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**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

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

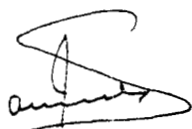
**Chemical Engineering**

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.saga.org.za](http://www.saga.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 21 October 2002***. All correspondence should be marked **Standards Setting – SGB for Chemical Engineering** and addressed to

The Director: Standards Setting and Development  
SAQA  
Attention: Mr. D Mphuthing  
Postnet Suite 248  
Private Bag X06  
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EXECUTIVE OFFICER

**Unit Standards Titles****Unit Standard Titles at NQF 1**

1. Apply financial life skills
2. Apply self management practices in the work place
3. Demonstrate an understanding of quality principles used in the chemical industry
4. Demonstrate knowledge of issues relating to HIV and AIDS
5. Describe chemical process operations and related process chemistry and technology used in the chemical industry
6. Maintain basic safety, health and environmental issues
7. Operate moving equipment to stack, de-stack, and position materials
8. Pack and Palletise products manually
9. Perform lubrication on production equipment
10. Select and use basic hand tools and materials
11. Use wastewater/sewage and storm water systems in industry

**Unit Standard Titles at NQF 2**

1. Apply process chemistry and related technology in the chemical industry
2. Apply sampling theory and practice in the chemical industry
3. Contribute to maintenance of equipment
4. Demonstrate knowledge of basic Good Manufacturing Practices (GMP) in a Chemical Manufacturing environment
5. Establish equipment start-up conditions to specified state
6. Shut down equipment to a specific state
7. Start up and operate equipment to specified state

**Unit Standard Titles at NQF 3**

1. Collect and interpret non-routine information regarding system conditions
2. Conform to and apply legislation and operational instructions in chemical processing
3. Contribute to the maintenance of a system
4. Establish system start up conditions
5. Monitor and maintain system conditions
6. Respond to hazardous conditions or emergencies
7. Shut down the system to a specified state
8. Solve operating problems using process chemistry and related technology
9. Start up the system

**Unit Standard Titles at NQF 4**

1. Collect, interpret and communicate process conditions
2. Control the process within set parameters
3. Establish process start up conditions
4. Respond to abnormal process conditions
5. Respond to hazardous and emergency conditions
6. Shut down the process to a specified state
7. Starting the process

**Unit Standards Titles and Specific Outcomes****Unit Standard Titles and Specific Outcomes at NQF 1****TITLE 1: Apply financial life skills**

- SO 1: Develop and operate a personal budget
- SO 2: Describe the benefits and limitations of commercial banking
- SO 3: Use a bank account
- SO 4: The functions and features of hire purchase are explained
- SO 5: A personal document control system is developed and maintained

**TITLE 2: Apply self management practices in the work place**

- SO 1: Maximise use of time
- SO 2: Manage anger to enhance personal effectiveness
- SO 3: Organise oneself for work
- SO 4: Apply stress management techniques

**TITLE 3: Demonstrate an understanding of quality principles used in the chemical industry**

- SO 1: Define the terms Quality Assurance, Quality Control and Quality Management
- SO 2: Explain the requirements and processes used to ensure effective Quality Control
- SO 3: Describe the factors that affect product quality
- SO 3: Demonstrate an understanding of the consequences of poor quality control

**Title 4: Demonstrate knowledge of issues relating to HIV and AIDS**

- SO 1: Explain the nature of HIV and AIDS and its effects on the human system
- SO 2: Demonstrate knowledge of HIV transmission, and practices to reduce the risk of contamination
- SO3: Explore societal and workplace issues related to HIV and AIDS

**Title 5: Describe chemical process operations and related process chemistry and technology used in the chemical industry**

- SO 1: Describe chemical process operations
- SO 2: Identify and describe process-variables related to physical/chemical occurrences that take place in a chemical process operation

**TITLE 6: Maintain basic safety, health and environmental issues**

- SO 1: Identify, recognise and describe safety health and environmental statutory and organizational requirements and responsibilities
- SO 2: Follow and observe safety, health and environmental requirements
- SO 3: Implement good hygiene and housekeeping practices
- SO 4: Recognise and report hazardous situations

**TITLE 7: Operate moving equipment to stack, de-stack, and position materials**

- SO 1: Prepare to stack and de-stack loads
- SO 2: Stack and de-stack loads using a range of moving equipment
- SO 3: Position materials at various locations and on varying surfaces