



# Higher Certificate in Information Systems (Robotics and Intelligent Systems)

SAQA ID 102780 NQF level 5

## 🕒 Qualification duration

### Part-Time

Minimum: 2.5 years

Maximum: 5 years

## ☰ Qualification description

Drive the innovation that will power the next industrial revolution. Robotics systems are a way of automating manufacturing applications while reducing the amount of labour and production costs and time associated with the process. An intelligent system is a computer-based system with an embedded, internet-connected computer that can learn about the structure of a data, analyse the data to extract patterns and meaning, derive new information, and identify strategies and behaviours to act on the results of its analysis.

The Higher Certificate in Information Systems (Robotics and Intelligent Systems) 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 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 Mastery Learning Methodology (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.

In addition, 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 (Robotics and Intelligent Systems) graduate include junior positions in:

- Database Administration
- Data Science
- Robotic and Intelligent Systems

## 📄 Programme accreditation

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



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This qualification is offered at the  
following campuses:

- Bedfordview
- Pretoria
- Tyger Valley

## 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
- Python Programming
- Python for Data Science
- Linux Operating System
- Python Robotics
- Final - Information Systems (Robotics and Intelligent Systems)