



# Bachelor of Science Access Programme (Science)

## 🕒 Mode and duration

### Contact

Full-Time (Campus)

- Minimum: 3-6 months
- Maximum: 12 months

## ☰ Qualification description

The Access Program is designed to provide an opportunity for individuals who may not meet the traditional entry requirements for a biomedicine and Biotechnology degree to gain admission to the programmes. This programme recognizes the potential of motivated and talented individuals who have unique circumstances or educational backgrounds that may have hindered their direct admission to the degree program. The program aims to foster diversity and inclusivity within the field of biomedical and Biotechnological sciences.

Applicants to the Access Program should possess a genuine passion for the field of biosciences. The program seeks individuals who are highly motivated and determined to succeed in a biomedical degree.

## This qualification is offered at the following campuses:

- Midrand
- Pretoria

## ☑ Entry requirements

1. South African National Senior Certificate (NSC) with Bachelor's degree endorsement.
2. Or a letter or certificate confirming an exemption from Universities South Africa (USAF) for any other School leaving results.
3. Any of the following:
  - i. English Language between 40% and 49% on Grade 12 or equivalent.
  - ii. No Physical Science on NSC Grade 12 or equivalent.
  - iii. Physical Science below 50% on NSC Grade 12 or equivalent.
  - iv. Mathematics between 30% and 49% on NSC Grade 12 or equivalent.
  - v. Mathematical Literacy equal or above 50% on NSC Grade 12 or equivalent.
  - vi. Life Sciences/Biology between 30% and 49% on NSC Grade 12 or equivalent.

## 🕒 Qualification structure

### Year 1

- Academic English B
- Computer Skills
- Introduction to Biology
- Mathematics for Science
- Physical Science 1
- Physical Science 2



# Bachelor of Science Access Programme (Science)

## Module Descriptors

### Year 1

#### **Academic English B**

The aim of this module is to equip students with the skills to write with purpose in higher education. This module further aims to encourage students to read widely, think critically, improve communication skills, and develop a certain level of competence and professionalism needed for degree studies. This module is a continuation of the themes covered in Academic English A such as language and identity, language, race and gender, variations of language, language and power. Thus, students will explore the relationship between language and attitudes in social and cultural contexts within this block module. Language narratives and multimedia texts will be used to demonstrate some of the mentioned key concepts. Students will further be encouraged to challenge their assumptions about the role of language in society and to critically examine the relationship between language and power.

In higher education, students will be required to complete a wide range of writing tasks. This also includes engaging with the reading and writing process on a continuous basis. The foundation lies with the understanding of what is expected from the student, and the student planning their written work to meet these expectations. Furthermore, this also includes research and the construction of arguments and points of view.

#### **Computer Skills**

The aim of this module is to provide practical use of computer applications to create, manage and format data by developing word-processing, spreadsheet and presentation skills in a Windows Operating System (OS) environment.

Within the field of IT, there is often the need to carry out tasks using the internet, word processors, spreadsheets or presentations. This module provides students with the necessary skills to effectively carry out these everyday tasks.

#### **Introduction to Biology**

This module aims to develop an understanding of basic biological concepts necessary for biological literacy regarding biological systems and biological issues of concern to the public.

The science of biology is about studying life. You will be introduced to fundamental concepts and principles of the phenomenal diversity in life, the characteristics of life, how life is organised into hierarchical levels, how energy flows through biological processes, how biological structures are related to function, how all living and non-living organisms interact with each other, and how life grows, develops and reproduces. This module will help you construct and apply biological knowledge in preparation for entry into the Biological Sciences degree programmes

#### **Mathematics for Science**

This module aims to introduce mathematical techniques and prepare students to use mathematics confidently to solve problems, communicate and reason mathematically and make connections between mathematics and its applications in real world scenarios.

This module will focus on graphs of functions and use a variety of ways to describe them. Specific attention will be given to linear, quadratic, polynomial, rational, exponential, logarithmic and trigonometric functions and their applications to real-world problems. The focus will also be on sequences and series and their relation to functions, e.g. linear functions.



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## Module Descriptors

### Year 1

#### Physical Science 1

The aim of this module is to assist students by covering and expanding on certain areas of chemistry that they are required to have a good grasp of in the first-year chemistry course. These are areas that we have found students sometimes struggle with, and so an entire module has been dedicated to ensuring proper understanding before commencing on with the SCCHA-1 course in the following year. This way, we are “setting you up for success” in your future academic studies.

Developing your mind to think like a scientist is about much more than merely knowing what an atom, a Bunsen burner and an isotope are. Scientists all have one thing in common, and that’s curiosity. The human trait to want to know and understand is what the world of science is all about, and we use the skill of problem solving to help us understand.

This module is here to help you understand the fundamental concepts within the field of chemistry, hoping that you leave with the knowledge and skills necessary to excel in your academic pursuits.

Designed as a preparatory course, this module serves as a starting block for students pursuing further studies in fields that require a good understanding of chemistry. By mastering the fundamental concepts introduced here, you will be well-prepared with a solid foundation for future academic success, no matter which scientific field you find yourself in.

We cover all fundamental topics in chemistry from properties of matter, the structure of the atom, the periodic table and chemical bonding. Once you have a good grasp of those concepts, we move on to chemical reactions, stoichiometry, solutions, concentrations, acids and bases, and finally, organic chemistry.

#### Physical Science 2

The aim of this module is to assist students by covering and expanding on certain areas of physics that they are required to have a good grasp of in the first-year physics course. These are areas that we have found students sometimes struggle with, and so an entire module has been dedicated to ensuring proper understanding before commencing on with the SCPHA-1 course in the following year. This way, we are “setting you up for success” in your future academic studies.

Developing your mind to think like a scientist is about much more than merely knowing what Newton's laws, electric circuits, and wave equations are. Scientists all have one thing in common, and that’s curiosity. The human trait to want to know and understand is what the world of science is all about, and we use the skill of problem-solving to help us understand.

This module is here to help you understand the fundamental concepts within the field of physics, hoping that you leave with the knowledge and skills necessary to excel in your academic pursuits. Designed as a preparatory course, this module serves as a starting block for students pursuing further studies in fields that require a good understanding of physics. By mastering the fundamental concepts introduced here, you will be well-prepared with a solid foundation for future academic success, no matter which scientific field you find yourself in.

We cover all fundamental topics in physics from mechanics, kinematics, and dynamics to electricity and magnetism, thermodynamics, waves and optics, and modern physics. Once you have a good grasp of those concepts, we move on to advanced topics like electromagnetism, quantum mechanics, and relativity.