

## **BSc (Four-year programme)**

### **Three extended programmes are available:**

BSc (Four-year programme) – Mathematical Sciences (02130007),  
BSc (Four-year programme) – Biological and Agricultural Sciences (02130008) and BSc (Four-year programme) – Physical Sciences (02130010).

Students who do not comply with the normal three-year BSc entrance requirements for study in the Faculty of Natural and Agricultural Sciences, may nevertheless be admitted to the Faculty by being placed on the BSc (Four-year programme). Generally the BSc (Four-year programme) means that first study year in Mathematics, Physics, Biology and Chemistry is extended to take two years. After completing the BSc (Four-year programme) successfully, students join the second year of the normal BSc programme to complete their degrees. The possibility of switching over to other faculties such as Engineering, Built Environment and Information Technology, Veterinary Science and Health Sciences, after one or two years in the four-year programme, exists. This depends on selection rules and other conditions stipulated by the other faculties.

Applications for admission to the BSc (Four-year programme) must be submitted annually before 30 September. All students considered for the BSc (Four-year programme) must have written an Institutional Proficiency Test. Information in this regard is available at the Client Services Centre. In addition all rules and regulations applicable to the normal study programmes, apply *mutatis mutandis* to the BSc (Four-year programme), with exceptions stated in the regulations for the BSc (Four-year programme). For instance, students placed in the BSc (Four-year programme) must have a National Senior Certificate with admission for degree purposes.

An admissions committee considers applications for the BSc (Four-year programme) annually. Regarding subject choices, admitted students are individually placed on the BSc (Four-year programme) according to their prospective field of study. Students may NOT change this placement without the permission of the Chairperson of the admissions committee.

### **Curriculum**

The following available modules as indicated below, are prescribed modules for a BSc (Four-year programme) and the equivalence to the first-year modules of the normal BSc programme:

**BSc (Four-year programme) –  
Mathematical Sciences**

**02130007**

**First year, first semester:**

Code	Name	Crdt
AIM 111	Academic information management 111	4
COS 133	Introduction to programming 133	8
LST 133	Language, life and study skills 133	8
WST 133	Mathematical statistics 133	8
WTW 133	Precalculus 133	8
<b>Total credits for compulsory modules</b>		<b>36</b>

An elective can be chosen from the modules FRK 133, CMY 133, PHY 133 or MLB 133

**Compulsory credits = (36) Elective credits = (8) Total credits = (44)**

**First year, second semester:**

Code	Name	Crdt
AIM 121	Academic information management 121	4
COS 143	Introduction to programming 2 143	8
LST 143	Language, life and study skills 143	8
WST 143	Mathematical statistics 143	8
WTW 143	Calculus 143	8
<b>Total credits for compulsory modules</b>		<b>36</b>

An elective can be chosen from the modules FRK 143, CMY 143, PHY 143 or MLB 143 based on the elective chosen from the first semester

**Compulsory credits = (36) Elective credits = (8) Total credits = (44)**

**Compulsory credits = (72) Elective credits = (16) Total credits = (88)**

**Second year, first semester:**

Code	Name	Crdt
COS 153	Introduction to programming 3	8
WST 153	Mathematical statistics 153	8
WTW 153	Calculus 153	8

With regard to the rest of the third-semester modules(second year, first semester) and the second-semester, prescribed modules must be selected from the normal BSc programme of your choice.

**First year, first semester:**

<b>Code</b>	<b>Name</b>	<b>Crdt</b>
<b>AIM 111</b>	<b>Academic information management 111</b>	<b>4</b>
<b>CMY 133</b>	<b>Chemistry 133</b>	<b>8</b>
<b>LST 133</b>	<b>Language, life and study skills 133</b>	<b>8</b>
<b>MLB 133</b>	<b>Molecular and cell biology 133</b>	<b>8</b>
<b>PHY 133</b>	<b>Physics 133</b>	<b>8</b>
<b>WTW 133</b>	<b>Precalculus 133</b>	<b>8</b>
<b>Total credits for compulsory modules</b>		<b>44</b>

**First year, second semester:**

<b>Code</b>	<b>Name</b>	<b>Crdt</b>
<b>AIM 121</b>	<b>Academic information management 121</b>	<b>4</b>
<b>CMY 143</b>	<b>Chemistry 143</b>	<b>8</b>
<b>LST 143</b>	<b>Language, life and study skills 143</b>	<b>8</b>
<b>MLB 143</b>	<b>Molecular and cell biology 143</b>	<b>8</b>
<b>PHY 144</b>	<b>Physics 144</b>	<b>8</b>
<b>WTW 144</b>	<b>Mathematics 144</b>	<b>8</b>
<b>Total credits for compulsory modules</b>		<b>44</b>
<b>Compulsory credits = (88) Elective credits = (0)</b>		

**Second year, first semester:**

<b>Code</b>	<b>Name</b>	<b>Crdt</b>
<b>CMY 154</b>	<b>Chemistry 154</b>	<b>8</b>
<b>MLB 153</b>	<b>Molecular and cell biology 153</b>	<b>8</b>
<b>PHY 154</b>	<b>Physics 154</b>	<b>8</b>
<b>WTW 154</b>	<b>Mathematics 154</b>	<b>8</b>
<b>Total credits for compulsory modules</b>		<b>32</b>
<b>Compulsory credits = (88) Elective credits = (0)</b>		

With regard to the rest of the third semester modules(second year, first semester) and the second semester, prescribed modules must be selected from the normal BSc programme of your choice.

