


SKILLS PROGRAMME DOCUMENT			
the SP Doc is applicable to three Skills Programmes			
Skills Programme ID Number(s)	Skills Programme Title(s)	Credits	Duration in days
SP-230316	Mining Excavator Operator-Underground Hardrock Operations	36	45 days
SP-230317	Mining Excavator Operator-Underground Coal Operations	28	35 days
SP-230318	Mining Excavator Operator-Surface Mining Operations	28	35 days
NQF Level	3		
Skills Programme Status	APPROVED	Start Date	End Date
		25/03/2023	25/03/2028
Last date for enrolment	25/03/2029	Last date for achievement	25/03/2032

SKILLS PROGRAMME DETAILS

1.	Title	<ul style="list-style-type: none"> - Mining Excavator Operator-Underground Hardrock Operations - Mining Excavator Operator-Underground Coal Operations - Mining Excavator Operator-Surface Mining Operations
2.	Sub Title	733208 Mobile Mining Equipment Operator
3.	NQF Level	NQF Level 3
4.	Duration	See cover page 1
5.	Credits	See cover page 1
6.	Quality Assuring Body	Quality Council for Trades and Occupations (QCTO)
7.	Skills Programme Rationale	<p>The need for this skills programme is that mobile machines are used extensively in mining operations, so it is essential that machine operators are trained in their duties and responsibilities. Mining legislation prescribes that the machine operators must be qualified, by virtue of their knowledge, training, skills, and experience, before they are appointed. They must be trained, assessed, and found competent, in accordance with recognised training and development programmes.</p> <p>Typical learners will be new entrants to the mining sector or employed learners seeking to be trained as machine operators.</p> <p>There is presently no similar skills programme recorded.</p> <p>A typical learning pathway for machine operators will be to other machine operator specialisations and to occupations in mining operations, engineering or training.</p> <p>The benefits of this skills programme to the mining sector will be to have persons who are trained and declared competent for their specific duties and responsibilities, and to provide introductory, specialised training to enable them to advance their - careers. Safe and productive mining operations are fundamental to the sector.</p> <p>The work is done in excavations that do not exist naturally but are created through rock breaking and blasting activities. This unique environment holds many hazards and risks for all personnel. The skills required to for the work require dedicated learning, application, and specialised and technical skills. Mining will remain the backbone of the South African economy for many years to come, and with the advance of technology there will, in the coming decades, be opportunities to return to and access the minerals left behind in the older mines. The mining and minerals sector will also be able to access</p>

		<p>resources that are currently too deep to mine. The development of the occupational competence as set out in this skills programme is essential to maintain and advance mining in the country.</p> <p>This skills programme will benefit society in terms of skills and technical competencies since qualifying learners will improve work standards, health and safety, and effectiveness, and contribute to the growth of the country's economy.</p>		
8.	Related registered qualification/s	SAQA ID 120057 Intermediate Occupational Certificate: Miner		
9.	Purpose	<p>The purpose of this skills programme is to prepare a learner to operate as a Mining Excavator Operator.</p> <p>An Excavator Operator operates and controls a machine to dig out and load material for mining operations. Excavator machine types maybe electric or diesel driven; have a face-shovel or back-hoe configuration; be wheel or track-mounted; have hydraulically or rope/cable operated boom, stick and bucket systems. The qualifying learner will know the functioning and operating of the excavator, including health, safety and environmental requirements and will be able to operate the excavator productively and safely.</p> <p>A qualified learner will be able to:</p> <ul style="list-style-type: none"> • Apply, exercise, and ensure safety, health and environmental measures and procedures • Operate the Excavator 		
10.	Content	<table border="0"> <tr> <td style="vertical-align: top;"> <p><u>Knowledge component</u></p> <ul style="list-style-type: none"> • 900155-000-00-KM-01 Workplace fundamentals, NQF Level 2, Credits 4 • 900134-000-00-KM-01 Health, safety, and the environment, NQF Level 2, Credits 4 • 900155-000-00-KM-01 Operations and machines, NQF Level 3, Credits 4 • 900155-000-00-KM-02 Components, controls, and consumables, NQF Level 3, Credits 4 </td> <td style="vertical-align: top;"> <p><u>Application component Compulsory module/s</u></p> <ul style="list-style-type: none"> • 900134-000-00-PM-01, Apply, exercise, and ensure safety, health and environmental measures and procedures, NQF Level 2, Credits 4 • 900155-000-00-PM-01 Perform pre-operational activities, NQF Level 3, Credits 4 <p><u>A learner may choose any of the below electives:</u></p> <p>Elective module 1:</p> </td> </tr> </table>	<p><u>Knowledge component</u></p> <ul style="list-style-type: none"> • 900155-000-00-KM-01 Workplace fundamentals, NQF Level 2, Credits 4 • 900134-000-00-KM-01 Health, safety, and the environment, NQF Level 2, Credits 4 • 900155-000-00-KM-01 Operations and machines, NQF Level 3, Credits 4 • 900155-000-00-KM-02 Components, controls, and consumables, NQF Level 3, Credits 4 	<p><u>Application component Compulsory module/s</u></p> <ul style="list-style-type: none"> • 900134-000-00-PM-01, Apply, exercise, and ensure safety, health and environmental measures and procedures, NQF Level 2, Credits 4 • 900155-000-00-PM-01 Perform pre-operational activities, NQF Level 3, Credits 4 <p><u>A learner may choose any of the below electives:</u></p> <p>Elective module 1:</p>
<p><u>Knowledge component</u></p> <ul style="list-style-type: none"> • 900155-000-00-KM-01 Workplace fundamentals, NQF Level 2, Credits 4 • 900134-000-00-KM-01 Health, safety, and the environment, NQF Level 2, Credits 4 • 900155-000-00-KM-01 Operations and machines, NQF Level 3, Credits 4 • 900155-000-00-KM-02 Components, controls, and consumables, NQF Level 3, Credits 4 	<p><u>Application component Compulsory module/s</u></p> <ul style="list-style-type: none"> • 900134-000-00-PM-01, Apply, exercise, and ensure safety, health and environmental measures and procedures, NQF Level 2, Credits 4 • 900155-000-00-PM-01 Perform pre-operational activities, NQF Level 3, Credits 4 <p><u>A learner may choose any of the below electives:</u></p> <p>Elective module 1:</p>			

