

**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 (Task Team) for

Fabrication and Extraction

registered by Organising Field 06 –Manufacturing,Engineering and Technology, publishes the following Qualification and Unit Standards for public comment.

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

Comment on the Qualification and Unit Standards should reach SAQA at the address below and **no later than 30 November 2009**. All correspondence should be marked **Standards Setting – Task team for Fabrication and Extraction** and addressed to

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ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
Further Education and Training Certificate: Mining Operations

SAQA QUAL ID	QUALIFICATION TITLE		
74490	Further Education and Training Certificate: Mining Operations		
ORIGINATOR	PROVIDER		
Task Team - Fabrication and Extraction			
QUALIFICATION TYPE	FIELD	SUBFIELD	
Further Ed and Training Cert	6 - Manufacturing, Engineering and Technology	Fabrication and Extraction	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	159	Level 4	Regular-Unit Stds Based

New NQF Level: NQF Level 04

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

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

The purpose of this Qualification is to equip learners with the theoretical knowledge, technical skills and practical ability to function as a Production Supervisor in a particular context (domain) within the mining industry.

The Production Supervisor plays a critical role in the mining industry. Mining activities are often conducted under dangerous and difficult conditions, which have to be managed appropriately in order to preserve the lives of those working in the industry, and ensure operational efficiency. While the title "supervisor" implies to specific competencies, these competencies are applied in conjunction with technical and operational competencies. The Production Supervisor must adapt continually to changing physical conditions in his or her area of responsibility e.g. geology and blast damage. He/she is accountable for the occupational health and safety of the team, as well as for achieving production targets.

Learners acquiring this Qualification will have an improved understanding of their role, acquire the applied competencies to consistently and effectively execute their duties by contributing to the mining process and adhere to quality and occupational health and safety requirements.

This Qualification will have a positive impact on society through the minerals produced, in the light of the massive impact of the mining industry on the economy. Furthermore, the mining industry has an additional impact on the economy in terms of secondary and tertiary mining and minerals related activities. In many parts of South Africa, entire communities would collapse if mining activities were to cease.

Learners credited with this Qualification will be able to:

- Communicate and solve problems by applying mathematical practical applications in a variety of ways.
- Adhere to Occupational Health, Safety and Environmental requirements.

- Supervise the extraction of minerals to meet production targets, taking into account the Occupational Health, Safety, Quality and Environmental requirements.
- Interact with Technical Services Departments to optimise the mining process.

Rationale:

The South African mining industry is one of the largest and most diverse in the world, with activities in domains such as:

- Underground Hard rock mining (Conventional and Mechanised).
- Underground Coal.
- Surface Mining/Quarrying/Dimension Stone/Industrial Minerals.
- Marine Mining.
- Alluvial.
- Small Scale Mines (Surface and Underground).

Apart from being the industry which makes the largest contribution to foreign exchange earnings, it is also one of the largest employers, providing employment opportunities to many workers from South Africa and neighbouring countries.

While there are many role players in the mining industry, the Production Supervisor (Pit Supervisor) can arguably be considered one of the most important role players in the mining process.

It is vital that the Production Supervisor comes from within the industry, and has intimate knowledge and experience of all the aspects of mining, such as:

- Occupational Health and Safety.
- Production (technical).
- Environmental (particularly surface mining contexts).
- Management/Leadership Skills.
- Mine Production Planning.

This requires a clear and thorough path of learning, from the basic aspects through to the more advanced aspects of Production, Occupational Health and Safety applicable at that particular level. The Production Supervisor has the accountability for the lives of his team and other support personnel.

This Qualification is the result of collaboration by the various mining domains:

- Underground Hard rock mining (Conventional and Mechanised).
- Underground Coal.
- Surface Excavations (Surface Mining/Quarrying/Dimension Stone/Industrial Minerals).
- Small Scale Mines (Surface and Underground).

Learners registering for this Qualification will typically be qualified Rockbreakers working within the mining industry; and learners will qualify as Production Supervisors in any of the specific domains in which they have accumulated sufficient technical and production expertise. Depending on their learning path, before engaging in learning towards this Qualification, a period of practical work in a specific domain may be required before appointment as a Production Supervisor can be made. This Qualification has 4 specialisation streams for learners to follow.

