Bachelor of Science in Information Technology (Software Engineering)

SAQA ID 80887 NQF level 7

🕐 Qualification duration

Full-Time
Minimum: 3 years
Maximum: 5 years

Part-Time
Minimum: 5 years
Maximum: 7 years

≔ Qualification description

Be at the forefront of digital innovation. The specialised nature of this degree prepares you for work in many areas in the Information Technology industry that are related to software development and management. Software engineering is a branch of Information Technology that is inclined towards the application of principles used in the field of engineering and computing, which usually deals with physical systems, to the design, development, testing, deployment and management of software systems.

Students will also develop practical skills with an emphasis on managing operating systems, designing software, analysing systems, programming, software development, database design and project management. This qualification is specially designed for students interested in designing and writing programs for computers or other electronic devices.

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.

📜 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:

• All Eduvos campuses

✅ Entry requirements

1. South African National Senior Certificate (NSC) with Bachelor degree endorsement.
2. Or a National Certificate (Vocational) level 4 issued by the Council of General and Further Education and Training with Bachelor's degree endorsement.
3. Or a letter or certificate confirming an exemption from Universities South Africa (USAf) for any other School leaving results.
4. Or completion of a Bachelor's degree.
5. Or completion of relevant Foundation Programme along with a letter or certificate of exemption from Universities South Africa (USAf).
6. Or completion of relevant Higher Certificate.
7. *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 (FPMIA0) before attempting Mathematics 1A (ITMTA1).

💼 Possible career options

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

• Database administration
• Database management
• IT project management
• Software programming
• Software development
• Project management
• Systems analysis and design
• Cloud computing

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Qualification structure

Year 1

This year of study lays the foundation down for students and aims to focus on the basic principles of programming with regards to specic software languages, computer literacy (Microsoft), the fundamentals of hardware and networking as well as the general knowledge on what IT is about.

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

Year 2

This year of study builds on the foundation of the rst year. More group engagement is encouraged, and focus is placed on specialised modules that prepare the students for this specialised stream.

• Advanced Networking
• Database System Design, Implementation and Management
• Database Management System
• Internet Server Management
• IT Project Management
• Network Security
• Python Network Programming
• Systems Analysis and Design

Elective Modules:
• Programming in C#
• Programming in Java
• Programming in Python

Elective Modules:
• Data Structures and Algorithms in C#
• Data Structures and Algorithms in Java
• Data Structures and Algorithms in Python

Year 3

During this year students are encouraged to think for themselves. All modules focus mainly on higher-order thinking and are stated below:

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

Elective Modules:
• Enterprise Programming in C#
• Enterprise Programming in Java
• Enterprise Programming in Python