

# Universiteit van Pretoria Jaarboek 2017

## BScHons Geoinformatika (02240393)

**Duur van studie** 1 jaar

**Totale krediete** 135

### Programinligting

Hierdie inligting is slegs in Engels beskikbaar.

BScHons (Biotechnology) is a unique interdepartmental programme aimed at enabling students to pursue their interest in molecular biotechnology through relevant research areas offered within fields of biochemistry, plant science, microbiology and plant pathology, plant production, as well as genetics. Students within this programme will be registered and will conduct their studies within the department of their choice. A student's choice of research programme will determine which of the respective departments will mentor their honours degree programme.

*Hierdie inligting is slegs in Engels beskikbaar*

#### 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 Bioteegnologie of gelykstaande graad met GTS 351, BCM 356 en MBY 364; 'n gemiddelde slaagsyfer van 60% of meer op derdejaarsvlak of toestemming deur die hoof van die departement. Voorkeur sal aan aansoekers met die hoogste gemiddelde finale graad punt vir hul voorafgaande graad gegee word, en kwalifiserende aansoekers kan aan 'n ingang evaluerings eksamen onderwerp word. Toegang is verder afhanklik van die beskikbaarheid van studieleiers en / of navorsingsprojekte binne die deelnemende departemente.

### Ander programspesifieke inligting

- The curriculum for the balance of the credits will be determined by the heads of the participating departments.
- Additional modules may be prescribed by the head of the department where deemed necessary. Honours students may also be required to complete a biometry or equivalent module, if they have not already done so



during their undergraduate training.

- A pass mark is required for all the components of the honours study programme and the final mark is calculated proportionally to the credits of the respective prescribed modules.

## 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

### Kernmodules

#### Biotegnologie in die werkplek 701 (BTW 701)

**Modulekrediete** 15.00

**Voorvereistes** Geen voorvereistes.

**Onderrigtaal** Module word in Engels aangebied

**Akademiese organisasie** 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.

#### Molekulêre en selbiologie 721 (MLB 721)

**Modulekrediete** 15.00

**Voorvereistes** Geen voorvereistes.

**Kontaktyd** 2 besprekingsklasse per week

**Onderrigtaal** Module word in Engels aangebied

**Akademiese organisasie** Mikrobiologie en Plantpat

**Aanbiedingstydperk** Semester 2

#### Module-inhoud

\*Hierdie inligting is slegs in Engels beskikbaar.

Principles and applications of recombinant DNA, and other novel molecular and genomics technologies, to address questions in the biological sciences and/or biotechnology. Strong emphasis is placed on the principles of research planning, including identifying suitable research objectives, formulating a research strategy and understanding the relevance and feasibility of research. The module is assessed by means of a research project proposal, conceived and formulated by each student. The proposal must focus on the use of molecular technologies in addressing realistic questions in biology and/or biotechnology. There is also an oral defense of the project proposal.

This module is jointly presented in the departments of Biochemistry, Genetics and Microbiology and Plant Pathology.

### Keusemodules



## Molekulere tegnieke 705 (BOT 705)

<b>Modulekrediete</b>	15.00
<b>Voorvereistes</b>	*Admission into BSc Hons in Plant Science (Plant Biotechnology/Physiology)*
<b>Kontaktyd</b>	1 lesing per week, 5 praktiese sessies per week, 1 besprekingsklas per week
<b>Onderrigtaal</b>	Module word in Engels aangebied
<b>Akademiese organisasie</b>	Plant- en Grondwetenskappe
<b>Aanbiedingstydperk</b>	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.

## Navorsingsmetodes 705 (GTK 705)

<b>Modulekrediete</b>	30.00
<b>Voorvereistes</b>	Geen voorvereistes.
<b>Kontaktyd</b>	10 besprekingsklasse per week, 5 webgebaseerde periodes per week, 5 praktiese sessies per week, 5 lesings per week
<b>Onderrigtaal</b>	Module word in Engels aangebied
<b>Akademiese organisasie</b>	Genetika
<b>Aanbiedingstydperk</b>	Jaar

### 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. Scientific writing and presentation skills, required for research in genetics, are also addressed.

