Universiteit van Pretoria Jaarboek 2018

BScHons Plantkunde (02240707)

Minimum duur van studie	1 jaar
Totale krediete	135

Programinligting

Hierdie inligting is slegs in Engels beskikbaar.

The programme consists of compulsory modules and elective modules. Students may register for modules to the maximum of 20 credits presented by another department, which forms part of the elective modules.
The following fields are presented in the BScHons in Plant Science programme:

- Plant Diversity (D)
- Plant Biotechnology/Physiology (PB)
- Plant Ecology (E)
- Option: Medicinal Plant Science

Apart from the compulsory and elective modules, a project, leading to a research report (60 credits), forms an essential part of the training programme. One seminar (15 credits) must also be written and presented. Field excursions are undertaken.
In addition to the compulsory modules, electives are selected in consultation with the supervisor.
Suitably qualified candidates may also apply for the interdepartmental BScHons in Biotechnology degree (Code 02240392) with a supervisor in the Department of Plant Science.
Please consult Prof P Bloomer, Tel: +27 12 420 3259, for further details

Renewal of registration

1. Subject to exceptions approved by the Dean, on the recommendation of the head of department, and in the case of distance education where the Dean formulates the stipulations that will apply, a student may not sit for an examination for the honours degree more than twice in the same module.
2. A student for an honours degree must complete his or her study, in the case of full-time students, within two years and, in the case of after-hours students, within three years of first registering for the degree and, in the case of distance education students, within the period stipulated by the Dean. Under special circumstances, the Dean, on the recommendation of the head of department, may give approval for a limited extension of this period.

In calculating marks, General Regulation G.12.2 applies.

Apart from the prescribed coursework, a research project is an integral part of the study.

Toelatingsvereistes

BSc in Plantkunde, of 'n aanbeveling van die hoof van die departement indien die kandidaat nie in Plantkunde gespesialiseer het nie. Voorkeur sal aan aansoekers met die hoogste finale graad punt gemiddeld vir hul voorafgaande graad gegee word, en kwalifiserende kandidate kan aan 'n toelatings eksamen onderwerp word.

Toegang is verder afhanklik van die beskikbaarheid van studieleiers en / of navorsingsprojekte binne die deelnemende departemente.

Ander programspesifieke inligting

BOT 705 and BTW 701 are for BScHons (Biotechnology) students. PB students who wish to take one of these modules as an elective need to apply to the programme leader.

The curriculum for the balance of the credits will be determined by the heads of department of the interdepartmental BScHons (Biotechnology) degree programme.

Slaag met lof

The BScHons degree is awarded with distinction to a candidate who obtains a weighted average of at least 75% in all the prescribed modules and a minimum of 65% in any one module.

Kurrikulum: Finale jaar

Minimum krediete: 135

Hierdie inligting is slegs in Engels beskikbaar

Core credits: 85
Elective credits: 50

The programme consists of compulsory modules and elective modules. Students may register for modules to the maximum of 20 credits presented by another department, which forms part of the elective modules.
The following fields are presented in the BScHons in Plant Science programme:

- Plant Diversity (D)
- Plant Biotechnology/Physiology (PB)
- Plant Ecology (E)
- Option: Medicinal Plant Science

Apart from the compulsory and elective modules, a project, leading to a research report (60 credits), forms an essential part of the training programme. One seminar (15 credits) must also be written and presented. Field excursions are undertaken.
In addition to the compulsory modules, electives are selected in consultation with the supervisor.
Suitably qualified candidates may also apply for the interdepartmental BScHons in Biotechnology degree (Code 02240393) with a supervisor in the Department of Plant and Soil Science.
Please consult Prof P Bloomer, Tel: +27 12 420 3259, for further details

Kernmodules

Navorsingsverslag 782 (BOT 782)

Modulekrediete	60.00
Voorvereistes	Geen voorvereistes.
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 1

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Teaching and planning, execution and documentation of a research project.

Seminaar 783 (BOT 783)

Modulekrediete	15.00
Voorvereistes	Geen voorvereistes.
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 1

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Literature study, discussion and oral presentation of a subject related to the main discipline.

