

74269 National Certificate: Occupational Health, Safety and Environment

120 Credits NQF Level 2

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

This Qualification is to equip learners working in any type of workplace with a broad understanding and knowledge of Occupational Health, Safety and Environmental (HSE) concepts and practices with sufficient detail to enable them to function in a safe and healthy way and to deal with health and safety problems and issues. It will also contribute to the further development of learners within this environment by providing articulation, recognition and mobility within this dynamic and changing environment.

A learner acquiring this Qualification will be able to:

Use verbal and written practices to communicate in the workplace and apply mathematical processes to solve every day numerical problems.

Explain the requirements of current legislation impacting on Health, Safety and environmental issues in the workplace.

Recognise, assess and report health and safety hazards and situations in the workplace.

Administer various health and safety functions, planning, policy and behaviours in the workplace.

Qualifying learners will be able to show responsibility, and independently and effectively manage themselves in the workplace regarding generic health and safety issues. Learners will be able to identify and evaluate occupational safety, health and environmental factors, in occupational environments, which may have a detrimental effect on health and safety of people in such environments. Learners credited with this Qualification can perform essential measurements and functions that promote a culture of health and safety in the workplace.

Rationale:

This Qualification provides learners with opportunities for professional development and career advancement within the broader constituencies of the Health, Safety and Environment (HSE) community that will contribute to providing better and safer workplace for all people in the Republic of South Africa. It will assist those health and safety professionals who play an increasingly complex and crucial role in ensuring the health and safety of employees have a well-grounded and comprehensive understanding of the key issues that are essential to meet these high demands. It covers the key issues involved at ground level and is designed to cover general health and safety issues with the specifics being incorporated in the Elective category.

In South Africa and internationally, the social and economic impact of occupational safety, hygiene, health, and environment is great. Direct costs that result from poor workplace safety, hygiene, health, and environments include human and economic costs. Indirect costs are also incurred and can include inter alia poor morale, poor productivity, downtime. Improved workplace safety, hygiene, health, and environments could influence the South African economy in direct costs alone to the value of millions of Rand each year. This qualification aims to meet the demand for learners that can assist with the provision of a safe, healthy and productive occupational environment.

There is a critical need in the industry to recognise learner competence regarding essential operations associated with a healthy, safe and productive working environment. This qualification is the entry level to a career path in one of the areas of specialisation in Occupational HSE. It is generic enough to allow maximum mobility within the field of application.

Obtaining formal qualifications in HSE will enable the learner to operate in a wide range of environments. This enhances the employment opportunities of learners and ensures a wider coverage of HSE Practitioners in the South African work environment. Formal qualifications, and especially at this level open a career path in HSE and access to further studies, formal and informal, not only in this field but also other, related, fields. Skills, knowledge, values and attitudes (competencies) reflected in the qualification are building blocks towards a higher qualification.

LEARNING ASSUMED TO BE IN PLACE AND RECOGNITION OF PRIOR LEARNING

Mathematical literacy at NQF Level 1.

Communication at NQF Level 1.

Computer literacy at NQF level 1.

Recognition of Prior Learning:

The Qualification can be achieved in whole or part through the Recognition of Prior Learning (RPL). Learners obtaining the whole Qualification through RPL and wishing to be declared competent are required to complete a practical assessment component for the purpose of such recognition. This implies that the Qualification may be granted to learners who have acquired the skills and knowledge without attending formal courses, provided they demonstrate competence in the outcomes of the individual Unit Standards as required by the Fundamental, Core and Elective components stipulated in the Qualification and by the Exit Level Outcomes.

Learners submitting themselves for RPL should be thoroughly briefed prior to the assessment and may be required to submit a Portfolio of Evidence (POE) in the prescribed format and/or undergo a workplace assessment to be assessed for formal recognition. While this is primarily a workplace-based Qualification, evidence from other areas of endeavour may be introduced if pertinent to any of the Exit Level Outcomes.

Access to the Qualification:

Access is open to all learners bearing in mind the learning assumed to be in place.

