

University of Pretoria Yearbook 2016

First course in physics 124 (PHY 124)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	16.00
Programmes	BEd Senior Phase and Further Education and Training Teaching BSc(Computer Science) Computer Science BSc Applied Mathematics BSc Chemistry BSc Extended programme - Physical Sciences BSc Geography BSc Geology BSc Mathematics BSc Meteorology BSc Physics
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
Prerequisites	WTW 114 GS and PHY 114 GS
Contact time	4 lectures per week, 1 discussion class per week, 1 practical per week
Language of tuition	Both Afr and Eng
Academic organisation	Physics
Period of presentation	Semester 2

Module content

Simple harmonic motion and pendulums. Coulomb's law. Electric field: dipoles, Gauss' law. Electric potential. Capacitance. Electric currents: resistance, resistivity, Ohm's law, energy, power, emf, RC-circuits. Magnetic Field: Hall-effect, Bio-Savart. Faraday's and Lenz's laws. Oscillations: LR-circuits. Alternating current: RLC-circuits, power, transformers. Introductory concepts to modern physics. Nuclear physics: Radioactivity.

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