

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 in Senior Phase and Further Education and Training Teaching
- BSc in Computer Science
- BSc in Information Technology in Information and Knowledge Systems
- Bachelor of Dental Surgery [BChD]
- Bachelor of Dietetics [BDietetics]
- Bachelor of Medicine and Surgery [MBChB]
- BSc in Biochemistry
- BSc in Biotechnology
- BSc in Chemistry
- BSc in Chemistry 4-year programme
- BSc in Ecology
- BSc in Ecology 4-year programme
- BSc in Entomology
- BSc in Food Management specialising in Culinary Science
- BSc in Food Management specialising in Nutrition
- BSc in Food Science
- BSc in Genetics
- BSc in Geography option Geography and Environmental Science
- BSc in Human Genetics
- BSc in Human Physiology
- BSc in Human Physiology 4-year programme
- BSc in Human Physiology, Genetics and Psychology
- BSc in Medical Sciences
- BSc in Meteorology

BSc in Meteorology 4-year programme

BSc in Microbiology

BSc in Physics

BSc in Physics 4-year programme

BSc in Plant Science

BSc in Zoology

BScAgric in Agricultural Economics in Agribusiness Management

BScAgric in Animal Science

BScAgric in Applied Plant and Soil Sciences

BScAgric in Applied Plant and Soil Sciences 5-year programme

BScAgric in Plant Pathology

BScAgric in Plant Pathology 5-year programme

Bachelor of Veterinary Science [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

4 lectures per week, 1 practical/tutorial 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.