RECOGNISE PREVIOUS LEARNING?

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QUALIFICATION RULES

The Qualification is made up of a combination of learning outcomes from Fundamental, Core and Elective components, totalling a minimum of 120 Credits.

Fundamental component:

All unit standards to the value of 36 credits are compulsory.

Core component:

All unit standards to the value of 64 credits are compulsory.

Elective component:

The Elective component for this Qualification is divided into different specialisations from which the learners may choose. Potential learners will need to select Elective Unit Standards to the value of a minimum of 20 credits from one of these options, depending on the sub-sector of the health, safety or environment field they are employed in or wish to become involved in.

The specialisations are as follows:

Health (Learning Programme ID 74289) (46 credits available):

- ID 252250: Apply firefighting techniques.
- ID 259607: Handle water sample for analysis.
- ID 259606: Conduct routine inspections on percussion rock drills.
- ID 244422: Demonstrate knowledge of the most common harmful gases and vapours.
- ID 259608: Explain the prevention and control of the propagation of a coal dust explosion.
- ID 259598: Describe the need for illumination in a working place.
- ID 259603: Determine low velocity and volume flow rate of air.
- ID 259605: Determine the amount of particulate matter in water by means of a turbidimeter.
- ID 259641: Determine the amount of rock dust in water by means of a Nephelometer.
- ID 259625: Measure cooling power and low air velocity using a wet kata thermometer.
- ID 259623: Measure wet and dry bulb temperature using a whirling hygrometer.
- ID 254221: Prevent musculoskeletal injuries to self during lifting and carrying activities.
- ID 259638: Issue and retrieve Personal Monitoring Equipment.
- ID 259642: Measure barometric pressure by means of electronic and mechanical instruments.
- ID 259640: Measure compressed air and water pressures by means of a handheld pressure gauge and take appropriate action.
- ID 259627: Measure illumination levels in a workplace by means of a luxmeter.
- ID 259637: Test for flammable gases by means of a handheld electronic instrument and take appropriate action.
- ID 259657: Measure virgin rock temperature.
- ID 259658: Sample and evaluate a mixture of coal dust and stone dust.
- ID 259626: Measure noise levels in a workplace by means of a sound level meter.

Safety (Learning Programme ID 74290) (30 credits available):

- ID 252250: Apply firefighting techniques.
- ID 9964: Apply health and safety to a work area.
- ID 120330: Conduct a continuous risk assessment in a workplace.
- ID 259610: Demonstrate basic understanding of the procedure for compensation claims submissions for injuries and occupational diseases.
- ID 120337: Demonstrate knowledge pertaining to the preparation, conducting, recording and follow-up actions of a planned task observation in a working place.
- ID 259599: Participate in the establishment, implementation and monitoring of a health and safety agreement.
- ID 259601: Participate in the implementation and evaluation of a safety and health management programme in the workplace.
- ID 119553: Take action to address impacts on the environment.
- ID 259622: Describe the functions of the workplace health and safety representative.

Environment (Learning Programme ID 74291) (35 credits available):

- ID 252250: Apply firefighting techniques.
- ID 119822: Collect data for environmental management purposes.
- ID 246463: Demonstrate knowledge of water cycle, water and wastewater systems and processes.
- ID 259600: Participate in the implementation and evaluation of an environmental management programme in the workplace.
- ID 119553: Take action to address impacts on the environment.
- ID 119558: Work with, use and care for materials and resources which can impact on health and the environment.

