

**MILPARK
EDUCATION**

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immersive
online

Occupational Certificate:

DATA SCIENCE PRACTITIONER

NQF Level 5 | SAQA ID 118708



Learnership Registration No. 32Q320170251855

COLLECTING DATA. DRIVING DECISIONS.

This qualification equips **data professionals** with the knowledge, practical skills, and **workplace experience required** to collect, transform, analyse, and communicate data-driven insights that support informed business decision-making. Offered by **Milpark Education**, a **trusted higher education institution since 1997**, this qualification combines **industry-relevant knowledge, practical skills, and workplace experience** to help learners **realise their potential and achieve their career goals**.

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01. Description and Programme Purpose

Qualification Overview

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.**

Become More

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COLLECT. ANALYSE. TRANSFORM.

Developing professionals who can **turn data into meaningful insights** that help organisations solve business challenges and make informed decisions.



02. Who Should Enrol



The **Occupational Certificate: Data Science Practitioner** (NQF Level 5) is ideal for employees who are interested in data, technology, and problem-solving.



It is designed for **individuals who want to develop practical skills** in collecting, analysing, and interpreting **data to support business decision-making**.



The programme is particularly suited to aspiring **Data Analysts, Business Intelligence** professionals, and those **seeking to build a foundation** for a future career in Data Science.

03. Programme Outcomes

Graduate Competencies

On successful completion of the **Occupational Certificate: Data Science Practitioner** (NQF Level 5), your employees will be able to:

- Collect, extract, and **transform data from large volumes of structured** and unstructured sources into a usable format for analysis.
- **Apply data analysis techniques** to identify patterns, trends, and insights within datasets in order to solve **business-related** problems and support decision-making.
- Prepare and **present descriptive analytics reports** using computer programming languages and data **visualisation tools to communicate** findings effectively to **stakeholders** through reports, dashboards, and data storytelling.



04. Programme structure

Qualification Framework

The **Data Science Practitioner programme** is structured to build your employees' skills progressively, starting with data literacy, statistics, and programming fundamentals, followed by data management, analysis, and visualisation techniques. **Employees then advance to machine learning**, predictive analytics, and data storytelling before applying their knowledge through a workplace-based capstone project. The **programme concludes with assessment** and certification, ensuring your employees who **completed the qualification can confidently** collect, analyse, interpret, and communicate data-driven insights to **support business decision-making**.

Major: Occupational Certificate: Data Science Practitioner: 185 credits

	Knowledge Modules	Practical Skills Modules	Work Experience Modules
Compulsory (all)	Introduction to Data Science and Data Analysis (6/4)	Apply Logical Thinking and Maths Refresher (3/4)	Data Collection and Pre-processing Processes (16/5)
	Logical Thinking and Basic Calculations (4/4)	Apply Code to use a Software Toolkit/Platform in the Field of Study or Employment (4/4)	Statistical Data Analysis Processes (16/5)
	Computers and Computing Systems (4/4)	Use Spreadsheets to Analyse and Visualise Data (3/4)	Data Visualisation and Reporting Processes (16/5)
	Computing Theory (2/4)	Use a Visual Analytics Platform to Analyse and Visualise Data (4/5)	Capstone Project using an Appropriate Toolkit (12/6)
	Basic Statistics for Data Analytics (10/4)	Apply Statistical Tools and Techniques (4/5)	
	Statistics Essentials for Data Analytics (4/5)	Collect and Pre-Process Large Amounts of Structured and Unstructured Data (12/5)	
	Data Science and Data Analysis (12/5)	Apply Data Analysis Techniques to Uncover Patterns and Trends in Datasets (12/5)	
	Data Analysis and Visualisation (16/5)	Prepare and Present Descriptive Analytic Reports for Decision Making (12/5)	
	Introduction to Governance, Legislation and Ethics (3/4)	Participate in a Design Thinking for Innovation Workshop (3/5)	
	Fundamentals of Design Thinking and Innovation (4/4)	Collaborate Ethically and Effectively in the Workplace (2/5)	
	4IR and Future Skills (1/4)		
Total credits	66	59	60



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FROM DATA TO DECISIONS.

Building **practical capabilities in data** analytics, visualisation, and reporting, enabling professionals to transform **complex information** into clear insights that support informed decision-making.