**First year, first semester:**

Code	Name	Crdt
AIM 111	Academic information management 111	4
CMY 133	Chemistry 133	8
LST 133	Language, life and study skills 133	8
PHY 133	Physics 133	8
WTW 133	Precalculus 133	8
<b>Total credits for compulsory modules</b>		<b>36</b>

An elective can be chosen from modules COS 133, or MLB 133, or WST 133

**Compulsory credits = (36) Elective credits = (8) Total credits = (44)**

**First year, second semester:**

Code	Name	Crdt
AIM 121	Academic information management 121	4
CMY 143	Chemistry 143	8
LST 143	Language, life and study skills 143	8
PHY 143	Physics 143	8
WTW 143	Calculus 143	8
<b>Total credits for compulsory modules</b>		<b>36</b>

An elective module can be chosen from modules COS 143, MLB 143 or WST 143 based on the elective chosen from the first semester

**Compulsory credits = (36) Elective credits = (8) Total credits = (44)**

**Compulsory credits = (72) Elective credits = (16) Total credits = (88)**

**Second year, first semester:**

Code	Name	Crdt
CMY 154	Chemistry 154	8
PHY 153	Physics 153	8
WTW 153	Calculus 153	8

With regard to the rest of the third-semester modules(second year, first semester) and the second-semester, prescribed modules must be selected from the normal BSc programme of your choice.

Prescribed: CMY 133 Chemistry 133, CMY 143 Chemistry 143 and CMY 154 Chemistry 154: Equivalent module – a BSc First-semester prescribed module: CMY 117.

Physics modules

For students in biological study directions: PHY 133 Physics 133, PHY 144 Physics 144 and PHY 154 Physics 154 Equivalent module: PHY 131.

For students who want to study Physical Sciences and engineering: PHY 133 Physics 133, PHY 143 Physics 143, PHY 153 Physics 153 Equivalent module: FSK 116 (or FSK 176)

For all other students: PHY 133 Physics 133, PHY 143 Physics 143, PHY 153 Physics 153, PHY 163 General physics: Equivalent modules: PHY 114 and PHY 124.

Prescribed: WTW 133 Precalculus 133, WTW 143 Calculus 143 and WTW 153 Calculus 153: Equivalent module – a BSc First-semester prescribed module: WTW 114.

For students in biological study directions: WTW 133 Precalculus 133, WTW 144 Mathematics 144 and WTW 154 Mathematics 154: Equivalent module WTW 134 Mathematics 134

Prescribed: MLB 133 Molecular and cell biology 133, MLB 143 Molecular and cell biology, MLB 153 Molecular and cell biology 153: Equivalent module – a BSc First-semester prescribed module: MLB 111 Molecular and cell biology 111.

**NB! Students may register for an extended module (eg PHY 133, PHY 143, PHY 153 and PHY 163) only once.**

#### Compulsory modules:

AIM 111 and AIM 121 Academic information management, 4 + 4 credits.

LST 133 and LST 143 Academic literacy, 8+ 8 credits.

All new students must register for the academic literacy modules LST.

#### Academic promotion requirements

##### General

All students whose academic progress is not acceptable can be suspended from further studies.

- A student who is excluded from further studies in terms of the stipulations of the abovementioned regulations, will be notified in writing by the Dean or Admissions Committee at the end of the relevant semester.
- A student who has been excluded from further studies may apply in writing to the Admissions Committee of the Faculty of Natural and Agricultural Sciences for re-admission.
- Should the student be re-admitted by the Admissions Committee, strict conditions will be set which the student must comply with in order to proceed with his/her studies.
- Should the student not be re-admitted to further studies by the Admissions Committee, he/she will be informed in writing.
- Students who are not re-admitted by the Admissions Committee have the right to appeal to the Senior Appeals Committee.
- Any decision taken by the Senior Appeals Committee is final.

##### Specific

##### **BSc (Four-year programme):**

It is expected of students who register for the first year of the BSc (Four-year programme) to pass all the prescribed modules of the first year;

It is expected of students accepted into the BSc (Four-year programme) to finish a complete corresponding BSc first year within the two years of enrolment in the BSc (Four-year programme). Students who do not show progress during the first semester of the first year will be referred to the Admissions Committee of the Faculty.

By the end of year 1 semester 2, a student must have passed at least 4 of the 5 prescribed semester 2 modules. The final mark in the module failed must not be lower than 40% allowing the student to write a special exam in this subject early in the following year. This exam must be passed in order to register for the second year of the programme.