Mining and Minerals specialisation (Learning Programme ID 74292):

- ID 252250: Apply firefighting techniques.
- ID 9964: Apply health and safety to a work area; Level 2; 3 credits.
- ID 259622: Describe the functions of the workplace health and safety representative; Level 2; 3 credits.
- ID 259599: Participate in the establishment, implementation and monitoring of a health and safety agreement; Level 2; 2 credits.
- ID 259601: Participate in the implementation and evaluation of a safety and health management programme in the workplace; Level 2; 2 credits.
- ID 259637: Test for flammable gases using a handheld electronic instrument and take appropriate action; Level 2; 2 credits.
- ID 120330: Conduct a continuous risk assessment in a workplace; Level 3; 4 credits.
- ID 244422: Demonstrate knowledge of the most common harmful gases and vapours; Level 3; 4 credits.
- ID 120337: Demonstrate knowledge pertaining to the preparation, conducting, recording and follow-up actions of a planned task observation in a working place; Level 3; 2 credits.
- ID 119553: Take action to address impacts on the environment; Level 2; 10 credits.
- ID 259598: Describe the need for illumination in a workplace; Level 1; 2 credits.
- ID 259606: Conduct routine inspections on percussion rock drills; Level 2; 2 credits.
- ID 259603: Determine low velocity and volume flow rate of air; Level 2; 2 credits.
- ID 259605: Determine the amount of particulate matter in water using a turbidimeter; Level 2; 2 credits.
- ID 259608: Explain the prevention and control of the propagation of a coal dust explosion; Level 2; 5 credits.
- ID 259607: Handle water samples for analysis; Level 2; 2 credits.
- ID 259638: Issue and retrieve Personal Monitoring Equipment; Level 2; 2 credits.
- ID 259642: Measure barometric pressure using electronic and/or mechanical instruments; Level 2; 2 credits.
- ID 259640: Measure compressed air and/or water pressure using a handheld pressure gauge; Level 2; 2 credits.
- ID 259625: Measure cooling power and low air velocity by using a wet Kata thermometer; Level 2; 2 credits.

ID 259627: Measure illumination levels in a workplace using a Luxmeter; Level 2; 2 credits
ID 259657: Measure virgin rock temperature; Level 2; 2 credits.
ID 259623: Measure wet and dry bulb temperature by using a whirling Hygrometer; Level 2; 2 credits.
ID 259658: Sample and evaluate a mixture of coal dust and stone dust; Level 2; 3 credits.
ID 259641: Determine the quantity of rock dust in water using a Nephelometer; Level 3; 3 credits.
ID 259626: Measure noise levels in a workplace using a sound level meter; Level 3; 2 credits.
ID 376480: Provide first aid as an advanced first responder; Level 3; 8 credits.

EXIT LEVEL OUTCOMES

1. Use verbal and written practices to communicate in the workplace and apply mathematical processes to solve every day numerical problems.
2. Explain the requirements of current legislation impacting on Health, Safety and environmental issues in the workplace.
3. Recognise, assess and report health and safety hazards and situations in the workplace.
4. Administer various health and safety functions, planning, policy and behaviours in the workplace.

Critical Cross-Field Outcomes:

This Qualification addresses the following Critical Cross-Field Outcomes, in the indicated Exit Level Outcomes:

Identifying and solving problems in the workplace in the process of dealing with and health and safety hazards and situations and the administration of health and safety functions.

Working effectively with others in the maintenance and adherence of health, safety and environmental practices in the workplace.

Organising and managing oneself and one's activities responsibly and effectively so that all aspects regarding health, safety and environmental functions and practices are at hand, as and when required, to enhance these in the workplace and in the application of legislation.

Collecting, analysing, organising and critically evaluating information pertaining to the application of health, safety and environmental legislation and the implementation of health, safety and environmental practices and functions.

Communicating effectively with all the stakeholders who are involved in health, safety and environmental practices and functions.

Using science and technology effectively and critically in the preparation and distribution of health, safety and environmental reports.

Demonstrating an understanding of the world as a set of related systems through the proper application of systems, policies and procedures related to health, safety and environmental practices and functions.

All of the above contribute to the full personal development of each learner and the social and economic development of society at large by ensuring they participate as responsible citizens in the life of local, national and global communities in terms of health, safety and environmental issues.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

- 1.1 Information from texts, reports and standard operating procedures is practically applied in the workplace in specific health, safety and environmental contexts.
- 1.2 All communications are addressed and responded to in accordance with the relevant workplace requirements.
- 1.3 Numerical conversions, calculations and measurements are performed as required in the workplace in specific health, safety and environmental contexts.
- 1.4 Health and safety signs are interpreted and explained as required by specific worksites.

