University of Pretoria Yearbook 2019

BSc Plant Science (02133405)

Minimum duration of study	3 years
Total credits	428

Admission requirements

- The following persons will be considered for admission: a candidate who is in possession of a certificate that is deemed by the University to be equivalent to the required Grade 12 certificate with university endorsement, a candidate who is a graduate from another tertiary institution or has been granted the status of a graduate of such an institution, and a candidate who is a graduate of another faculty at the University of Pretoria.
- Life Orientation is excluded in the calculation of the Admission Point Score (APS).
- Grade 11 results are used for the conditional admission of prospective students. Final admission is based on the Grade 12 results.

Minimum requirements Achievement level English Home Language or English First Additional Language		**Mathematics**		**Physical Science**		**APS**
NSC/IEB	AS Level	NSC/IEB	AS Level	NSC/IEB	AS Level	
5	C	5	C	5	C	**30**

* 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.

Candidates who do not comply with the minimum admission requirements for BSc (Plant Science), may be considered for admission to the BSc – Extended programme for the Biological and Agricultural Sciences. The BSc – Extended programme takes place over a period of four years instead of the normal three years.

BSc Extended Programme for the Biological and Agricultural Sciences

Minimum requirements Achievement level English Home Language or English First Additional Language		**Mathematics**		**Physical Science**		**APS**
NSC/IEB	AS Level	NSC/IEB	AS Level	NSC/IEB	AS Level	
4	D	4	D	4	D	**24**

Other programme-specific information

A student must pass all the minimum prescribed and elective module credits as set out at the end of each year within a programme as well as the total required credits to comply with the particular degree programme. Please refer to the curricula of the respective programmes. At least 144 credits must be obtained at 300-/400-level, or otherwise as indicated by curriculum. The minimum module credits needed to comply with degree requirements is set out at the end of each study programme. Subject to the programmes as indicated a maximum of 150 credits will be recognised at 100-level. A student may, in consultation with the relevant head of department and subject to the permission by the Dean, select or replace prescribed module credits not indicated in BSc three-year study programmes to the equivalent of a maximum of 36 module credits.

It is important that the total number of prescribed module credits is completed during the course of the study programme. The Dean may, on the recommendation of the relevant head of department, approve deviations in this regard. Subject to the programmes as indicated in the respective curricula, a student may not register for more than 75 module credits per semester at first-year level subject to permission by the Dean. A student may be permitted to register for up to 80 module credits in a the first semester during the first year provided that he or she obtained a final mark of no less than 70% for grade 12 Mathematics and achieved an APS of 34 or more in the NSC.

Students who are already in possession of a bachelor’s degree, will not receive credit for modules of which the content overlap with modules from the degree that was already conferred. Credits will not be considered for more than half the credits passed previously for an uncompleted degree. No credits at the final-year or 300- and 400-level will be granted.

The Dean may, on the recommendation of the programme manager, approve deviations with regard to the composition of the study programme.

Please note: Where elective modules are not specified, these may be chosen from any modules appearing in the list of modules.

It remains the student’s responsibility to acertain, prior to registration, whether they comply with the prerequisites of the modules they want to register for.

The prerequisites are listed in the Alphabetical list of modules.

Promotion to next study year

A student will be promoted to the following year of study if he or she passed 100 credits of the prescribed credits for a year of study, unless the Dean on the recommendation of the relevant head of department decides otherwise. A student who does not comply with the requirements for promotion to the following year of study, retains the credit for the modules already passed and may be admitted by the Dean, on recommendation of the relevant head of department, to modules of the following year of study to a maximum of 48 credits, provided that it will fit in with both the lecture and examination timetable.

General promotion requirements in the faculty
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.

Pass with distinction

A student obtains his or her degree with distinction if all prescribed modules at 300-level (or higher) are passed in one academic year with a weighted average of at least 75%, and obtain at least a subminimum of 65% in each of the relevant modules.

Curriculum: Year 1

Minimum credits: 140

Minimum credits: 140

Fundamental = 12
Core = 128

Additional information:
Students who do not qualify for AIM 102 must register for AIM 111 and AIM 121.

Fundamental modules

Academic information management 102 (AIM 102) - Credits: 6.00
Academic information management 111 (AIM 111) - Credits: 4.00
Academic information management 121 (AIM 121) - Credits: 4.00
Language and study skills 110 (LST 110) - Credits: 6.00
Academic orientation 102 (UPO 102) - Credits: 0.00

Core modules

Biometry 120 (BME 120) - Credits: 16.00
Plant biology 161 (BOT 161) - Credits: 8.00
General chemistry 117 (CMY 117) - Credits: 16.00
General chemistry 127 (CMY 127) - Credits: 16.00
Introductory genetics 161 (GTS 161) - Credits: 8.00
Introduction to microbiology 161 (MBY 161) - Credits: 8.00
Molecular and cell biology 111 (MLB 111) - Credits: 16.00
Physics for biology students 131 (PHY 131) - Credits: 16.00
Mathematics 134 (WTW 134) - Credits: 16.00
Animal diversity 161 (ZEN 161) - Credits: 8.00

Curriculum: Year 2

Minimum credits: 144

Minimum credits: 144

Students are required to select their modules on the basis of a chosen subject stream within the broader discipline of Plant Science. The choice of streams is as follows: Biodiversity (ecology & taxonomy), Medicinal Plant Science, Plant Pathology or a dual major in Plant Science and Biochemistry or Plant Science and Microbiology or Genetics. It is possible to register for other modules and configurations at the discretion of the relevant head of department and as long as the timetable permits.

