

University of Pretoria Yearbook 2017

First course in physics 124 (PHY 124)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	16.00
Programmes	BEEd Senior Phase and Further Education and Training Teaching BSc Computer Science BSc Chemistry BSc Extended programme - Physical Sciences BSc Geography BSc Geology 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	Separate classes for Afrikaans and English
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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