05. Module Descriptions

5.1 Knowledge Modules:



Introduction to Data Science and Data Analysis

Introduces your employees to the **fundamental concepts of data science**, the key processes involved in data analytics, and the **role of data in supporting informed business** decision-making.



Logical Thinking and Basic Calculations: Refresher

Develops logical reasoning, **problem-solving abilities**, and the mathematical foundations required to **support effective** data analysis and interpretation.



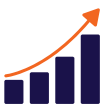
Computers and Computing Systems

Provides an **understanding of computer** hardware, software, networks, and information systems, and how these **technologies are used** within data-driven environments.



Computing Theory

Introduces **fundamental computing** and programming concepts, including how computers process, store, and **execute instructions to perform a range of tasks**.



Basic Statistics for Data Analytics

Covers **essential statistical techniques** and methods used to organise, summarise, analyse, and interpret **data for business purposes**.



Statistics Essentials for Data Analytics

Builds on foundational statistical concepts and techniques to support more advanced data analysis, interpretation, and **data-driven decision-making**.



Data Science and Data Analysis

Develops skills in data collection, preparation, transformation, and analysis to support the solving of **business-related** problems and challenges.



Data Analysis and Visualisation

Focuses on analysing datasets, **identifying trends** and patterns, and **communicating insights** through reports, dashboards, and data visualisations.



Introduction to Governance, Legislation and Ethics

Explores the ethical, legal, and **governance principles related to data management**, privacy, security, and the responsible use of data.



Fundamentals of Design Thinking and Innovation

Introduces creative problem-solving approaches and innovation techniques that are used to develop practical, **user-centred solutions**.



4IR and Future Skills

Examines **Fourth Industrial Revolution** technologies, emerging trends, and future-focused skills required in the digital economy.

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TURNING DATA INTO OPPORTUNITY.

Developing practical data analytics capabilities that enable professionals to **uncover trends**, solve problems, and **support business growth** through informed **decision-making**.

5.2 Practical Skills Modules:



Apply Logical Thinking and Maths Refresher

Develops practical mathematical and logical reasoning skills that can be applied to solving a variety of data-related problems and challenges.



Apply Code to use a Software Toolkit/Platform in the Field of Study or Employment

Introduces **coding techniques and the use of software tools** to perform data analysis tasks and automate processes.



Use Spreadsheets to Analyse and Visualise Data

Develops practical skills in using spreadsheets to organise, analyse, interpret, and visualise data.



Use a Visual Analytics Platform to Analyse and Visualise Data

Equips your **employees to use data visualisation tools** and analytics platforms to create reports, dashboards, and insights.



Apply Statistical Tools and Techniques

Provides **hands-on experience in applying statistical** methods to analyse data and support decision-making.



Collect and Pre-Process Large Amounts of Structured and Unstructured Data

Develops skills in sourcing, cleaning, transforming, and preparing data for analysis.



Apply Data Analysis Techniques to Uncover Patterns and Trends in Datasets

Focuses on **analysing datasets to identify patterns**, trends, and insights that can address business challenges.



Prepare and Present Descriptive Analytic Reports for Decision Making

Develops the ability to communicate findings through reports, data storytelling, and visual presentations that support business decisions.



Participate in a Design Thinking for Innovation Workshop

Introduce **collaborative innovation and design thinking** techniques to solve complex business problems creatively.



Collaborate Ethically and Effectively in the Workplace

Develops the professional, ethical, communication, and teamwork skills required to contribute **effectively in modern data-driven workplaces**.

5.3 Work Experience Modules:



Data Collection and Pre-processing Processes

Provides workplace experience in collecting, cleaning, transforming, and preparing structured and **unstructured data for analysis**.



Statistical Data Analysis Processes

Develops practical experience in **applying statistical techniques** to analyse datasets, identify trends, and **generate business insights**.



Data Visualisation and Reporting Processes

Focuses on **creating data visualisations**, dashboards, and analytical reports to communicate findings and **support decision-making**.



Capstone Project using an Appropriate Toolkit

Requires your employees to apply the knowledge and skills gained throughout the programme to complete an **end-to-end data analytics** project using industry-relevant tools and **techniques**.

06. Minimum Admission Requirements

The admission criteria for the **Occupational Certificate: Data Science Practitioner** are as follows:

Applicants should have:



An **NQF Level 4** qualification (Matric or equivalent)



Basic **computer literacy**



DISCOVER. INTERPRET. DELIVER.

