

OCCUPATIONAL QUALIFICATION

Data Science Practitioner

Level 5 | SAQA ID – 118708



Edge Training is a proudly Level 1 B-BBEE accredited skills training provider with a national footprint and full accreditation with QCTO and SETA partners. We remain aligned with evolving QCTO regulations, ensuring that skills development in South Africa continues to meet national standards. Our commitment to compliance, excellence and quality assurance reinforces our role in strengthening the national framework and contributing meaningfully to the advancement and sustainability of skills development training.

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Qualification Information

Occupational Qualification: Data Science Practitioner

Level 5

SAQA ID – 118708

185 Credits

Entry Requirements:

- NQF Level 4

Occupational Purpose:

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 in order 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

Occupational Tasks:

- Collect large amounts of structured and unstructured data from primary and secondary sources and extract and transform them into a usable format. (NQF Level 5)
- Apply data analysis techniques to uncover patterns and trends in datasets (resultant sets of data that can be viewed as tables or as a "spreadsheet of data") to solve business-related problems. (NQF Level 5)
- Prepare and present descriptive analytics reports on patterns and trends using computer programming languages and explain those patterns and trends through e.g., visualisation, storytelling etc. using data visualization tools. (NQF Level 5)

Qualification Information

Purpose of the Knowledge Modules:

The knowledge acquired will enable learners to demonstrate an understanding of:

(KM-01):

- The concepts of data analytics and the application of data science and analysis in the economic sectors

(KM-02):

- Acquire mathematical thinking theory for solving problems and acquire basic maths knowledge for use during data analytics

(KM-03):

- What computers can do and the processes that make them function in terms of the four major parts: input, output, CPU (central processing unit) and memory
- Overview of networks and connectivity as well as security issues pertaining to IT ecosystems

(KM-04)

- Understanding of programming as creating a set of instructions to a computer on how to perform a task using coding and programming languages

(KM-05):

- Understanding of basic statistics as it pertains to and is applied in data analysis

(KM-06):

- Build an understanding of statistics essentials as they pertain to and are applied in data analysis

(KM-07)

- Understanding of concepts, principles and governance within data analytics

(KM-08)

- Data analysis and visualisation procedures

(KM-09):

- Legislations governing the workplace and their implications
- Performance management, business planning concepts, costing of products and concepts of general ethical behaviour and its impact in the workplace

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Purpose of the Knowledge Modules:

The knowledge acquired will enable learners to demonstrate an understanding of:

(KM-10):

- Design thinking principles and application in the workplace

(KM-11):

- The impact of 4IR on communities, individuals and businesses and important skills for future needs

Purpose of the Practical Modules:

The focus of the learning in the practical modules is on providing the learner an opportunity to:

(PM-01):

- Mathematical thinking skills for solving problems and to acquire basic maths skills for using software toolkits or platforms. Functional understanding of maths and for logical reasoning

(PM-02):

- Apply basic programming skills and code to use a software toolkit/platform in the field of study or employment

(PM-03):

- The skills to use spreadsheets to analyse and visualise data

(PM-04):

- Use Business Intelligence (BI) Technologies to analyse and visualise data (BI toolsets and technologies refer to e.g. Power BI, R, Python, Tableau, Hadoop, Spark, etc.)

(PM-05):

- Apply various methods and tools to analyse data and create meaningful insights

(PM-06):

- Collect and clean large amounts of structured and unstructured data

(PM-07):

- Acquire the skills to conduct preliminary analysis of data

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Purpose of the Practical Modules:

The knowledge acquired will enable learners to demonstrate an understanding of:

(PM-08):

- Explore and model to extract meaningful information and insights and present such insights

(PM-09):

- The skills to participate in a design thinking intervention, apply design thinking methodologies and look for opportunities to apply the same methodology in world-of-work and personal life

(PM-10):

- The focus of the learning in this module is on providing the learner with an opportunity to acquire the skills to function ethically and effectively in the workplace

Purpose of the Workplace Modules:

The focus of the work experience module is on providing the learner an opportunity to:

(WM-01):

- Collect, clean, wrangle and scrub large amounts of structured and unstructured data, transform them into a usable format and to assist organisations in making informed decisions

(WM-02):

- Use analytical and logical reasoning to gain information from and find meaning in data so that the derived knowledge can be used to make informed decisions

(WM-03):

- Prepare and present descriptive analytic reports on patterns and trends using computer programming languages, linear maths and statistics and explaining those patterns and trends through, e.g. visualisation, storytelling

(WM-04):

- Provide for the: retrieval, analysis, simplification, and representation of complex data sets and examining of company data in order to make conclusions about them that interested parties can leverage to shape the future of the business

Edge Training Will Provide

- Full project management of qualification
- Registration of the qualification with the relevant SETA
- Enrolment of the learner with QCTO for the qualification
- Facilitation by a Subject Matter Expert
- Venue suitable for the number of delegates
- Course material
- Monthly progress reports via the Edge Client Portal
- Booking of final exam (EISA) with the relevant SETA
- Certificates of Attendance

Qualification Structure

Data Science Practitioner | Total Credits: 185

	Knowledge Modules	Level	Credits
KM01	Introduction to Data Science and Data Analysis	4	6
KM02	Logical Thinking and Basic Calculations: Refresher	4	4
KM03	Computers and Computing Systems	4	4
KM04	Computing Theory	4	2
KM05	Basic Statistics for Data Analytics	4	10
KM06	Statistics Essentials for Data Analytics	5	4
KM07	Data Science and Data Analysis	5	12
KM08	Data Analysis and Visualisation	5	16
KM09	Introduction to Governance, Legislation and Ethics	4	3
KM10	Fundamentals of Design Thinking and Innovation	4	4
KM11	4IR and Future Skills	4	1

Knowledge Modules | Total Credits: 66

	Practical Modules	Level	Credits
PM01	Apply Logical Thinking and Maths Refresher	4	3
PM02	Apply Code to use a Software Toolkit/Platform in the Field of Study or Employment	4	4
PM03	Use Spreadsheets to Analyse and Visualise Data	4	3
PM04	Use a Visual Analytics Platform to Analyse and Visualise Data	5	4
PM05	Apply Statistical Tools and Techniques	5	4
PM06	Collect and Pre-Process Large Amounts of Structured and Unstructured Data	5	12
PM07	Apply Data Analysis Techniques to Uncover Patterns and Trends in Datasets	5	12
PM08	Prepare and Present Descriptive Analytic Reports for Decision Making	5	12
PM09	Participate in a Design Thinking for Innovation Workshop	5	3
PM10	Collaborate Ethically and Effectively in the Workplace	5	2

Practical Modules | Total Credits: 59

	Workplace Modules	Level	Credits
WM01	Data collection and Pre-processing Processes	5	16
WM02	Statistical Data Analysis Processes	5	16
WM03	Data Visualisation and Reporting Processes	5	16
WM04	Capstone Project using an Appropriate Toolkit	5	12

Work Experience Modules | Total Credits: 60

Additional Information

Alternative titles used by the industry:

- None

Get in Touch

 087 135 5543
  www.edgetraining.co.za
 info@edgetraining.co.za

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