

University of Pretoria Yearbook 2025

Foundational physics 137 (PHY 137)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	8.00
NQF Level	05
Programmes	BSc in Chemistry 4-year programme
	BSc in Ecology 4-year programme
	BSc in Geoinformatics 4-year programme
	BSc in Geology 4-year programme
	BSc in Human Physiology 4-year programme
	BSc in Mathematics 4-year programme
	BSc in Meteorology 4-year programme
	BSc in Physics 4-year programme
	BScAgric in Applied Plant and Soil Sciences 5-year programme
	BScAgric in Plant Pathology 5-year programme
Prerequisites	Admission to relevant programme.
Contact time	2 lectures per week, 1 practical fortnightly, 1 tutorial fortnightly, Foundation Course
Language of tuition	Module is presented in English
Department	Physics
Period of presentation	Semester 1

Module content

This module introduces the fundamental principles and tools of physics. Students will gain mastery in measurement techniques, data analysis through graphical representations, and dimensional analysis to identify hidden relationships. Subsequently, the module focuses on one-dimensional kinematics, emphasizing the concepts of position, velocity, and acceleration. Further exploration delves into longitudinal and transverse waves, investigating their properties and propagation mechanisms. The module then introduces physical optics, exploring the behaviour of light through lenses and the formation of images. Finally, the foundations of thermodynamics are established, focusing on the concepts of heat, temperature, and heat capacity.

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.