Empowering future **Data Science Practitioners** to identify **opportunities** within data, communicate findings **effectively**, and support organisations through **evidence-based analysis and reporting**.

Other / International certificates:

Further to the **requirements for admission** provided above, foreign nationals or South African nationals seeking to apply for admission onto the qualification, based on a **non-South African/foreign** senior school leaving certificate, must obtain and submit to Milpark a Certificate of Exemption from Universities South Africa (USAf) (www.usaf.ac.za).

Applicants with foreign senior school leaving certificates who have already completed the equivalent of a South African Grade 12, are advised to **submit their USAf Certificate of Exemption** at the time of applying online for the Milpark bachelor's degree.

Any foreign national or South African national seeking admission based on a **non-South African/foreign tertiary qualification** must obtain and submit to Milpark a Certificate of Exemption from Universities South Africa (USAf) (www.usaf.ac.za) at the time of applying for admission onto the qualification. www.saqa.org.za

Foreign nationals residing in South Africa on a temporary visa must **provide proof from the South African Home Affairs** offices that they are permitted to study and enrol for studies at the tertiary level.

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DATA SCIENCE FOR BUSINESS IMPACT.

Preparing professionals to work confidently with **structured and unstructured** data, applying analytical techniques and **technology tools** to **solve real-world** business problems.



Recognition of Prior Learning (RPL) applications:

Milpark admits a small number of candidates onto its programme via **Recognition of Prior Learning (RPL)**. **Applicants interested** in applying via RPL will be considered individually by the relevant Head of School.

Applicants will be required to provide evidence as outlined below when **applying for admission via the RPL route**:

- **Curriculum vitae** – applicant must have 10 years of relevant work experience.
- Applicant must have a **matric qualification**, even if they performed poorly on it.
- **Personal motivational letter**, advising how the qualification will assist them and how the qualification links with their line of work.
- Evidence from **performance in the workplace** (e.g. direct line manager motivational letter, evidence from workplace appraisal)
- **Evidence from prior achievement**
- Certified academic **transcript/statement** of result.

[Learn More About The RPL Requirements](#)

07. Delivery & Technology Access

Mode of Delivery

Distance Learning Online (DLO) is one of the key modes of learning offered by the **Milpark School of Commerce**.

It provides a fully digital, guided, and **flexible study experience** that supports independent learning while **maintaining structured engagement**. Through Milpark's online platform, **your employees can access all their learning** materials, including prescribed textbooks, and participate in live **classes and interactive discussion forums**.

DLO is designed to foster meaningful interaction while allowing employees of your business to learn at their own pace. With **comprehensive resources** and flexible access, it accommodates varying levels of connectivity and provides an inclusive **learning journey that caters** to diverse employee contexts.

Access to Technology

Through the *myMilpark* and *myCourses* **online tuition** and support environments, students have **access to all course materials** (including formative and summative assessments), discussion opportunities, administrative **services and a wealth of external resources**.

Minimum requirements to study online and complete assessments and online proctored assessments

A **laptop or personal computer (PC)** with one of the **following operating systems**:



Windows 10+



macOS 10.11+



Ubuntu 18.04+



Chrome 58+



Continuous (daily) access to a **stable internet connection** with an upload and download speed of at least 5 Mbps.



A **camera/webcam** (720p resolution)



Speakers and a microphone **OR** headphones



2GB free **RAM** (memory)



250MB **free disk space**.

[View Technical Requirements](#)

[How To Check Your RAM](#)

08. Employee Support

Library access

The **Milpark Library** provides access to **e-books** in a virtual library called Cyberlibris (Scholartext). Lecturers may create **smart bookshelves per course or module** for your employees to access (these shelves can contain prescribed and recommended books).

Employees can also create their own personal smart bookshelves containing resources for their studies. Having access to a digital library means that **thousands of employees can access books and resources** from anywhere, at the same time, online.

There is **no need to make reservations and requests**, and **no limit to the time a student has to access a book**. With the implementation of Cyberlibris, employees also have access to full-text resources via ProQuest (global), Emerald (global), Ebsco (global) and Sabinet (South African publications), to assist with research and to enrich their learning experience.