## Navorsingsmetodes 774 (BCM 774)

<b>Modulekrediete</b>	30.00
<b>Voorvereistes</b>	Toelating tot BScHons Biochemie, Biotegnologie, Genetika, Mikrobiologie, Bioinformatika of Mensfisiologie
<b>Kontaktyd</b>	4 lesings per week, 2 praktiese sessies per week, 2 webgebaseerde periodes per week
<b>Onderrigtaal</b>	Module word in Engels aangebied
<b>Akademiese organisasie</b>	Biochemie
<b>Aanbiedingstydperk</b>	Jaar



## Module-inhoud

\* Hierdie inligting is slegs in Engels beskikbaar.

Students are guided through the methodology of research planning and data handling, as well as science communication skills. They are offered hands-on experience in a range of advanced techniques employed in biochemistry, molecular technologies and biochemical analysis. Scientific writing and presentation skills required for research in biochemistry, are also addressed. Ethical and philosophical issues in the broader field of the Cellular and Molecular Sciences are also addressed. Several of these aspects will be presented collaboratively by the Department of Genetics and the Department of Microbiology and Plant Pathology.

## Navorsingsprojek en -verslag 773 (BCM 773)

<b>Modulekrediete</b>	60.00
<b>Voorvereistes</b>	Geen voorvereistes.
<b>Kontaktyd</b>	1 ander kontak per week
<b>Onderrigtaal</b>	Module word in Engels aangebied
<b>Akademiese organisasie</b>	Biochemie
<b>Aanbiedingstydperk</b>	Jaar

## Navorsingsverslag 782 (BOT 782)

<b>Modulekrediete</b>	60.00
<b>Voorvereistes</b>	Geen voorvereistes.
<b>Onderrigtaal</b>	Module word in Engels aangebied
<b>Akademiese organisasie</b>	Plant- en Grondwetenskappe
<b>Aanbiedingstydperk</b>	Semester 1

## Module-inhoud

\*Hierdie inligting is slegs in Engels beskikbaar.

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

## Navorsingsprojek 703 (GTK 703)

<b>Modulekrediete</b>	60.00
<b>Voorvereistes</b>	Geen voorvereistes.
<b>Onderrigtaal</b>	Module word in Engels aangebied
<b>Akademiese organisasie</b>	Genetika
<b>Aanbiedingstydperk</b>	Jaar



## Module-inhoud

\*Hierdie inligting is slegs in Engels beskikbaar.

A mini-dissertation with well-defined limits is undertaken under the guidance of a supervisor. The students are allowed to choose from a number of projects from the different research programmes in the department. The module also has a strong theoretical component since emphasis is placed on writing and presenting a comprehensive literature review and project proposal. Additional technical and analytical training is provided. The project is concluded with a final report, presented in the format of a short manuscript, as well as a poster and an oral presentation.

## Navorsingsprojek en literatuurstudie 754 (MCP 754)

<b>Modulekrediete</b>	60.00
<b>Voorvereistes</b>	Geen voorvereistes.
<b>Onderrigtaal</b>	Module word in Engels aangebied
<b>Akademiese organisasie</b>	Mikrobiologie en Plantpat
<b>Aanbiedingstydperk</b>	Jaar

## Module-inhoud

\*Hierdie inligting is slegs in Engels beskikbaar.

The module includes both practical and theoretical components. In addition to an individual research project with well-defined limits that is undertaken under the guidance of a lecturer, the module also acquaint the student with the theoretical aspects relevant to a specific research topic. The research project is thus preceded by the presentation of an in-depth review of the relevant literature, and the project is concluded with a progress report, presented in the format of a short publication and an oral presentation.

## Navorsingsmetodes 751 (MCP 751)

<b>Modulekrediete</b>	30.00
<b>Voorvereistes</b>	Geen voorvereistes.
<b>Kontaktyd</b>	5 praktiese sessies per week, 7 lesings per week
<b>Onderrigtaal</b>	Module word in Engels aangebied
<b>Akademiese organisasie</b>	Mikrobiologie en Plantpat
<b>Aanbiedingstydperk</b>	Jaar

## Module-inhoud

\*Hierdie inligting is slegs in Engels beskikbaar.

The module provides students with planning, data handling, writing, and presentation skills required for microbiological research. In addition, students are provided with hands-on experience in the advanced techniques utilised in research and analysis. Ethical and philosophical issues in the broader field of Microbiology and Plant Pathology are also addressed.

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 vertrouwd met hierdie regulasies sowel as met die inligting vervat in die [Algemene Reëls](#) sal wees. Onkunde betreffende hierdie regulasies en reëls sal nie as 'n verskoning by oortreding daarvan aangebied kan word nie.