



Bachelor of Science in Information Technology (Data Science)

SAQA ID 80887 NQF level 7

🕒 Qualification duration

Part-Time

Minimum: 5 years
Maximum: 7 years

☰ Qualification description

Be at the forefront of the future world of work. The specialised nature of this degree prepares you for work in many areas in the Information Technology industry that are related to data analysis, big data, statistical and predictive reporting.

Data Science is a branch of Information Technology that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from structured, semi-structured and unstructured data.

Students will be equipped with the concepts behind statistics, data analysis, machine learning and related methods in order to understand and analyse actual phenomena with data. Data Science does require programming tools.

Hence, this qualification will help students achieve the above technical know-how using Python. You will also develop essential skills for the world of work, such as analytical and abstract thinking, effective decision-making self-discipline, being innovative, adapting to change, working in teams and communicating effectively.

📁 Possible career options

Career choices for you, as a Bachelor of Science in Information Technology (Data Science) graduate, are varied, and employment opportunities exist in both IT and in business:

- Database Administration
- Database Management
- IT Project Management
- Systems Analysis and Design
- Big Data Analysis
- Data Science
- Cloud Computing
- Data Modelling

✅ Entry requirements

South African National Senior Certificate (NSC) with Bachelor's degree endorsement.

Or

A National Certificate (Vocational) level 4 issued by the Council of General and Further Education and Training with Bachelor's degree endorsement.

Or

A letter or certificate confirming an exemption from Universities South Africa (USAf) for any other school-leaving results.

Or

Completion of a Bachelor's degree.

Or

Completion of a relevant Foundation Programme along with a letter or certificate of exemption from Universities South Africa (USAf).

Or

Completion of a relevant Higher Certificate.

A student with Mathematics Literacy (50% or more) must enrol for, and complete, Introduction to Mathematics and Mathematics for Degree Studies B (IT) before attempting Mathematics 1A.

A student with Mathematics (less than 50%, but greater than or equal to 30%) must enrol for, and complete Mathematics for Degree Studies B (FPMIAO) before attempting Mathematics 1A (ITMTA1).

📄 Qualification accreditation

- Higher Education Quality Committee (HEQC) of the Council on Higher Education (CHE)
- South African Qualifications Authority (SAQA)



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This qualification is offered at the
following campuses:

- Bedfordview
- Midrand
- Pretoria
- Tyger Valley

Qualification structure

Year 1

- Advanced Information and Computer Skills
- Business English
- Computer Network and Security
- Computer Skills
- Introduction to Information Systems
- Introduction to Programming
- Human Computer Interaction
- Mathematics 1A
- Procedural Programming
- Technical Writing and Communication

Year 2

- Data Structures and Algorithms in Python
- Database Management System
- Database System Design, Implementation and Management
- Internet Server Management
- Introduction to Statistics and Probability
- IT Project Management
- Machine Learning Algorithms
- Network Security
- Scientific Computing in Python
- Systems Analysis and Design

Year 3

- Cloud Computing: A Practical Approach
- Industry 4.0
- Logistics and Supply Chain Management
- Object Oriented System Analysis and Design
- Operating Systems
- Project: Data Science
- Soft Skills for IT Professionals
- Web Development and e-Commerce