



# Higher Certificate in Information Systems (Machine Learning)

SAQA ID 102780 NQF level 5

## 🕒 Qualification duration

**Part-Time** (Campus)

Minimum: 2.5 years

Maximum: 5 years

## ☰ Qualification description

Power the next industrial revolution. Machine Learning is a branch of Artificial Intelligence (AI) that focuses on the scientific study of algorithms and statistical models that computer systems use to effectively perform a specific task without using explicit instructions. By applying machine learning techniques, computer systems can learn from data, identify patterns and make decisions with minimal human intervention.

The Higher Certificate in Information Systems (Machine Learning) is a career-focused qualification that is intensive but also broad. It provides you with the fundamental and technical knowledge as well as the applicable skill set in Databases, Python Programming, Statistical Thinking in Python, Supervised Learning with scikit-learn, Unsupervised Learning in Python, Linear Classifiers in Python, and Deep Learning in Python. You will also cover topics such as Computer Literacy, Program Design, Processing and Logic Concepts. Throughout the qualification, you will complete technical projects and challenging problems that will make you well-prepared and empowered for the world of work.

We attribute much of the success of our Higher Certificate programmes in Information Systems (IS) to our unique MLM platform. The MLM route, which is a modular self-directed learning approach, gives you the flexibility to start and progress through the programme at a pace that best suits you. This learning methodology together with our cutting-edge facilities such as computer labs, IS open learning areas, hardware pods and smart pods, will prepare you for the real IT work environment of the future. Over and above this, you will develop essential skills for the world of work, especially for the IT industry, such as analysing and solving real problems, logical thinking, being innovative and adaptable, working in teams and communicating effectively.

## ☑ Entry requirements

· South African National Senior Certificate (NSC) with Bachelor's degree, Diploma or Higher Certificate endorsement.

**Or**

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

**Or**

· A Certificate of evaluation on a minimum NQF level 4 for foreign qualification confirmed by SAQA.

**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, Diploma, Higher Certificate or equivalent.

## 📁 Possible career options

The career choices for you as a Higher Certificate in Information Systems (Machine Learning) graduate include junior positions in:

- Database Administration
- Data Science
- Data Analytics
- Machine Learning
- Data Mining
- Data Administration



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## Qualification accreditation

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

## This qualification is offered at the following campuses:

- Bedfordview
- Bloemfontein
- Claremont
- Durban
- East London
- Mbombela
- Nelson Mandela Bay
- Potchefstroom
- Pretoria
- Tyger Valley
- Vanderbijlpark

## Qualification structure

- Computer Literacy (Microsoft)
- Personal Skills Development
- Processing and Logic Concepts
- Program Design
- IT Fundamentals
- Software Engineering
- Database Design Concepts
- Database Management Choice of: SQL Server or MySQL
- Cloud Foundations (AWS)
- Python Programming
- Python for Data Science
- Machine Learning with Python
- Final - Information Systems (Machine Learning)