A typical learning pathway would begin with a National Certificate: Rockbreaking, NQF Level 3 and proceed to the Further Education and Training Certificate: Mining Operations. Learners who have achieved this Qualification can progress to Qualifications at a higher level on the NQF within the established mining learning pathways.

As this is a generic Qualification, it will be possible for learners to articulate between the respective domains. However an appropriate exposure to the practical aspects of a particular domain may be required before the learner will be able to operate safely and effectively in the new context.

RECOGNIZE PREVIOUS LEARNING?

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LEARNING ASSUMED IN PLACE

It is assumed that learners embarking on learning towards this Qualification are already competent in the following:

- Communication and Mathematical Literacy at NQF Level 3.

Recognition of Prior Learning:

This Qualification can be achieved wholly or in part through Recognition of Prior Learning in terms of the criteria laid out above.

Evidence can be presented in a variety of forms, including international or previous local Qualifications, reports, testimonials mentioning functions performed, work records, portfolios, videos of practice and performance records.

Access to the Qualification:

Access to this Qualification is restricted in terms of the Mines Health and Safety Act and Regulations to persons who have successfully completed a suitable Rockbreaking Qualification in the relevant domain or are current holders of a Blasting Certificate of Competence issued by the Department of Minerals and Energy.

QUALIFICATION RULES

Fundamental:

The Fundamental Component consists of the following learning, which is compulsory for learners:

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

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

All Unit Standards totalling 56 Credits must be achieved.

Core:

All Unit Standards totalling 53 Credits must be achieved.

Electives:

The Elective component consisting of four specialisation areas:

- Specialisation Area A: Underground Hard rock mining (Conventional and Mechanised).
- Specialisation Area B: Underground Coal Mining.
- Specialisation Area C: Surface Excavations.
- Specialisation Area D: Small Scale Mines (Surface and Underground).

Learners are to choose a specialisation area and then complete Unit Standards list for that specialisation totalling a minimum of 50 Credits.

Specialisation area A: Underground hard rock mining:

Title; NQF Level; Credits:

- ID 336912: Demonstrate knowledge and understanding of short term mine planning; NQF Level 4; 8 Credits.
- ID 336907: Demonstrate an understanding of development, pre-ledging equipping, ledging, equipping and stopping processes; NQF Level 4; 8 Credits.
- ID 336902: Demonstrate knowledge and understanding of the starting up and closing off procedure for an underground workplace; NQF Level 4; 5 Credits.
- ID 336900: Demonstrate an understanding of strata control practice in an underground hard rock mine; NQF Level 4; 8 Credits.
- ID 336905: Demonstrate knowledge and understanding of underground horizontal transport operation; NQF Level 4; 4 Credits.
- ID 336911: Demonstrate an understanding of mine geology; NQF Level 4; 4 Credits.
- ID 336915: Demonstrate knowledge and understanding of Mineral valuation; NQF Level 4; 4 Credits.
- ID 336964: Demonstrate an understanding of roles and responsibilities of a production supervisor in a mining environment; NQF Level 4; 8 Credits.
- ID 336980: Apply a computerized management system in a production mining environment; NQF Level 3; 4 Credits.

Total: 53 Credits.

Specialisation area B: Underground coal mining:

Title; NQF Level; Credits:

- ID 263016: Read and understand a mine plan and transfer recorded information onto mine plans; NQF Level 3; 4 Credits.
- ID 337039: Coordinate transportation operations in an underground coal mine; NQF Level 4; 5 Credits.
- ID 115600: Demonstrate the coordination of conveyor system operations in an underground coal mine; NQF Level 3; 4 Credits.
- ID 115608: Demonstrate an understanding of Ventilation systems in an underground coal mine; NQF level 4; 10 Credits.
- ID 336979: Control stonework operations in an underground coal mine; NQF Level 3; 4 Credits.
- ID 336944: Coordinate of loading operations in an underground coal mine; NQF Level 4; 5 Credits.
- ID 110125: Control operations in a blasting section in an underground coal mine; NQF Level 3; 15 Credits.
- ID 263414: Process data using information technology; NQF Level 4; 5 Credits.