

# OCCUPATIONAL CERTIFICATE: CHEMICAL LABORATORY ANALYST NQF LEVEL 4

Knowledge & Practical Modules: Six (6) Months

Workplace Module: Twelve (12) Months

Mode of Teaching & Learning:

Contact Lectures and Practical Laboratory Experiments

Lectures : KZN Training Academy (321 ZK Matthews Rd)

Practical Venues: TIA & MUT Chemistry Laboratories

## PURPOSE

The purpose of this qualification is to prepare a learner to operate as a Chemical Laboratory Analyst.

Chemical Laboratory Analysts perform chemical and physical analyses of samples to pre-defined standards, in support of operational chemical processes.

### A qualified learner will be able to:

- Take samples for specific operational processes
- Prepare samples for analysis
- Analyse samples in a chemical laboratory by applying basic analytical methods and equipment
- Analyse samples in a chemical laboratory by applying advanced analytical processes and using complex equipment

## ASSESSMENT

An internal integrated formative assessment is conducted by the Skill Development Provider (SDP) for both applied knowledge and practical skills. This assessment is based on the stipulated internal assessment criteria and weighting which leads to entrance into the integrated external summative assessment.

An external integrated summative assessment is conducted through the relevant QCTO Assessment Quality Partner for the issuing of the certificate. This assessment focuses on the exit level outcomes and associated assessment criteria.

## CAREER PROGRESSION

On successful completion of this program, the learner will receive an Occupational Certificate: Chemical Laboratory Analyst NQF Level 4. This certificate will qualify the learner either to join the workforce as a Chemical Laboratory Analyst or to further his/her studies to the next NQF Level shown below:

Higher Certificate/Advanced Certificate NQF Level 5

Diploma: Analytical Chemistry NQF Level 6

Advanced Diploma: Analytical Chemistry NQF Level 7

## CAREER OPPORTUNITIES

Chemical laboratory Assistant, Chemical Laboratory Technician/ Chemical Analyst/ laboratory Manager/ Mining/ Forensic Sciences/ Pharmaceutical Industry/Research and Development/ Quality Assurance/ Lecturer/Marketing & Sales

## ADMISSION REQUIREMENTS

Grade 12 with Pure Mathematics and Physical Science with Minimum 30% Mark Each or Mathematics N3 & Engineering Science N3 With Minimum 40% Mark Each.

## QUALIFICATION MODULES (QM)

### Knowledge Modules (KM):

**311101001-KM-01:** Fundamentals of Sampling and Sample Preparation (Credits 6)

**311101001-KM-02:** Introduction to Analytical Chemistry (Credits 11)

**311101001-KM-03:** Theory of Fire Assay (Credits 6)

**311101001-KM-04:** Applied mathematics, chemistry, and physics (Credits 16)

**311101001-KM-05:** Analytical Chemistry (Credits 30)

*Total number of credits for Knowledge Modules: 69*

### Practical Modules (PM):

**311101001-PM-01:** Collect a range of samples (Credits 7)

**311101001-PM-02:** Execute primary and secondary sample preparation as required (Credits 8)

**311101001-PM-03:** Analyse samples using basic analytical methods and equipment (Credits 20)

**311101001-PM-04:** Analyse samples by advanced analytical methods and equipment (Credits 24)

*Total number of credits for Practical Modules: 59*

### Workplace Modules (WM):

**311101001-WM-01:** Exposed to the processes of sample collection for specific industries (Credits 8)

**311101001-WM-02:** Exposure to the processes of sample preparation as applied within the specific work environment (Credits 16)

**311101001-WM-03:** Exposure to the basic analysis of laboratory samples (Credits 16)

**311101001-WM-04:** Exposure to the advanced analysis of laboratory samples (Credits 32)

*Total number of credits for Workplace Modules: 72*

## ENQUIRIES

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**FDA FUNULWAZI  
DEVELOPMENT  
ACADEMY**

THE INSTITUTE OF SCIENCE, INNOVATION AND TECHNOLOGY

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OCCUPATIONAL CODE: 311101

ACCREDITED BY



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