		<p>Underground hardrock operations</p> <ul style="list-style-type: none"> • 900162-000-00-PM-01 Operate an excavator in an Underground Hardrock operation, NQF Level 3, Credits 12 <p>Elective module 2: Underground coal operations</p> <ul style="list-style-type: none"> • 900163-000-00-PM-01 Operate an Excavator in an Underground Coal Operation, NQF Level 2, Credits 4 <p>Elective module 3: Surface mining operations</p> <ul style="list-style-type: none"> • 900164-000-00-PM-01 Operate an Excavator in a Surface Mining Operation, NQF Level 2, Credits 4 <p>Total credits:16</p> <p>Total credits: Either 20 credits <i>or</i> 12 credits - <i>depends on the elective chosen</i></p>
11.	Minimum entry requirements	Open access
12.	Exit Level Outcomes (ELO) and Associated Assessment Criteria (AAC)	<p>Exit Level Outcome 1: Work safely, applying the knowledge of relevant legal and company requirements, hazard identification and risk assessment processes and procedures and environmental and operating conditions.</p> <p>Associated Assessment Criteria:</p> <ul style="list-style-type: none"> • The importance of identifying and responding to various kinds of hazard is explained. • How to respond to emergencies is described and explained. • Legal and procedural compliance with regard to the operation of the excavator and working safely is described and explained. <p>Exit Level Outcome 2: Operate an Excavator.</p> <p>Associated Assessment Criteria:</p> <ul style="list-style-type: none"> • The correct sequence of operations is followed.

		<ul style="list-style-type: none"> • The machine is operated and used within specified limits. • Man-machine interfaces are controlled safely and effectively. • Excavator operations are completed, in accordance with requirements.
13.	Assessment	<p>Continuous Assessment</p> <p>The SDP must ensure that all learners are enrolled with the QCTO at the start of training (within 5 days) in the format required by the QCTO.</p> <p>Continuous assessments are set by the SDP in accordance with the assessment criteria provided for each module for either underground hard rock, underground coal or surface mining operations</p> <p>This may consist of a variety of methods, e.g., practical, or written assessments, assignments, projects, demonstrations, presentations, or any other form of assessment to assist the learner in the learning process.</p> <p>During training, it is mandatory for formal summative assessments to take place at the end of each module/topic. These results must be formally recorded and be available for monitoring and/or evaluation by the QCTO.</p> <p>Final Integrated Supervised Assessment (FISA) All learners gain entrance to the Final Integrated Supervised Assessment by successfully completing all formal summative assessments conducted by the SDP.</p> <p>Format of FISA: A practical assessment integrating the relevant Exit Level outcomes, with simultaneous verbal assessment of embedded knowledge by the assessor before, during or after the FISA.</p> <p>All FISAs must be supervised, and virtual FISAs must be recorded throughout the assessment.</p> <p>All Exit Level Outcomes must be covered in the FISA. In the FISA, the learner must demonstrate applied knowledge and skills for either underground hard rock, underground coal or surface mining operations to prove that the competencies of the Skills Programme have been achieved.</p> <p>The FISA may not contain any assessments used in the "Continuous Assessment" process (thus no re-assessment).</p> <p>Special considerations should be made for candidates with special learning needs.</p>