Keusemodules

Biometrie 780 (BME 780)

Modulekrediete	15.00
Diensmodules	Fakulteit Natuur- en Landbouwetenskappe
Voorvereistes	Geen voorvereistes.
Kontaktyd	2 Blokweke
Onderrigtaal	Module word in Engels aangebied
Departement	Statistiek
Aanbiedingstydperk	Semester 1

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

The principles of experimental design as required for the selection of an appropriate research design. Identification of the design limitations and the impact thereof on the research hypotheses and the statistical methods. Identification and application of the appropriate statistical methods needed. Interpreting of statistical results and translating these results to the biological context.

Natuurlike boomveld en woude: Ekologie en bestuur 700 (BOT 700)

Modulekrediete	15.00
Voorvereistes	Geen voorvereistes.
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 2

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Definitions of woodlands and forests and vegetation and forest resources in southern Africa; Classification of forest and woodland in southern Africa; Woodland dynamics including disturbance, recruitment, growth and mortality, recovery after disturbance; Ecosystem services (microclimate and nutrient cycling, carbon sequestration etc); Sustainable forest resource management (resource assessment, socio-economic assessment e.g. wood and non-forest products, participatory resource management processes); Forest health; Monitoring of resource-use impacts and adaptive management; Development of a framework for sustainable conservation and use of non-timber forest products; Climate change and resilience. Forest disease and pathology.

Molekulere tegnieke 705 (BOT 705)

Modulekrediete	15.00

Voorvereistes	*Admission into BSc Hons in Plant Science (Plant Biotechnology/Physiology)*
Kontaktyd	1 lesing per week, 5 praktiese sessies per week, 1 besprekingsklas per week
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 1

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Students are guided through the methodology of research planning and data handling. They are offered hands-on experience in a range of advanced techniques employed in molecular research and analysis.

Plantnomenklatuur 712 (BOT 712)

Modulekrediete	10.00
Voorvereistes	Geen voorvereistes.
Kontaktyd	1 lesing per week, 1 ppraktiese sessie per week
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 1

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

The regulations of the International Code for Botanical Nomenclature. Principles of nomenclature. History of plant collecting. Type specimens.

Saadekologie 714 (BOT 714)

Modulekrediete	10.00
Voorvereistes	Geen voorvereistes.
Kontaktyd	1 ppraktiese sessie per week, 1 lesing per week, 1 webgebaseerde periode per week
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 2

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Regeneration of plants from seed under natural conditions. Early stages in the life of a plant from ovule to established seedling: seed production; seed predation; seed dispersal; seed germination and dormancy, seed bank dynamics and seedling establishment.

Plantmorfologie 717 (BOT 717)

Modulekrediete	10.00
Voorvereistes	Geen voorvereistes.
Kontaktyd	1 lesing per week, 1 ppraktiese sessie per week
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 1

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Speciation in flowering plants; plant variation. Sex determination in flowering plants. Reproductive systems in flowering plants.

Inleidende plantbiotegnologie 718 (BOT 718)

Modulekrediete	10.00
Voorvereistes	Geen voorvereistes.
Kontaktyd	1 lesing per week, 1 praktiese sessie per week
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 1

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Plant genome: structure and composition of the plant genome (nuclear, mitochondrial and chloroplast); applications in plant biotechnology: plant tissue culture (microproagation, somatic embryogenesis and cell suspension cultures). Genetic manipulation and gene transfer technology (Agrobacterium-based and other) and DNA-marker technology.

Primêre plantmetabolisme 719 (BOT 719)

Modulekrediete	10.00
Voorvereistes	Geen voorvereistes.
Kontaktyd	1 praktiese sessie per week, 1 besprekingsklas per week, 1 webgebaseerde periode per week
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 1

Module-inhoud
*Hierdie inligting is slegs in Engels beskikbaar.

Regulation and interaction of primary plant metabolic pathways on the sub-cellular and whole plant level.

Plantekologie 730 (BOT 730)

Modulekrediete	10.00
Voorvereistes	Geen voorvereistes.
Kontaktyd	8 uur per dag vir 5 dae
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 1

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.
Practical applications of plant ecology principles. Designing and executing field studies. Exposure to skills of field ecology and plant identification. This module includes a compulsory 5-day field component.