Access to the Library is included in the module fee.

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ANALYTICS. INNOVATION. RESULTS.

Combining data analysis, critical thinking, and innovation skills to **help professionals** generate meaningful insights and **contribute to data-driven** business success.



Comprehensive employee support services are available. Employees are provided with administrative support by **Student Services**. To assist with understanding content, your employees have **access to online lecturers** whom they can contact individually. Employees who experience study and/or personal problems have access to a counsellor. **All support services are available to registered employees via myMilpark (myCourses).**

09. Rules of Progression



Compulsory modules have to be **completed by all employees**.

10. Assessment

Assessment is **conducted through a combination** of knowledge-based, practical, and **workplace assessments** that take place throughout the programme. Employees are required to **demonstrate competence** in all Knowledge Modules, Practical Skills Modules, and **Work Experience Modules**, with assessments designed to evaluate both **theoretical understanding** and the ability to apply skills in real-world data analytics contexts.

Successful completion of these components results in a Statement of Results **confirming achievement** across the curriculum requirements.



Following successful completion of the internal assessments, your employees are required to undertake the External Integrated Summative Assessment (EISA) at a **QCTO-accredited Assessment Centre**. The EISA is a **national assessment** that evaluates the employee's ability to integrate and apply the knowledge, practical skills, and workplace **experience gained throughout the programme**.

The assessment focuses on the **application of data science** and analytics skills to solve business-related problems and **communicate insights effectively**, rather than on theoretical knowledge alone. Successful completion of the EISA is required for the awarding of the **Occupational Certificate: Data Science Practitioner**.

11. Duration

Distance online learning employees have **18 months to complete the qualification.**

12. Certification

Upon **successful completion of the programme** and the external integrated summative assessment, your employees will be awarded the: **Occupational Certificate: Data Science Practitioner** (NQF Level 5). Quality Assured by: **Quality Council for Trades and Occupations** (QCTO) through the MICT SETA.

13. Further Studies

Milpark Education is **committed to the process of lifelong learning** and to opening up access to higher education.

The Occupational Certificate: Data Science Practitioner (NQF Level 5) provides a **strong foundation** for further studies at Milpark Education.

Employees who completed the qualification can progress to qualifications in business, management, and financial services, including **Higher Certificates, Advanced Certificates, the Bachelor of Business Administration (BBA), and Bachelor of Commerce (BCom)** degrees, subject to meeting the relevant admission requirements.

The **analytical, problem-solving, and technology skills** gained through this **qualification also support** further **learning in areas** such as business intelligence, information management, and **data-driven decision-making.**



Employees who completed the qualification can progress to qualifications to further their studies in information technology, cybersecurity, digital forensics, and information security-related fields, including the **Bachelor of Business Administration (BBA)**, and **Bachelor of Commerce (BCom)** degrees, subject to meeting the relevant admission requirements.

By continuing their studies, **employees who completed** this qualification can **further strengthen their technical expertise**, expand their career opportunities, and progress into senior cybersecurity, risk management, and information **security leadership roles**.

14. Pricing & Disclaimer

Pricing

All module fees include one round of formative and summative assessments (supplementary examinations excluded). Module **fees do not include the cost of prescribed textbooks**, which will be for the employer's or employee's own account. **The prescribed book list will be available** on myMilpark, on registration.

Disclaimer

The content of this **brochure is accurate at the time** of going to print. Milpark Education reserves the right to change the programme content due to changes in legislation, as well as for market requirements and other reasons. **Notice of such changes will be published on our website.**





GET IN TOUCH

Build Data Science Capability with a Trusted Learning Partner

Investing in **data and analytics** talent should be simple. **That's why we partner** with organisations to deliver a streamlined, **end-to-end learning solution** that develops the knowledge, practical skills, and workplace experience required to **support data-driven decision-making**.

The Data Science Practitioner programme combines **industry-aligned learning** with dedicated support, helping **organisations develop professionals** who can collect, transform, analyse, and interpret data, uncover valuable insights, and communicate findings that **support business performance and growth**.

From onboarding and learner support to programme coordination and reporting, we **work as an extension** of your team to ensure a seamless and effective learning experience.

Speak to us about how we can tailor the **programme to your organisation's** needs and support your **long-term talent development** and data capability objectives.

Enquire Now

Engage With Us

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