

PROGRAMME TITLE	NQF	SAQA ID	CREDITS
Occupational Certificate: Data Science Practitioner	5	118708	185

DESCRIPTION

The purpose of this qualification is to prepare a learner to operate as a Data Science Practitioner. Data Science Practitioners take custody of data and make the data available in a structured form for the Data Scientist to use. They support the data life cycle by collecting, transforming, and analysing data and communicating results to solve elementary business problems. They transform data into robust, comprehensive data sets, aligned with the problem identified in the statement of work and ready for storage

CAREER FIELDS

With this qualification, successful learners could pursue a career as a:

- Data Analyst.
- Data Engineers.
- Database Administrator.
- Machine Learning Engineer.
- Data Scientist.
- Data Architect.
- Statistician.
- Business Analyst.

PROGRAMME OUTLINE

Knowledge Modules:

- 251102-001-00-KM-01 Introduction to Data Science and Data Analysis, Level 4, 6 Credits.
- 251102-001-00-KM-02 Logical Thinking and Basic Calculations: Refresher, Level 4, 4 Credits.
- 251102-001-00-KM-03 Computers and Computing Systems, Level 4, 4 Credits.
- 251102-001-00-KM-04 Computing Theory, Level 4, 2 Credits.
- 251102-001-00-KM-05 Basic Statistics for Data Analytics, Level 4, 10 Credits.
- 251102-001-00-KM-06 Statistics Essentials for Data Analytics, Level 5, 4 Credits.
- 251102-001-00-KM-07 Data Science and Data Analysis, Level 5, 12 Credits.
- 251102-001-00-KM-08 Data Analysis and Visualisation, Level 5, 16 Credits.
- 251102-001-00-KM-09 Introduction to Governance, Legislation and Ethics, Level 4, 3 Credits.
- 251102-001-00-KM-10 Fundamentals of Design Thinking and Innovation, Level 4, 4 Credits.
- 251102-001-00-KM-11 4IR and Future Skills, Level 4, 1 Credit.

Total number of credits for Knowledge Modules: 66

Practical Skill Modules

- 251102-001-00-PM-01 Apply Logical Thinking and Maths Refresher, Level 4, 3 Credits.
- 251102-001-00-PM-02 Apply Code to Use a Software Toolkit/Platform in the Field of Study or Employment, Level 4, 4 Credits.
- 251102-001-00-PM-03 Use Spreadsheets to Analyse and Visualise Data, Level 4, 3 Credits.
- 251102-001-00-PM-04 Use a Visual Analytics Platform to Analyse and Visualise Data, Level 5, 4 Credits.
- 251102-001-00-PM-05 Apply Statistical Tools and Techniques, Level 5, 4 Credits.
- 251102-001-00-PM-06 Collect and Pre-Process Large Amounts of Unruly Data, Level 5, 12 Credits.
- 251102-001-00-PM-07 Apply Data Analysis Techniques to Uncover Patterns and Trends in Datasets, Level 5, 12 Credits.
- 251102-001-00-PM-08 Prepare and Present Descriptive Analytic Reports for Decision Making, Level 5, 12 Credits.
- 251102-001-00-PM-09 Participate in a Design Thinking for Innovation Workshop, Level 5, 3 Credits.
- 251102-001-00-PM-10 Collaborate Ethically and Effectively in the Workplace, Level 5, 2 Credits.

Total number of credits for Practical Skill Modules: 59

Work Experience Modules

- 251102-001-00-WM-01 Data Collection and Pre-processing Processes, Level 5, 16 Credits.
- 251102-001-00-WM-02 Statistical Data Analysis Processes, Level 5, 16 Credits.
- 251102-001-00-WM-03 Data visualisation and Reporting Processes, level 5, 16 Credits.
- 251102-001-00-WM-04 Capstone Project Using an Appropriate Toolkit, Level 5, 12 Credits. Total number of credits for Work Experience Modules: 60



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TYPE OF PROGRAMME

The programme duration is 2 years on a full-time basis. Tuition is face to face and is scheduled per campus. Programmes are offered during the week on a full-time and part-time basis. Part-time tuition is scheduled as per the stipulated planner.

ADMISSION REQUIREMENTS

The minimum entry requirement for this qualification is:

- NQF Level 4 with Mathematics.

LEARNER MATERIAL

Prescribed textbook lists will be provided by the academic department at your campus. Students will receive electronic versions of the study guides for this programme.

PRICING

Enquire at the Berea College of Technology campus for a current programme pricelist.

ADDITIONAL COSTS

Students must make provision for additional items such as textbooks, stationery, supplementary examinations, research costs and printing of study guides etc.

EXAMINATION AUTHORITY

In terms of the Skills Development Act, 1998 (Act 97 of 1998), the QCTO accredits assessment centres to conduct the External Integrated Summative Assessment (EISA) (link to EISA information brochure PDF) for specified occupational qualifications, part-qualifications or trades recorded on the National Learners' Records Database (NLRD) but without an associated occupational qualification.

Integrated Assessment

Integrated Formative Assessment: The skills development provider will use the curriculum to guide them on the stipulated internal assessment criteria and weighting. They will also apply the scope of practical skills and applied knowledge as stipulated by the internal assessment criteria. This formative assessment together with work experience leads to entrance in the integrated external summative assessment.

Integrated Summative Assessment: An external integrated summative assessment, conducted through the relevant QCTO Assessment Quality Partner is required for the issuing of this qualification. The external integrated summative assessment will focus on the exit level outcomes and associated assessment criteria. The assessment will be conducted through written assessment and the evaluation of practical tasks at decentralised approved assessment sites by a panel of assessors evaluated by assessor(s) registered with the AQP within a period of 1 day.

EISA is a single, national assessment which leads to competent learners being awarded Occupational Certificates. It is an integral and critical component of QCTO's quality assurance system, as it ensures that the assessment of occupational qualifications, part-qualifications and trades is standardised, consistent and credible. Qualifying for External Assessment: To qualify for an external assessment, learners must provide proof of completion of all required knowledge and practical modules by means of statements of results and a record of completed work experience.

CERTIFICATION

On successful completion of the programme, the student will receive a statement of result from Berea College of Technology and upon meeting the EISA requirements, receive an Occupational Certificate: Data Science Practitioner from the QCTO.

ARTICULATION

This qualification provides opportunities for horizontal and vertical articulation options.

Horizontal Articulation:

- National Certificate: Business Analysis Support Practice, NQF Level 5.

Vertical Articulation:

- National Certificate: Business Analysis, NQF Level 6.



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FURTHER STUDIES

Please enquire at the nearest Berea College of Technology campus for the prospectus containing post-certificate studies. Admission to further your studies at a different institution remains the prerogative of each institution and its academic council.

DISCLAIMER

The information contained in this fact sheet is accurate at the time of printing. However, factors beyond Berea College of Technology control (such as environmental, regulatory or technical changes) may cause the contents of this fact sheet or of the programme to change. In the event of any such change, Berea College of Technology will formally notify current learners. All possible measures will be taken to minimise inconvenience to learners.

Name of Learner: I....., hereby acknowledge that I understand the information stated in this document and fully comprehend the specifics explained above pertaining to this qualification.

Signature of Learner:

Name of Legal Guardian:
(if applicable)

Signature:

Name of Sales Consultant:

Signature:

Name of Head of Department:

Signature:

Date:

* Please note the original signed copy should be kept on the learner record file.