Planttaksonomie 741 (BOT 741)

Modulekrediete	10.00
Voorvereistes	Geen voorvereistes.
Kontaktyd	1 ppraktiese sessie per week, 1 lesing per week
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 2

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Classification, identification and nomenclature, methodology of a revision study, analysis and presentation of taxonomic information, evolution, phylogeny and cladistics.

Plantklassifikasie en fitogeografie742 (BOT 742)

Modulekrediete	20.00
Voorvereistes	BOT 366
Kontaktyd	2 lesings per week, 1 ppraktiese sessie per week
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 2

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.
An overview of phylogenetics sets the scene, and sources of taxonomic information (morphology, anatomy, chemotaxonomy, cytogenetics, reproductive biology, palynology, ethnobotany and paleobotany) and how these data are used are discussed. This is followed by a section on the use of phylogenies as tools to understand ecological and geographical patterns and processes. Modern plant distribution patterns are assessed from the framework of the competing explanations of dispersalisn and vicariance.

Toepassings in plantbiotegnologie 746 (BOT 746)

Modulekrediete	10.00
Voorvereistes	Geen voorvereistes.
Kontaktyd	1 praktiese sessie per week, 1 lesing per week
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 2

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Creation of genetically modified plants and their impact on modern agriculture.

Gevorderde fitomedisyne 761 (BOT 761)

Modulekrediete	10.00
Voorvereistes	Geen voorvereistes.
Kontaktyd	1 lesing per week, 1 ppraktiese sessie per week
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 2

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Metabolism and functions of secondary compounds such as tannins, alkaloids, terpenoids, flavonoids and free amino acids. Importance of secondary compounds in the defence mechanisms of plants. Isolation and identification of medicinal bioactive compounds from plants. Their current scope and potential applications in ethnobotany. Strategies to discover new pharmaceuticals from ethnomedicine.

Trends in plant science784 (BOT 784)

Modulekrediete	10.00
Voorvereistes	Geen voorvereistes.
Onderrigtaal	Module word in Engels aangebied

Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 2

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Literature study of recent publications in a subject related to one of the elective disciplines.

Praktiese plantidentifikasie 786 (BOT 786)

Modulekrediete	10.00
Voorvereistes	Geen voorvereistes.
Kontaktyd	2 lesings per week, 2 praktiese sessies per week
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 1

Module-inhoud

Beginsels van identifikasie, klassifikasie en nomenklatuur; identifikasie van plante; familieherkenning; versameling van planteksemplare vir identifikasie; herbarium as inligtingsbron. Variasie in saadplante en voortplantingsisteme. Praktiese werk behels ook

Ruimtelike ontleding in ekologie 788 (BOT 788)

Modulekrediete	10.00
Voorvereistes	Geen voorvereistes.
Kontaktyd	2 lesings per week
Onderrigtaal	Module word in Engels aangebied
Departement	Plant- en Grondwetenskappe
Aanbiedingstydperk	Semester 2

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Mapping and analysing spatial data. Theory and basic techniques of analysing and manipulating spatial data using geographical information systems. Mapping of vegetation types, species distributions and diversity, species traits. Understanding the spatial drivers of biodiversity patterns. The influence of scale on biodiversity analyses. Relevance for conservation planning for mapping biodiversity risk and prioritsing conservation, especially in a South African context.

Biotegnologie in die werkplek 701 (BTW 701)

Modulekrediete	15.00
Voorvereistes	Geen voorvereistes.
Onderrigtaal	Module word in Engels aangebied

Departement	Genetika
Aanbiedingstydperk	Jaar

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Introduction to the principles and realities of working in the field of biotechnology. Discussions on various aspects, including entrepreneurship; intellectual property; patent rights; financial management; grant applications and product marketing. The module will be assessed by way of a simulated grant application for the development of a hypothetical biotechnological venture.

Die inligting wat hier verskyn, is onderhewig aan verandering en kan na die publikasie van hierdie inligting gewysig word.. Die Algemene Regulasies (G Regulasies) is op alle fakulteite van die Universiteit van Pretoria van toepassing. Dit word vereis dat elke student volkome vertroud met hierdie regulasies sowel as met die inligting vervat in die Algemene Reëls sal wees. Onkunde betrefffende hierdie regulasies en reels sal nie as ‘n verskoning by oortreding daarvan aangebied kan word nie.