



# University of Pretoria Yearbook 2025

## Molecular and cell biology 111 (MLB 111)

**Qualification** Undergraduate

**Faculty** Faculty of Natural and Agricultural Sciences

**Module credits** 16.00

**NQF Level** 05

**Programmes** BEd (Senior Phase and Further Education and Training Teaching)

*BSc Computer Science*

*BSc Information and Knowledge Systems*

*Bachelor of Dental Surgery [BChD]*

*Bachelor of Dietetics [BDietetics]*

*Bachelor of Medicine and Surgery [MBChB]*

*BSc (Food Management) Culinary Science*

*BSc (Food Management) Nutrition*

*BSc (Geography) Geography and Environmental Science*

*BSc Biochemistry*

*BSc Biotechnology*

*BSc Chemistry*

*BSc Ecology*

*BSc Entomology*

*BSc Food Science*

*BSc Genetics*

*BSc Human Genetics*

*BSc Human Physiology*

*BSc Human Physiology, Genetics and Psychology*

*BSc Medical Sciences*

*BSc Meteorology*

*BSc Microbiology*

*BSc Physics*

*BSc Plant Science*



BSc specialising in Chemistry 4-year programme

BSc specialising in Ecology 4-year programme

BSc specialising in Human Physiology 4-year programme

BSc specialising in Meteorology 4-year programme

BSc specialising in Physics 4-year programme

BSc *Zoology*

BScAgric *Agricultural Economics and Agribusiness Management*

BScAgric *Animal Science*

BScAgric *Applied Plant and Soil Sciences*

BScAgric *Plant Pathology*

BScAgric specialising in Applied Plant and Soil Sciences 5-year programme

BScAgric specialising in Plant Pathology 5-year programme

Bachelor of Veterinary Sciences [BVSc]

**Service modules**

Faculty of Engineering, Built Environment and Information Technology

Faculty of Education

Faculty of Health Sciences

Faculty of Veterinary Science

**Prerequisites**

A candidate who has passed Mathematics with at least 60% in the Grade 12 examination

**Contact time**

1 practical/tutorial per week, 4 lectures per week

**Language of tuition**

Module is presented in English

**Department**

Biochemistry, Genetics and Microbiology

**Period of presentation**

Semester 1

**Module content**

Introduction to the molecular structure and function of the cell. Basic chemistry of the cell. Structure and composition of prokaryotic and eukaryotic cells. Ultrastructure and function of cellular organelles, membranes and the cytoskeleton. General principles of energy, enzymes and cell metabolism. Selected processes, e.g. glycolysis, respiration and/or photosynthesis. Introduction to molecular genetics: DNA structure and replication, transcription, translation. Cell growth and cell division.

**General Academic Regulations and Student Rules**

The [General Academic Regulations \(G Regulations\)](#) and [General Student Rules](#) apply to all faculties and registered students of the University, as well as all prospective students who have accepted an offer of a place at



the University of Pretoria. On registering for a programme, the student bears the responsibility of ensuring that they familiarise themselves with the General Academic Regulations applicable to their registration, as well as the relevant faculty-specific and programme-specific regulations and information as stipulated in the relevant yearbook. Ignorance concerning these regulations will not be accepted as an excuse for any transgression, or basis for an exception to any of the aforementioned regulations. The G Regulations are updated annually and may be amended after the publication of this information.

#### **Regulations, degree requirements and information**

The faculty regulations, information on and requirements for the degrees published here are subject to change and may be amended after the publication of this information.

#### **University of Pretoria Programme Qualification Mix (PQM) verification project**

The higher education sector has undergone an extensive alignment to the Higher Education Qualification Sub-Framework (HEQSF) across all institutions in South Africa. In order to comply with the HEQSF, all institutions are legally required to participate in a national initiative led by regulatory bodies such as the Department of Higher Education and Training (DHET), the Council on Higher Education (CHE), and the South African Qualifications Authority (SAQA). The University of Pretoria is presently engaged in an ongoing effort to align its qualifications and programmes with the HEQSF criteria. Current and prospective students should take note that changes to UP qualification and programme names, may occur as a result of the HEQSF initiative. Students are advised to contact their faculties if they have any questions.