Associated Assessment Criteria for Exit Level Outcome 2:

- 2.1 Legislative and regulatory requirements are explained related to health, safety and environmental issues.
- 2.2 The health and safety environment are defined focusing on specific workplace principles and situations.
- 2.3 The concept of promoting health, safety and environmental issues is explained indicating the roles played by all stakeholders.

Associated Assessment Criteria for Exit Level Outcome 3:

- 3.1 The consequences of exposure and poor adherence to health and safety requirements are described in terms of the impact on people and the organisation.
- 3.2 Workplace hazards and risks are addressed in accordance with workplace specific health and safety requirements.
- 3.3 Corrective and/or mitigative measures are taken to deal with workplace hazards and risks in accordance with workplace specific health and safety requirements.

Associated Assessment Criteria for Exit Level Outcome 4:

- 4.1 All HSE functions, including inspections, meet specified requirements in line with each specific workplace.
- 4.2 Administrative functions are performed in accordance with workplace specific health and safety requirements.
- 4.3 Primary emergency care requirements are met in accordance with workplace specific health and safety requirements.
- 4.4 Health and safety behaviours are observed in order to ensure compliance by all role-players.

Integrated Assessment:

Learners may be credited for individual unit standards as and when they can demonstrate that they can achieve the required competencies.

Workplace experience may be recognised when assessing this qualification.

A range of formative and summative methods may be used in assessing learners, which may include:

- > Written and oral tests/examinations.
- > Case studies and assignments.
- > Role-play and simulation sessions.
- > Written reports/work plans.
- > Demonstrations by the learner.
- > Research projects.

Formative assessment should be carried out at regular intervals throughout the period of study. It should be offered in an integrated manner where the theoretical and practical components are assessed together to measure learner competence.

Summative assessment is carried out on completion of all learning components required for the Qualification, whether theoretical or practical.

INTERNATIONAL COMPARABILITY

The purpose of this study was to facilitate the development of a meaningful learning path and its associated curriculum incorporating both theoretical and practical vocational skills which will ensure compatibility, comparability and compliance with existing international qualification specifications and regulations.

Training programmes in occupational safety and health (OSH) exist in the SADC region. However a review of these programmes conducted under the auspices of SADC/ELS for Work and Health in Southern Africa (WAHSA), identified that with the exceptions of the Seychelles, South Africa, Zambia and Zimbabwe, no other SADC countries have any specific health and safety training programme in place. From this report it can be understood that there is a lack of capacity in OSH training, and that many courses and topics needed to cover the requirements for OHS professionals in the region are missing. In the process of conducting this international study, it was found that the majority of OHS training was conducted by South African companies in the SADC region. Therefore, it was difficult to find any comparisons.

This Qualification was compared with equivalent qualifications from a range of other countries. Countries with similar economies to ours were sourced and a comparison was made with their training and development. The best examples of like qualifications/courses came from Brazil and India.

Countries with established economies were also accessed and chosen for comparison purposes because they offer education and training that is of high quality in terms of Occupational Health and Safety practices. These countries are the United Kingdom, Australia, United States of America and Canada.

Conclusion:

The United Kingdom seems to show best practice through its strictness in the observance of health and safety practices and in the provision of training and development in this field. The National Certificate: Occupational Health, Safety and Environment, NQF Level 2, compares favourably with the courses offered in the United Kingdom. Differences in training in South Africa are created through the need to comply with South African legislative requirements. Training in the area of OHS in South Africa has shown to be in demand in several countries of the SADC region and further afield in sub-Saharan Africa.

ARTICULATION OPTIONS

Horizontally, this Qualification articulates with:

ID 61689: National Certificate: Community Water, Health and Sanitation Promotion, NQF Level 2.

ID 49085: National Certificate: Fundamental Ancillary Health Care, NQF Level 2.

ID 49605: National Certificate: Environmental Practice, NQF Level 2.