Biodiversity stream: GKD 250, GIS 221, MBY 251 and 261, ZEN 251 and 261; plus
(Sem 2) 12 credits: PLG 262 or PPK 251

Medicinal Plant Science stream: BCM 252 and 261, MBY 251 and 261, plus
(Sem 1) 12 credits (select one): CMY 284, PLG 251, ZEN 251
(Sem 2) 24 credits (select two): CMY 283, BCM 262, MBY 262, GIS 221

Plant Pathology stream: BCM 252 and 261, MBY 251 and 261, PLG 251 and 261 plus
(Sem 2) 12 credits (select one): GIS 221 or MBY 262

Plant Science in dual major with Microbiology or Genetics: BCM 252, 261, MBY 251, 261 and 262 plus
(Sem 1) 12 credits (select one): ZEN 251 or PLG 251
(Sem 2) 12 credits (select one): BCM 262, PLG 262 or ZEN 261

Plant Science in dual major with Biochemistry: BCM 252, 261 and 262, CMY 282, 283, 284 and 285.

Core modules

Introduction to proteins and enzymes 251 (BCM 251) - Credits: 12.00
South African flora and vegetation 251 (BOT 251) - Credits: 12.00
Plant physiology and biotechnology 261 (BOT 261) - Credits: 12.00
Molecular genetics 251 (GTS 251) - Credits: 12.00
Genetic diversity and evolution 261 (GTS 261) - Credits: 12.00

Elective modules

Carbohydrate metabolism 252 (BCM 252) - Credits: 12.00
Lipid and nitrogen metabolism 261 (BCM 261) - Credits: 12.00
Biochemical principles of nutrition and toxicology 262 (BCM 262) - Credits: 12.00
Physical chemistry 282 (CMY 282) - Credits: 12.00
Analytical chemistry 283 (CMY 283) - Credits: 12.00
Organic chemistry 284 (CMY 284) - Credits: 12.00
Inorganic chemistry 285 (CMY 285) - Credits: 12.00
Geographic information systems introduction 221 (GIS 221) - Credits: 12.00
Introductory soil science 250 (GKD 250) - Credits: 12.00
Bacteriology 251 (MBY 251) - Credits: 12.00
Mycology 261 (MBY 261) - Credits: 12.00
Food microbiology 262 (MBY 262) - Credits: 12.00
Introduction to crop protection 251 (PLG 251) - Credits: 12.00
Principles of plant pathology 262 (PLG 262) - Credits: 12.00
Sustainable crop production and agroclimatology 251 (PPK 251) - Credits: 15.00

Invertebrate biology 251 (ZEN 251) - Credits: 12.00
African vertebrates 261 (ZEN 261) - Credits: 12.00

Curriculum: Final year

Minimum credits: 144

Minimum credits: 144

Core = 90
Elective = 54

Additional information:
Specialisation in Plant ecology: Students take suitable elective modules in the first semester and ZEN 364 (18 credits) in the second semester.
Specialisation in Plant Pathology: In the first semester, select PLG 351 and one module from [ZEN 355 or MBY 355], and in the second semester, select PLG 363 and replace [BOT 365 or BOT 366] with ZEN 365.

Dual major
Plant Science and Biochemistry: Replace BTC 361 in order to take BCM 356, BCM 357, BCM 367 and BCM 368.
Plant Science and Genetics: Select GTS 351, GTS 354 and GTS 367. Students may also choose to replace BOT 366 with GTS 368.
Plant Science and Microbiology: Replace BOT 366 in order to take MBY 351, MBY 355, MBY 364 and MBY 365.

Core modules

Plant ecophysiology 356 (BOT 356) - Credits: 18.00
Plant ecology 358 (BOT 358) - Credits: 18.00
Phytomedicine 365 (BOT 365) - Credits: 18.00
Plant diversity 366 (BOT 366) - Credits: 18.00
Plant genetics and crop biotechnology 361 (BTC 361) - Credits: 18.00

Elective modules

Macromolecules of life: Structure-function and Bioinformatics 356 (BCM 356) - Credits: 18.00
Biocatalysis and integration of metabolism 357 (BCM 357) - Credits: 18.00
Cell structure and function 367 (BCM 367) - Credits: 18.00
Molecular basis of disease 368 (BCM 368) - Credits: 18.00
Eukaryotic gene control and development 351 (GTS 351) - Credits: 18.00
Genome evolution and phylogenetics 354 (GTS 354) - Credits: 18.00
Population and evolutionary genetics 367 (GTS 367) - Credits: 18.00
Genetics in human health 368 (GTS 368) - Credits: 18.00
Virology 351 (MBY 351) - Credits: 18.00
Bacterial genetics 355 (MBY 355) - Credits: 18.00
Genetic manipulation of microbes 364 (MBY 364) - Credits: 18.00
Microbe interactions 365 (MBY 365) - Credits: 18.00
General plant pathology 351 (PLG 351) - Credits: 18.00
Plant disease control 363 (PLG 363) - Credits: 18.00
Insect diversity 355 (ZEN 355) - Credits: 18.00
Conservation ecology 364 (ZEN 364) - Credits: 18.00

The information published here is subject to change and may be amended after the publication of this information. The

General Regulations (G Regulations) apply to all faculties of the University of Pretoria. It is expected of students to familiarise themselves well with these regulations as well as with the information contained in the General Rules section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.