		<p>Standards for Final Integrated Supervised Assessment (FISA):</p> <p>The learner should be provided with a brief/job card/task to demonstrate what the learner should show, know, or produce in a product, relevant to the Exit Level Outcomes and the purpose of the Skills Programme. This is the section where the learner must show applied competency (what the learner must be able to do, and to what expected standard)</p> <p>The FISA INSTRUMENT (Written case study, scenario, or brief/task [similar to a job card]) must be developed and moderated by the SDP and conducted in a supervised environment. It is assessed by means of a RUBRIC developed by the SDP for this purpose:</p> <p>A Competent Candidate must be able to carry out and conduct directional drilling operations, interpreting, applying, and exercising policies, procedures, performance parameters, controls, and operating standards.</p> <p>Given a simulated or actual Underground Hardrock, Underground Coal, or Surface mining context, the candidate must be able to:</p> <ul style="list-style-type: none"> • Deal with ground and strata conditions, in accordance with operating requirements <p>Perform pre-operational activities Operate the machine</p> <p>effectively and safely in accordance with statutory, regulatory, and organizational procedures, policies, codes of practice, standards and agreements.</p> <p>This Practical assessment should be a maximum of 2 hours.</p> <p>Whilst conducting the above practical, strategic, well-timed questions should be asked of the learner to assess embedded knowledge gained during the skills programme, as well as critical thinking and problem-solving skills: for e.g.</p> <ul style="list-style-type: none"> • "Why.....?" • "What would happen if ...?" • "When is done, what would the result be?" • "How would you deal with?" • Etc. <p>The marking rubric/compliance checklist used to assess these competencies must include a section for the assessor/facilitator used in this session to make a note of competencies shown, (or not shown), as well as the questions that were asked, and a summary of the learner's answers, and state whether these are of the acceptable standard or not.</p>
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14.	Recognition of Prior Learning	<ul style="list-style-type: none"> • Learners will gain access to the skills programme through RPL for access as provided for in the QCTO RPL Policy. RPL for access is conducted by an accredited institution, skills development provider or workplace accredited to offer that specific skills programme. • Learners who have already acquired competencies of modules of a skills programme will be exempted from modules through RPL. Such learners will be awarded credits towards the skills programme. • Learners who complete this skills programme will accumulate credits towards the relevant full or part qualification. The Credit Accumulation and Transfer (CAT) Policy shall apply to these learners
15.	Work Opportunities and further learning	<p>This skills programme will enable qualifying learners to access Machine Operator occupations in the Mining and Minerals Sector.</p> <p>A typical learning pathway in mining production operations would be to Blasting Assistant or Team Leader at NQF Level 2, Blaster or Miner at NQF Level 3, then Shift Supervisor at NQF Level 4</p>
16.	Skills Development Provider Accreditation Requirements	<p><i>Physical Requirements:</i></p> <ul style="list-style-type: none"> • Occupational Safety, Health, and Environmental (OSHE) and operational facilities, plant equipment and resources • OSHE and operational related consumables

		<p><i>Human Resource Requirements:</i></p> <ul style="list-style-type: none"> • Experienced Facilitators/trainers with a minimum NQF Level 3 ETDP qualification • A minimum of 1-year experience in machine operations appointed in accordance with the organisation's Quality Management system <p><i>Legal Requirements:</i> Registered Skills Development Providers (SDP) will comply with the requirements of the following, including all amendments, regulations, and directives, as applicable: Occupational Health and Safety Act 85 of 1993 Mine Health and Safety Act 29 of 1996 Labour Relations Act 66 of 1995 The Basic Conditions of Employment Act 75 of 1997</p> <p><i>Safety requirements:</i></p> <ul style="list-style-type: none"> • Facilitators and personnel /trainers conform to all statutory, regulatory, and organisational requirements
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