

# University of Pretoria Yearbook 2021

## BScHons Genetics (02240705)

**Department** Genetics

**Minimum duration of study** 1 year

**Total credits** 135

**NQF level** 08

### Programme information

The honours study programmes serve as the first level of postgraduate training and the aim is therefore to introduce students to the methods of research – from the reading of research papers, through to the conceptualisation, planning, execution and communication of a research project.

#### Renewal of registration

- i. Subject to exceptions approved by the Dean, on the recommendation of the relevant head of department, a student may not sit for an examination for the honours degree more than twice in the same module.
- ii. 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. Under special circumstances, the Dean, on the recommendation of the relevant 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.

### Admission requirements

1. Relevant BSc degree
2. A weighted average of at least 60% in Genetics at final-year level
3. An admission examination may be required

### Examinations and pass requirements

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

### Pass with distinction

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.

## Curriculum: Final year

**Minimum credits: 135**

### Additional information:

Suitably qualified candidates may also apply for the interdepartmental BScHons Biotechnology (Code 02240393) with a registration in the Division of Genetics. For more information, please refer to the programme information for the BScHons Biotechnology.

## Core modules

### Scientific communication 702 (GTK 702)

<b>Module credits</b>	15.00
<b>NQF Level</b>	08
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	1 discussion class per week, 1 seminar per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Biochemistry, Genetics and Microbiology
<b>Period of presentation</b>	Year

#### Module content

Students are guided to collect relevant and up-to-date literature on large topics from databases using referencing software, and to select and condense relevant papers into the outline for a literature review. Critical reading of research papers, article discussions and presentations. Scientific writing skills.

### Research project 703 (GTK 703)

<b>Module credits</b>	60.00
<b>NQF Level</b>	08
<b>Prerequisites</b>	No prerequisites.
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Biochemistry, Genetics and Microbiology
<b>Period of presentation</b>	Year

#### Module content

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.



### Trends in genetics 704 (GTK 704)

<b>Module credits</b>	20.00
<b>NQF Level</b>	08
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	2 discussion classes per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Biochemistry, Genetics and Microbiology
<b>Period of presentation</b>	Year

#### Module content

Discussions and essays focusing on a selection of current topics, as well as recent advances in the field of genetics. There is emphasis on contextualising these developments in the broader framework of the biosciences and its role in the workplace and modern society. Ethical and philosophical issues in genetics are debated. Concepts related to intellectual property, legal issues and biosafety in biotechnology are introduced.

### Research methods 705 (GTK 705)

<b>Module credits</b>	25.00
<b>NQF Level</b>	08
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	2 Practicals/Discussion classes per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Biochemistry, Genetics and Microbiology
<b>Period of presentation</b>	Year

#### Module content

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.

### Molecular and cellular biology 721 (MLB 721)

<b>Module credits</b>	15.00
<b>NQF Level</b>	08
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	2 discussion classes per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Biochemistry, Genetics and Microbiology
<b>Period of presentation</b>	Year

## Module content

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 and Soil Sciences.

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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.