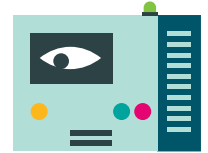


# Higher Certificate in Information Systems (Machine Learning)



SAQA ID 102780-ISML NQF level 5

## Qualification duration

### **Mastery Learning Methodology (MLM) Route**

Minimum: 1 year full time  
Maximum: 2 ½ years part time

### **Lecture-Based Learning (LBL) Route**

Minimum: 1 year full time

## Qualification start date

For MLM path, students can start any day of the month in January until February. Thereafter, from March to December only on the first Monday of each month.

For the LBL path, students start lectures on the first Monday of February (first intake). Thereafter, second intake starts on the last Monday of March and the mid-year intake starts on the second Monday of July.

## Qualification description

**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 "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 LBL and MLM platforms. 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. The LBL route gives you the opportunity to attend and participate in lecture presentations over a specific period. These learning methodologies 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

- National Senior Certificate (NSC) with diploma or Higher Certificate entry or an equivalent foreign secondary qualification or international school-leaving certificate on an NSC level (NQF 4) confirmed by SAQA..

Or

- National Certificate (Vocational) level four issued by the Council of General, Further Education, and Training.

And

- You must have obtained the required results in the Placement Assessment.

## Qualification accreditation

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

## Possible career options

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

- Python for Data Science
- Data Analytics, Machine Learning
- Data Mining and Data Administration

## This programme is offered at the following campuses

- Selected Campuses

## Qualification structure

- Computer Literacy
- Database Design Concepts
- Database Management
- Personal Skills Development
- Processing and Logic Concepts
- Program Design
- Python for Data Science
- Hardware Essentials
- Machine Learning with Python