of the event against set objectives, client satisfaction levels, post event reviews, emphasize the highlights.)

**Specific Outcome 2:** Reflect on, measure and evaluate performance in order to improve future practice and learning.  
(Range: Own performance, staff performance.)

**Specific Outcome 3:** Evaluate effectiveness of systems and processes supporting the event.  
(Range: Administration, communications, support services, documentation, event management process.)

**Specific Outcome 4:** Conduct mid-event evaluations.  
(Range: Monitoring and evaluation procedures, ensure quality and high standards of event.)

**Specific Outcome 5:** Compile a report in user-friendly format.  
(Range: Record proceedings and evaluations, communicate report to all appropriate role players, make necessary recommendations to achieve sustainable events.)

**10. Title: Produce a safe and successful event within a specific event subfield**

**Specific Outcome 1:** Know and understand the specific characteristics of the event sub-field in order to operate in a variety of establishments.  
(Range: Sub-field requirements, Facility capacity and constraints of facility according to sub-field and establishment, stakeholders, donors/sponsors, volunteers, audience/spectators, media partners.)

**Specific Outcome 2:** Identify, know and apply the event elements specific to and appropriate within a specific sub-field.  
(Range: Transportation, lighting and sound, design and décor.)

**Specific Outcome 3:** Understand and apply knowledge of the inter-relatedness of events, elements, client expectations and how it contributes to the success, challenges and risks of an event.  
(Range: Define, analyse and reflect on the nature and specific characteristics of: site development and capacity, participants and other role-players, support services, event safeguards, event environment, event activities, ancillary services, documentation, work within constraints of facilities and budget and propose alternatives when necessary.)

**Specific Outcome 4:** Operate within a legal framework:  
(Range: comply with, define, analyse and reflect on the nature and specific requirements of: music licensing, copyright, trademark, service mark protection, television and radio rights, alcohol management plan to encourage responsible drinking, contracts, procure and secure all permits. Report on gaps.)

**Specific Outcome 5:** Understand and apply ethical practices to ensure the integrity and interpersonal aspects of the event.  
(Range: Observe the code of conduct of a specific workplace. Respectfully manage issues of cultural diversity, special needs. Be aware of national legislation and regulations and know where to find information. Adhere to international disability requirements. Comply with protocol, traditions, regulations.)

**Specific Outcome 6:** Ensure the health and safety of clients and attendees:  
(Range: Deal with routine emergencies. Avoid circumstances which might lead to personal risk. Take into account specific medical conditions of guests.)

**Specific Outcome 7:** Reflect on the success of the event and suggest alternatives where necessary.  
(Range: Understand own roles and roles of role-players with regards to the success of an event. Evaluate and reflect on the success of guest experiences and satisfaction levels. Evaluate and reflect on responsibilities and performances of self and role-players.)

#### **11. Title: Conduct an integrative project in the workplace**

**Specific Outcome 1:** Decide on a project that integrates exit level-outcomes, underpinning knowledge and critical cross-field outcomes of a chosen qualification.

**Specific Outcome 2:** Reach agreement with a designated assessor on the mechanisms or tools through which you will be assessed.

**Specific Outcome 3:** Plan the project to achieve the purpose of this unit standard.

**Specific Outcome 4:** Conduct the project while constantly adapting own performance.

**Specific Outcome 5:** Evaluate the project design, implementation and own performance in both.

**Specific Outcome 6:** Evaluate own learning during the project and identify strengths, weaknesses and areas for improvement.

No. 756

14 August 2001

**NOTICE BY NSB 06, MANUFACTURING, ENGINEERING AND TECHNOLOGY, OF AN APPLICATION TO REGISTER AN SGB FOR ENGINEERING**

NSB 06 hereby registers SGB for Engineering for a period of three years, until August 2004.

**PROPOSED BRIEF OF THE SGB**

1. Develop learning pathways for potential qualifications and standards across the three subfields of organising field 06, from Level 4 through to Level 8 in Engineering [Regulation 24 (1)(e)].

2. Generate the following qualifications and standards in accordance with Authority requirements, at NQF levels 4 to 8:

These would cover whole and unit standards based qualifications for Engineering Technicians, Engineering Technologists and Engineers in the areas of aeronautical, agricultural, chemical, civil, electrical, industrial, mechanical, metallurgical/materials, and mining engineering as well as for the continuous development of learners in these fields:

- ◆ National Certificate in Engineering (levels 4 – 7)
- ◆ National Diploma in Engineering (levels 5 – 8)
- ◆ First National Degree in Engineering (level 6)
- ◆ National Degree in Engineering (level 7)
- ◆ Masters Degree in Engineering (level 8)

[Regulation 24(1)(a)].

