



University of Pretoria Yearbook 2021

Physics 144 (PHY 144)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	8.00
NQF Level	05
Programmes	BSc extended programme - Biological and Agricultural Sciences BSc extended programme - Mathematical Sciences
Service modules	Faculty of Education
Prerequisites	PHY 133
Contact time	1 practical per week, 4 lectures per week, Foundation Course
Language of tuition	Module is presented in English
Department	Physics
Period of presentation	Semester 2

Module content

The main topics covered in this module are Mechanics and Thermodynamics. Kinematics: Basic types of motion, one-dimensional motion, two- and three dimensional motion, linear momentum and its conservation, multi-object systems and the centre of mass.

Forces: Types of forces, Newton's Laws of Mechanics and applications, friction.

Energy: Work, heat, conservation of mechanical energy.

Thermodynamics: First law of thermodynamics, empirical gas laws, mechanical model of the ideal gas, energy of the ideal gas, basic thermodynamic processes.

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