

Engineering, Built Environment and Information Technology

Exciting new degree offered from 2020: BIT (Information Systems)

Since ICT skills are still scarce skills in South Africa, skilled information and communications technology (ICT) professionals are in high demand. This skills shortage will be addressed by the new Bachelor of Information Technology degree with specialisation in Information Systems, BIT (Information Systems).

Core modules from first to third year

- Systems analysis and design
- Programming
- Critical thinking skills
- Database design and implementation
- Network infrastructure
- Project management
- Human-computer interaction
- Trends in IT

Elective modules

Students can choose from seven streams:

- The computer auditing stream
- The Information Science stream
- The Entrepreneurship stream
- The e-Business stream
- The Geography stream
- The Data Science Management stream
- The e-Taxation stream

1. The computer auditing stream

An information technology (IT) audit involves the analysis of an organisation's information technology structure, operations and software programs. An IT auditor may identify ways in which an organisation's computer systems can better meet its needs, configure hardware and software programs to design new systems, and test systems to ensure that they are working properly.

The majority of IT auditors work in an office setting, primarily with computer systems. Depending on the employer, some auditors may be required to travel in order to evaluate their clients' systems. Although auditors generally work independently, larger projects may require some collaboration. In this stream you will take Accounting, Statistics and Auditing together with Information Systems.



2. The Information Science stream

Information scientists are responsible for managing the acquisition, supply and distribution of information within an organisation or a section of an organisation, and for making that information accessible to users. A combination of Information Science and Information Systems will equip students to become data scientists, knowledge managers, competitive intelligence analysts, information architects, web-content managers, etc.



3. The Entrepreneurship stream

Entrepreneurial careers transcend specific job titles, career paths and industries. While entrepreneurship can involve starting a new business, entrepreneurial careers can be found (or created) in just about every field, industry and organisation. Entrepreneurs create products, services, companies and even industries. Some work for themselves or in family businesses, while others work in traditional companies. Those with entrepreneurial aspirations typically pursue one of the following career paths:

New venture creation: Launching a company, buying a business or franchise, starting a new venture in a family enterprise, or commercialising a technology.

Careers in existing entrepreneurial ventures: Working for a start-up venture, small business, corporate entrepreneur or strategic entrepreneurial unit, or in another area such as education, research, public policy and accelerators. In this stream Accounting, Statistics and Entrepreneurship modules are combined with Information Systems.

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4. The e-Business stream

E-business (electronic business) managers oversee sales for businesses that use the internet to market their products directly to consumers.

E-business has seen rapid growth in recent years, and continued growth is predicted due to the ongoing expansion of the internet. Entry-level positions require at least a bachelor's degree. In this stream Accounting, Statistics, Communication Management and Business Management will give you the business knowledge needed, whilst Information Systems will give you the necessary ICT knowledge.



5. The Geography stream

Organisations across the globe are increasingly relying on location intelligence

to make better decisions; therefore there is an increasing demand for careers in Geographical Information Systems (GIS). GIS professionals are equipped with data visualisation and spatial analysis skills, and qualify for occupations in countless fields. A combination of Information Systems and Geography modules will qualify you for a career in GIS.



6. The Data Science Management stream

Statisticians are responsible for planning, collecting, processing and analysing information (data) in order to make informed decisions. They are involved in producing reliable data, analysing data in order to form a clear picture, and drawing practical conclusions based on the available data.

A combination of Information Systems and Statistics will be useful if you are interested in a career as a data scientist, data mining specialist or data analyst in an organisation.



7. The e-Taxation stream

Employees with a background in Accounting, Statistics, Taxation and

Information Systems are in high demand in financial institutions such as banks and audit firms.

Minimum admission requirements for 2020

| Programme | Minimum requirements for 2020 | | | | | |
|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------|-------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| | Achievement level* | | | | APS | |
| SCHOOL OF INFORMATION TECHNOLOGY | English Home Language or English First Additional Language | | Mathematics | | | |
| | NSC/IEB | AS Level | NSC/IEB | AS Level | | |
| | 5 | C | 4 | D | 30 (26-29 admission based on the NBT) | |
| BIT (Information Systems) [3 years] Closing dates: SA - 30 September Non-SA - 31 August | | | | | Should a candidate obtain an APS of between 26 and 29, consideration for admission will be based on the results of the NBT, provided that the student number quotas have not yet been reached. Careers: Graduates will differentiate themselves in an application environment by choosing one of the following options: Computer Auditing, Information Science, Entrepreneurship, e-Business, Geography, Data Science Management or e-Taxation. | |

* Cambridge A level candidates who obtained at least a D in the required subjects, will be considered for admission. International Baccalaureate (IB) HL candidates who obtained at least a 4 in the required subjects, will be considered for admission.

What does the BIT (Information Systems) programme entail?

BIT (Information Systems) is the study of the application and use of computer and information systems in an organisation. Due to the increasing use of information technology by organisations, more complex and challenging applications are constantly being explored and developed.

In addition to the obvious fact that the work environment of the informatics specialist is particularly interesting, this constant development also means that many new job opportunities become available to well-qualified informatics specialists. The superiority of students in this field lies in their specialist stream, which can be Computer Auditing, Information Science, Entrepreneurship, e-Business, Geography, Data Science Management or e-Taxation.

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