

# University of Pretoria Yearbook 2016

## BScHons Biochemistry (03241011)

**Duration of study** 1 year

**Total credits** 135

### Programme information

#### Renewal of registration

- i. 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.
- 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 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.

### Admission requirements

Organic and Analytical chemistry at 200-level; a final mark of 60% or more in Biochemistry at 300-level and depending on availability of supervisor/s and/or projects within the department.

### Other programme-specific information

- A pass mark is required for all the components of the honours programme and the average mark is calculated proportionally to the credits.
- Additional modules can be prescribed to remedy shortcomings in a candidate's undergraduate training.

### 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

### Core modules

#### Trends in biochemical research 771 (BCM 771)

Module credits	15.00
Prerequisites	No prerequisites.
Contact time	1 discussion class per week
Language of tuition	English
Academic organisation	Biochemistry
Period of presentation	Year

##### Module content

Study and discussion of topical research results from recent scientific publications.

#### Research project and report 773 (BCM 773)

Module credits	60.00
Prerequisites	No prerequisites.
Contact time	1 other contact session per week
Language of tuition	English
Academic organisation	Biochemistry
Period of presentation	Year

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

Module credits	15.00
Prerequisites	No prerequisites.
Contact time	2 discussion classes per week
Language of tuition	English
Academic organisation	Microbiology and Plant Path
Period of presentation	Semester 2



## 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 Pathology.

## Research methods 774 (BCM 774)

**Module credits** 30.00

**Prerequisites** Admission into BSc Hons Biochemistry, Biotechnology, Genetics, Microbiology, Bioinformatics or Human Physiology

**Contact time** 2 web-based periods per week, 2 practicals per week, 4 lectures per week

**Language of tuition** English

**Academic organisation** Biochemistry

**Period of presentation** Year

## Module content

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.

## Advanced biochemistry 775 (BCM 775)

**Module credits** 15.00

**Prerequisites** Admission into BSc Hons Biochemistry, Genetics, Microbiology, Bioinformatics or Human Physiology

**Contact time** 4 web-based periods per week, 4 lectures per week

**Language of tuition** English

**Academic organisation** Biochemistry

**Period of presentation** Year

## Module content

The latest trends towards a biological systems approach of metabolism, functional genomics and control. This includes integration of metabolic pathways, mechanisms of regulation and metabolic control analysis.



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.