3. Recommend the qualifications and standards generated under 2 above to the National Standards Body [Regulation 24(1)(a)].
4. Recommend criteria for the registration of assessors and moderators or moderating bodies [Regulation 24(1)(d)].
5. Review these qualifications and unit standards and effect the necessary changes [Regulation 24(1)(b)].
6. Maintain liaison, during the process of developing standards and qualifications, with other related Standards Generating Bodies as and when directed by NSB 06 [Regulation 24(1)(e)].



**PROPOSED COMPOSITION OF THE SGB**

<b>Nominee</b>	<b>Workplace</b>	<b>Nominating Body</b>	<b>Experience/ Qualifications</b>
Don Turvey	INGWE	South African Colliery Managers Association (SACMA)	BSc Mining Engineering; MBL; 16 years experience in the mining industry
Du Toit Grobler	South African Pulp and Paper Industry (SAPPI)	The Institution of Certified Mechanical and Electrical Engineers of SA	BSc (Eng)(Elec) 28 years experience in electrical and mechanical engineering
Dirk van Niekerk	Siyazi Consultants	South African Institute of Mining and Metallurgy	M Eng (Mining); 32 years experience in mining engineering including 4 involved with national policy formulation
Robert Reinecke	Consultant	South African Institute for Industrial Engineering	D. (B&A) 43 years experience in engineering consulting including 21 years in education and training
Terrence Stidworthy	Consultant	Institute of Professional Engineering Technologists	National Technical Diploma, 42 years experience in electrical engineering
Johan De Koker	Spoornet	Institute of Professional Engineering Technologists	Masters Diploma in Technology, Civil Engineering, 30 years experience in civil engineering
Vivian Nel	Orbicom (Pty) Ltd	The Chamber of Engineering Technology	National Diploma in Engineering; 40 years experience in broadcasting technology
Patrick Moncur	Spoornet	The Chamber of Engineering Technology	National Diploma; 36 years experience in mechanical engineering
Michael Barley	Schindler Lifts	Engineering Technicians (Lifts)	National Training Certificate 3, Certified Training Officer; 33 years experience in lift mechanics including 4 as national training officer



Nominee	Workplace	Nominating Body	Experience/ Qualifications
Steven Sidney	Consultant	National Laboratory Association (Metrology)	Higher National Diploma T4; 20 years commercial experience in the technology sector
Nicolaas Beute	Cape Technikon	Committee of Technikon Principals (CTP)	PhD Electrical Eng; 38 years experience in engineering including 31 years in education and training; Dean of Engineering
Frederick Otieno	Technikon SA	Committee of Technikon Principals (CTP)	PhD Eng, MBA; 20 years in consultancy HOD of Civil Engineering
Pieter van der Walt	University of Stellenbosch	South African University Vice Chancellors Association (SAUVCA)	PhD (Eng) 30 years experience in tertiary education; Dean, Faculty of Engineering
Beatrys Lacquet	Rand Afrikaans University	South African Institute of Electrical Engineers	D. Ing (Electrical and Electronic) 22 years experience in research and tertiary education; Professor of Electrical and Electronic Engineering
Leon Beech	Athlone Technical College	AFETISA: (Association for Further Education and Training Institutions of South Africa)	B Ed 20 years experience in Further Education Rector
Marie Davison	Consultant	University of Stellenbosch	MSc (Eng) 32 years experience in Electrical Engineering including 5 in the field of policy development and strategic development
Andre Strydom	(Chemical Industry Education and Training Authority) CHIETA	Chemical Industries (CHIETA)	National Technical diploma; 18 years experience in the Metal Industry

Nominee	Workplace	Nominating Body	Experience/ Qualifications
Gene King	Eskom	Electricity Commission (ESKOM)	B Ed; 7 years experience in engineering; 18 years in Further Education, company training and HR
Graham Brokenshire	Anglogold	Mining Qualifications Authority (MQA)	BSc Eng (Electrical) 30 years experience in engineering including 9 years in training field
Themba Dlamini	(Construction Education and Training Authority) CETA	Construction SETA (CETA)	M. Development Economics; 12 years experience in financial management and economics; CEO CETA
Jacob Malatse	Department of Labour	Department of Labour	M Phil; 13 years experience in electrical engineering including 2 years in education and training field; Deputy Director
Louis van Rensburg	Department of Transport	Department of Transport	BSc (Eng) 30 years experience in engineering at middle and senior management level, including mentoring and HR development
Zola Mbanguta	Department of Education	Department of Education	D Phil; 17 years experience in engineering in the fields of further education and government

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