

# University of Pretoria Yearbook 2017

## First course in physics 124 (PHY 124)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	Faculty of Natural and Agricultural Sciences
<b>Module credits</b>	16.00
<b>Programmes</b>	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
<b>Service modules</b>	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
<b>Prerequisites</b>	WTW 114 GS and PHY 114 GS
<b>Contact time</b>	4 lectures per week, 1 discussion class per week, 1 practical per week
<b>Language of tuition</b>	Separate classes for Afrikaans and English
<b>Academic organisation</b>	Physics
<b>Period of presentation</b>	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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